

# Determinants of the Level of Financial Literacy Inmeru County, Kenya: A Survey of Meru County

Njehia, MilcahWanjiru

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Corresponding Author: Njehia, MilcahWanjiru

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**Abstract:** In recent years, financial literacy has come to play a growing important role in financial reforms across the world. Various financial crisis has been faced by all generations in the past and today for both young and old, who are expected to make and take increasingly vital and complex choices on budgeting for consumption, savings and investing, taxation and handling crisis such as bankruptcy, incapacity, household debt, unemployment and medical. Modern technology, investments, and liberalization have made new financial products and services widely available leaving majority of the population less equipped to make informed financial choices or to evaluate complex financial products (Lusardi and Mitchell, 2007). To solve this perceived problem of limited, inadequate and even totally lack of financial literacy, governments, financial institutions, and non-profit making organizations have devoted vast resources to financial education programs, targeted to reach many individuals in the coming years. Today, there is very little evidence on the importance of financial education, although some evaluations of financial literacy programs are now underway, the focus seems to be mostly on measuring end outcomes such as behavior change or financial product take-up, and not much on the determinants of this literacy and how it would be improved. Financial institutions promote their products by providing detailed information in brochures and various media sources. By being part of this mass population having personal bank accounts in several banks and having personal and official relations with other individuals and account holders, it is not easy to understand some financial concepts. Research has shown that, many individuals with low literacy level are more likely to rely on family and friends as their main source of financial informants and advisers and are less likely to invest in stock. This research thesis examines and analyses the determinants of the level of financial literacy in Meru County, in Kenya. The determinants studied are; Level of education, Demographic characteristics (Gender and Age), Socio-economic factors (Occupation status -employment and Personal income) and Sources of Financial information or advice (informal tools and formal tools). Others factor mentioned include; Culture, Psychological factors (such as religiosity, hopelessness, financial satisfaction, retirement plan intention and risk preference) and Field of study or professional qualification in Meru county. This research employs Descriptive research design in conducting the study. Primary data is collected using open and closed-ended questionnaires while secondary data is collected from the relevant books and journals. Questionnaires are more logical and easy option of collecting information from people. The target population for the study done are men, women and the youth in Meru County. The sample size is based on convenience samples ( used because of reality, where we cannot draw a sample, but we have a group that is accessible, is a representative of our target population and available to us hence use this honestly with acknowledgement that there are limitations). These data is then summarized and categorized according to common themes, analyzed using frequency distribution tables and percentages. Descriptive statistics is used to describe the general characteristics of the population. To determine the relationship between the dependents and the independent variables, chi-square test of association is used and recommendations made based on the findings.

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## I. Introduction

### 1.1 Background of the Research

Financial literacy has had a wide and growing importance in the recent years due to globalization, dynamic modern technology, investments, increasing crisis and liberalization that have created the varied financial products and services hence leaving majority of the people less equipped to make informed financial decisions and to evaluate complex financial products. According to OECD (2005), financial literacy is the combination of consumers and investors understanding of financial products and concepts and their ability and confidence to appreciate financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being (Miller et al., 2009).

Financial Literacy is significant as it enables people understand how money works in the world, how to manage to earn it, invest it and how to help others with it. It provides a set of skills and knowledge that allows one to make effective decisions with all of their financial resources. According to Greenspan (2002), financial literacy helps to inculcate individuals with the financial knowledge necessary to create household budgets, initiate savings plans, and make strategic investment decisions. Proper application of that knowledge helps households to meet their financial obligations through wise planning, and resource allocation so as to derive maximum utility (Mwangi&Kihui, 2012).

Financial literacy means different things to different people; for some, it is quite a broad concept encompassing an understanding of economics and how household decisions are affected by economic conditions and circumstances. Others, it focuses quite narrowly on basic money management such as; budgeting, saving, investing and insuring (Worthington, 2006). Further financial literacy is defined as the ability to make informed judgments and to take effective decisions regarding the use and management of money” (Schagen& Lines, 1996)

In both the developed and developing economies there have been rising financial crisis in the recent past with the rapid change in the finance landscape. Financial literacy helps in empowering and educating consumers so that they are knowledgeable about finance in relevant ways to their lives and enables them to use this knowledge to evaluate products and make informed decisions (Mwangi&Kihui, 2012).

Surveys around the world have indicated that financial literacy levels are low in developed countries and lower in developing countries. In a study carried out by Hussein & Hassan (2012) on ‘Financial Literacy and Investment Decision of UAE (United Arab Emirates) Investors’, the financial literacy level of the UAE individual investors and the factors that influence their investment decision were examined. The research findings indicated that financial literacy is far from the needed level and the importance of improving financial literacy increased due to factors such as development of new financial products, the complexity of financial markets and the changes of political, demographic and economic factors. The U.S. Department of treasury enacted a policy that would charge an organization to educate society.

The Financial Literacy and Education Commission (FLEC) created under the Fair and Accurate Credit Transactions Act of 2003 (Financial Literacy and Education Commission), developed a National Strategy in 2006 and a later enhanced National Strategy in 2011. Kenya falls under the developing countries, and the government has not ignored this. In fact, the government has put great effort in developing user-friendly financial systems such as the I-TAX for revenue collection, huduma centres for personalized services, provided massive training and education on the importance of tax returns and payments as this contributes to the overall economic growth of the Country and consequently its counties, Meru being one of them.

Etkind (1989) noted that co-operatives must train their members (including Board of Directors) for full participation in the co-operative affairs actively, since SACCOs (Savings and credit cooperative societies) movement operates on a completely different pattern and manner from the commercial banking system, hence SACCOs members need training. The essence of cooperative banking is quite unique in that members (both savers and borrowers), use the cooperative to recycle money from those who have it to those who need it, without anyone outside taking a profit and with interest rates set so that systems work in everyone’s interest” (ILO 2009). The Kenyan government has developed fiscal policies that promote the creation and existence of Cooperative societies, these include the fact that they can lend money to their members at a reduced rate than the market rate. They also are more lenient to their customers than the commercial banks since people in the same category such as the Bankers Sacco Association and the Police Sacco form these Saccos although we have some that encourage public participation such as the Kenya Power Sacco, in Meru County, we have Lewa Sacco in Buuri Sub-County.

These Saccos also provide education, consultation, advise, training and financial materials to their members, hence contributing to financial literacy. More studies have shown that improving financial literacy contributes positively to the economy as financially educated people help financial markets to operate efficiently, by better trading decisions based on fundamentals and technical analysis. Furthermore, they are in a position to protect themselves from financial frauds (Volpe, 2002). Financially educated customers demand more customized products, which increase competition between businesses, encourage innovation and improve quality of products. Increase in households saving is associated with high financial literacy and has positive impact on investment level, financial markets liquidity and economic growth (OECD, 2005). In Kenya, we have the Nairobi Stock Exchange that has advanced the availability of financial materials making them accessible online for the population. The NSE members have also held forums where they educate the people on investments. Just recently, the government established a mobile phone accessible bond trading where Kenyans including the Meru people are able to trade on these bonds.

Financial education is important for all and we need to make sure that all have access to it. In 2012, the Group of 20, a forum attended by finance ministers and central bank governors from the world’s 20 most highly developed economies released a declaration stating that it is time to pay more attention to increasing access to

financial services and financial education for women. In a report that followed this declaration, the OECD (Organization for Economic Co-operation and Development) said that greater access would bring women financial empowerment, greater opportunities, and improved well-being whose outcomes are sure to benefit everyone.

Society assumes that comprehensive education on a subject will render you capable of self-proficiency. In Kenya we have funds set aside for the women in society who are required to form groups for financing then, are given advice on potential business opportunities, those already with the businesses are given more information on how to expand and grow their business. We also have banks such as K-rep and KWFT (Kenya Women Finance trust) who believe that "In serving the women, we also serve the men because our products and services are tailored to benefit the entire family" Mwangi Githaiga, managing director KWFT, deposit taking microfinance limited. They provide financial information, education and training to women, giving them finance at a reduced rate and better repayment terms. These banks have branches all over the country Meru included.

In addition, helping young people understand financial issues is important, as younger generations are likely to face ever-increasingly complex financial products and services. They are more likely to have to bear more financial risks in adulthood than their parents, especially in budgeting for consumption, saving, planning for retirement and covering their healthcare needs. The Kenyan government has also had fund for the youth, the Youth Fund, providing financial services to those with ideal business ideas that have formed groups. It has also provided employment to the youth, giving them a source of income such as in the NYS (National Youth Service), encouraging and training on savings from the daily payments collected for future use.

Peng (2008) finds that, a state mandate should require a specific personal finance course so as to have a significant and positive impact on student financial literacy.

Many nations have recognized the importance of financial literacy and created task forces to study their populations with the goal of offering education and outreach in common places such as schools offering students courses to prepare them for managing their finances then and later in life as an important aspect of developing fiscal policy. In Kenya, we have business studies in secondary schools, mathematics and English as compulsory in both primary and secondary schools as these are vital when it comes to understanding financial terms. We also have schools in Kenya with clubs that promote financial literacy. In Meru School, students have a business club, which helps promote financial literacy by imparting knowledge and application skills to simulated financial crisis and recognize financial planning to help them prepare for life events. In Kenya Methodist University Finance and Accounting Students Association, providing financial information, advice, insights, training, guidance, education trips and career forums for the members.

Globally, The Organization for Economic Co-operation and Development (OECD) started an inter-governmental project in 2003 with the objective of providing ways to improve financial education and literacy standards through the development of common financial literacy principles.

In March 2008, the OECD launched the International Gateway for Financial Education, which aims to serve as a clearing-house for financial education programs, information and research worldwide. In the UK, the alternative term "financial capability" is used by the state and its agencies: the Financial Services Authority (FSA) in the UK started a national strategy on financial capability in 2003. The US Government also established its Financial Literacy and Education Commission in 2003.

In Kenya similarly, we have the Kenya Revenue Authority (KRA), Retirement Benefits Authority (RBA), Capital Markets Authority (CMA) and Insurance Regulatory Authority (IRA) doing massive campaigns on financial education. They put emphasis to the public on fulfilling tax obligations in time to avoid penalties, saving as little as 100/- per day for retirement purposes, investing in the capital markets for better returns and having a good insurance policy that would cater for multiple issues in cases of crisis respectively. The Kenya government has policies in the employment act that requires every employer to register their employees under the NSSF (National Security Saving Fund), this has been under development in the recent days increasing the monthly contribution from Sh. 200 from employer and Sh. 200 from employee to a total of 6% of basic salary up to a maximum of Sh. 1,800 from employees and an equal amount from the employers. For medical coverage and planning, we have NHIF (National Health Insurance Fund) that requires every employer to register the employees and have contributions as stipulated on the granulated guidelines provided in the Kenya constitution. The above is getting support from the services offered by Huduma Centre branches opened countrywide offering the governmental services and clearances that enable the people get quick financing and even be able to confirm the legitimacy of financial institutions easily. In Meru, we have NSSF and NHIF offices where training, education and advice are provided, including registration for the same, also at Huduma Centre at the Postal office building.

Financial literacy is more important today than ever, since in today's world, financial systems complexity have brought with them the speedy growth and sophistication of the financial environment. The dynamic technology has changed the business environments creating increased number of financial products and services. Today there are massive marketing services, education in middle level and higher learning institutions,

community finance awareness programs such as road shows, advertising campaigns and promotion of existing and new financial products and services making many people active in the Financial Markets as they are more enlightened and financially literate.

Studies show that, market liberalization has led to individuals taking more responsibility for their finance, taking this position from the government and employers. Therefore, financial literacy equips one with the knowledge and understanding of financial matters, including being aware of money management, income, insurance, real estate, tax planning, retirement, advantages of savings methods, spending options, consumer rights, time value of money, compound interest, financial planning, the mechanics of credit card, and even knowledge to fight fraud, and take charge of one's finances. It is important that educators begin to equip students with the knowledge and skills to succeed as consumers in today's global economy since we are living in an age of unprecedented debt and people are destined to face challenging times financially. Financial literacy today has gained enormous importance since the world is becoming more and more complex with increasing financial products hence informed decisions required.

Kefela (2010), revealed that financial knowledge is directly correlated with self beneficial financial behavior. Therefore, financial education should take a wholesome perspective to include the fundamentals of finance since participants who are less financially literate are more likely to have problems with debt, less likely to save, more likely to engage in high cost mortgages, less likely to plan for retirement and are less likely to make better choices for their investments.

Today, financial literacy is now an important skill like reading, writing, and math that everyone needs to know in order to survive the complex financial world, hence a global concern. Annamarie Lusardi, a prominent economist conducting research in financial literacy, notes that "...just as it was not possible to live in an industrialized society without print literacy...so it is not possible to live in today's world without being financially literate (CEE 2011)." Similarly, Nan Morrison, President and CEO of the Council for Economic Education (CEE) sees a need for increased financial education, even at a young age, and states that financial literacy is not a negotiable skill in today's world (Sloan, 2012).

In Kenya today, consumers are faced with many consumer and business decisions hence education for these decisions relies on the individual as well as the family's desire to use money effectively as a resource. Wide variety and complicated financial products, low level of awareness and lack of knowledge about financial issues warrants financial literacy. Individuals and families of today are ready for financial education and a financial foundation so that students are educated on healthy living including help for the monetary hardships of individual issues.

Kenya's financial market is getting complex, as financial products increase and become readily available in the market so does the need for an average individual required to understand the products and services in the market. Several institutions, financial banks and the government are striving to satisfy the needs of individuals through creation of more sophisticated products and services. This has led to the common people being lost and confused on what to invest in and how to spend. Therefore, to survive in such financial markets, financial literacy becomes essential and crucial.

In Meru County, just like the rest of the world, we notice that lack of financial literacy can both lead to and arise from differences in opportunities to gain knowledge and exposure to financial matters. It can lead to under saving due to poor financial planning, poor investment choices hence less efficient markets due to illiterate consumers. There has been ambiguity created for those that are financially illiterate to understand the new products and services and lack of knowledge on how to prepare for retirement.

For financial literacy, individuals could be exposed to financial education policies and programmes to increase their financial know how as financial education improves consumers understanding about dynamic financial products, concepts and risk through financial information, instruction and objective advice. Therefore, they develop the skills, confidence of financial risks and opportunities awareness making informed choices, access necessary help and take effective action to improve their financial well-being.

The need for financial literacy has vigorously increased due to rise and increase of bankruptcies, household debt, globalization of financial products. This include; the Euro Bond, dynamic modern technology such as mobile financial packages like M-Shwari from Safaricom, varied investments, and liberalization that have created the varied financial products and services hence leaving majority of the people less equipped to make informed financial decisions and to evaluate complex financial products and poor investments, we are forced to recognize the need for improving the level of financial literacy.

Studies show that, if implemented, comprehended and applied, financial literacy could lead to a successful future and to a better economy overall. Financial literacy skills could help consumers in the ability to understand and work with interest, debt management, exchange rates, understanding risks, plan for retirement, budget before spending, learning how to evaluate potential investments, practice savings, identifying scams and dubious financial practices, balancing cheque books, their accounts and being able to read account statements.

## **1.2 Statement of the Research Problem**

In recent years, financial literacy is massively playing a role in financial reforms across the world. Variant financial crisis being faced by all generations in the past and today who are expected to make and take increasingly vital and complex choices on budgeting for consumption, savings and investing, taxation and handling crisis. Modern technology, globalization and liberalization have made new financial products and services widely available leaving majority of the population less equipped to make informed financial choices or to evaluate complex financial products (Lusardi and Mitchell, 2007). Consequently, there is a problem of limited, inadequate, lack and low level of financial literacy hence the basis of this research study. To solve this perceived problem of limited, inadequate and even totally lack of financial literacy, governments, firms, and non-profit organizations have devoted vast resources to financial education programs, targeted to reach many individuals in the coming years.

Today, there is very little evidence on the importance of financial education, although some evaluations of financial literacy programs are now underway, the focus seems to be mostly on measuring end outcomes such as behavior change or financial product take-up, and not much on the factors influencing this literacy and how it would be improved. Being part of this mass population having personal bank accounts in several banks and having personal or official relations with other individuals and account holders, it's not easy to understand some financial concepts.

This study seeks to research, analyze and conclude on the determinants of the level of financial literacy to provide an insight to improvement, development and upgrade of available financial information, tools, policies. The government, financial institutions, and non-profit organizations have tried to devote vast resources to financial education programs, targeted to reach many individuals in the coming years. The study will provide recommendations that will aid in development of adaptable and realistic fiscal policies, increase materials on financial information and promote financial education.

In addition, it will enable the educators, the government, policy makers, financial institutions, academicians and the people of Meru make informed judgment and take effective action regarding current and future level of financial literacy basing on the determinants identified.

The determinants that will be looked at are; Level of education, Demographic characteristics (Gender and Age), Socio-economic factors (Occupation status and Personal income) and Sources of Financial information (informal tools and formal tools).

## **1.3 Research Objectives**

The general objective of the study is to examine and analyze the factors influencing financial literacy in Meru County.

### **1.3.1 Specific Objectives**

The study seeks to;

- (i) To assess the relationship between Level of Education and financial literacy in Meru County.
- (ii) To examine the relationship between Demographic factors and financial literacy in Meru County.
- (iii) To investigate the relationship between Socio economic factors and financial literacy in Meru County.
- (iv) To determine the relationship between the Sources of Financial information and financial literacy in Meru County.

## **1.4 Research Hypotheses**

H<sub>0</sub> There is no significant relationship between Level of Education and financial literacy.

H<sub>1</sub> There is a significant relationship between Level of Education and financial literacy.

H<sub>0</sub> There is no significant relationship between Demographic factors and financial literacy.

H<sub>2</sub> There is a significant relationship between Demographic factors and financial literacy.

H<sub>0</sub> There is no significant relationship between Socio-economic factors and financial literacy.

H<sub>3</sub> There is a significant relationship between Socio-economic factors and financial literacy.

H<sub>0</sub> There is no significant relationship between Sources of Financial information and financial literacy.

H<sub>4</sub> There is a significant relationship between Sources of Financial information and financial literacy.

## **1.5 Research Justification**

Economists are interested in studying financial literacy as it seems that informed consumers are more equipped to make better financial decisions that can have positive long-term effects on households and short-term effects such as increased short-term saving can have long-term impacts on a person's lifetime consumption (Lusardi, Michaud, and Mitchell, 2013).

This research seeks to provide an insight into the main factors that influence financial literacy in Meru County in recognition of the diverse increased financial products and services. The findings from data analysis

in this research are expected to indicate factors that have more significant influence in comparison with others to provide vital and crucial information that will assist individuals in Meru County and Kenya at large. In addition, be able to identify the barriers to financial literacy and ways in which this could be reduced or avoided to enhance and develop the current financial literacy level. Furthermore, NGOs, Government bodies for both national and county levels and those involved in formulating and developing fiscal policies, would get guidance and insight on areas of concern hence formulate policies that promote, encourage and increase financial literacy.

I also believe that, my research thesis will provide the base or foundation for deeper, wider and further research in the academic field.

### **1.6 Research Scope**

The study is investigating the factors that influence financial literacy in Meru County where I will use a limited number of respondents based on the sample size representing just a fraction of the actual population due to the available resources of time and finance. The study will be conducted in Meru County in sub-counties such as Buuri, North Imenti, Central Imenti, Tigania East and West. The aim is to get first hand information on individuals' financial literacy, preferences and attitudes towards the determinants of the level of financial literacy being studied in Meru County.

### **1.7 Research Limitations**

The study shall only cover the people in Meru County when collecting data and analyzing this information hence findings will also be limited to this County. Financial literacy could also be determined by many other factors that could include and not limited to culture, norms and even family backgrounds of individuals.

These would differ and change in different regions and counties in Kenya as their situations and circumstances could be different from that of the Meru region. Therefore, the study findings and conclusions might not be applicable to all areas and cases.

The research will be done in Meru County hence the target will be broad and including the occupants of Meru County hence there will be issues of classification and generalization expected. Standardized Questionnaires will be used in this study as they are more logical and easy option of collecting information from people and using statistical tests in determining the relationship between the variables.

The sample size will be based on convenience samples that will be used because of reality, where we cannot draw a sample, but we have a group that is accessible, is a representative of our target population and just available to the researcher. The study will assume that there will be cooperation from the respondents and that they will give honest and accurate responses hence the data and information collected will be limited to this assumption. Moreover, the study will be limited to the time and finances set aside and budgeted as adequate for the purpose of the study.

## **II. Literature Review**

### **2.1 Introduction**

Chapter two presents the findings of chapter one's work relevant to financial literacy, both empirical and theoretical literature is explained, analyzed, synthesized and presented in this chapter. Textbooks, journals and published literature articles are the sources of the topical and in-depth literary content done by other scholars. This chapter also presents theoretical framework, a conceptual framework and summary of the literature review together with a study gap to be filled. This Chapter provides an in-depth understanding of the relationship between the key determinants identified and the level of financial literacy.

### **2.2 Theoretical Review**

The section describes the various theories that have a relationship with the research, the main theory used is the Transformative Learning Theory. The other theories that have been identified and explained in this research include; Multi-Media Learning Theory, Bounded rationality theory and Social learning theories. These theories consequently form the basis of the theoretical framework.

**Learning theories** are conceptual frameworks describing how information is absorbed, processed, and retained during learning. Cognitive, emotional, and environmental influences, as well as prior experience all play a part in how understanding is acquired, changed or knowledge and skills retained.

Behaviorists look at learning as an aspect of conditioning and will advocate a system of rewards and targets in education, while Educators, who embrace cognitive theory believe that the definition of learning as a change in behavior is too narrow and prefer to study the learner rather than their environment and in particular the complexities of human memory. Those who advocate constructivism believe that a learner's ability to learn relies largely on what he already knows and understands, and the acquisition of knowledge should be an

individually tailored process of construction. Transformative learning theory focuses upon the often-necessary change that is required in a learner's preconceptions and worldview understanding.

### **2.2.1 Transformative Learning Theory**

**Transformative learning theory**, explains how humans revise and reinterpret meaning through a perspective transformation process that has three dimensions: psychological (changes in understanding of the self), convictional (revision of belief systems), and behavioral (changes in lifestyle). Adults seem to have a tendency of rejecting any ideas that do not correspond to their particular values, associations and concepts. This is due to our frames of reference that are of two dimensions: habits of mind (are harder to change) and points of view (easier to change). Where habits of mind influence our point of view and the resulting thoughts or feelings associated with them, but points of view may change over time because of influences such as reflection, appropriation and feedback. Transformative learning is said to take place when discussing with others the reasons presented in support of competing interpretations, by critically examining evidence, arguments, and alternative points of view. **Mezirow** developed this theory during the past two decades, and has evolved into a more comprehensive and complex description of how learners validate and reformulate the meaning of their experience. For learners to change their meaning schemes thus specific beliefs, attitudes, and emotional reactions, they have to engage in critical reflection on their experiences, which in turn leads to a perspective transformation. Mezirow believes that at times less frequent transformation may occur and results from a disorienting dilemma, which is triggered by a life crisis or major life transition, although it may also result from an accumulation of transformations in meaning schemes over a period of time. Perspective Transformation is explained by **Mezirow**, as a result of Disorienting dilemma, Self-examination, Sense of alienation, Relating discontent to others, Explaining options of new behavior, Building confidence in new ways, Planning a course of action, Knowledge to implement plans and Experimenting with new roles. An important part of transformative learning is for individuals to change their frames of reference by critically reflecting on their assumptions and beliefs and consciously making and implementing plans that bring about new ways of defining their worlds, which makes this process fundamentally rational and analytical.

Transfer of learning is the idea that what one learns in school somehow carries over to situations different from that particular time and that particular setting. Transfer was amongst the first phenomenon tested in educational psychology by **Edward Lee Thorndike** who was a pioneer in transfer research. He found that though transfer is extremely important for learning, it is a rarely occurring phenomenon. In fact, he held an experiment where he had the subjects estimate the size of a specific shape and then he would switch the shape. He found that the prior information did not help the subjects; instead it impeded their learning. Some theorists argue that transfer does not even occur at all. They believe that students transform what they have learned into the new context. They say that transfer is too much of a passive notion. They believe students, instead, transform their knowledge in an active way. Students do not simply carry over knowledge from the classroom, but they construct the knowledge in a way that they can understand it themselves. The learner changes the information they have learned to make it best adapt to the changing contexts that they use the knowledge in. This transformation process can occur when a learner feels motivated to use the knowledge; however, if the students do not find the transformation necessary it is less likely that the knowledge will ever transform. There are many benefits of transfer of learning in the classroom. One of the main benefits is the ability to quickly learn a new task. This has many real-life applications such as language and speech processing. Transfer of learning is also very useful in teaching students to use higher cognitive thinking by applying their background knowledge to new situations.

### **2.2.2 Multimedia Learning Theory**

**Multimedia learning theory** elaborates on the use of visual and auditory teaching materials that may include video, computer and other information technology while focusing on the principles that determine the effective use of multimedia in learning. The main emphasis is on using both the visual and auditory channels for quality information processing. The auditory channel deals with information that is heard while the visual channel processes information that is seen. Generally, the visual channel holds less information than the auditory channel since most of the information is in pictorial form. However, if both the visual and auditory channels are presented with information then, more knowledge will be retained. Information provided should be precise and clear since if too much information is delivered it is inadequately processed and long term memory is not acquired. Multimedia learning seeks to give instructors the ability to stimulate both the visual and auditory channels of the learner, resulting in better progress.

### **2.2.3 Bounded Rationality Theory**

Bounded rationality is distinguished from rationality as “the perfect human rationality that is assumed in classical and neoclassical economic theory and the reality of human behavior as it is observed in economic life” (Simon, 1992). The behavioral assumption of bounded rationality embodies rejection of perfect knowledge and optimization on the part of economic actors, which characterizes the treatment of rationality in the neoclassical economics orthodoxy and instead involves an element of being limited or bounded (Bruin & Hartle, 2003). The neoclassical condition of “perfect human rationality” locates constraints in external environment, while Simon’s concept of bounded rationality views constraints arising from the cognitive limitations of individuals themselves (Brun & Dupuis, 2000). In particular, individuals lack the capacity to “take account of all the available information, compile exhaustive list of alternative courses of action, and ascertain the value and probability of each of possible outcomes” (Hindess, 1998). The bounded rationality perspective shifts the emphasis from neoclassical “Homo economics” which demonstrates characteristics of optimization and consistency based on perfect knowledge, to acknowledge imperfect knowledge and satisfying behavior (Susan 2003).

From the theory, it can be seen that in real life many individuals seem to have limited information and imperfect knowledge. These could be due to limitation to access a certain level of education hence directly influence financial literacy, such as only reaching lower primary instead of completing primary level, secondary and even the tertiary levels. This is why individuals are not always able to achieve optimality within the context of a dynamic and complex financial products and services. Individuals tend to get advice on financial products from close friends and peers due to assumed mistrust of financial advisors and have preference for products with which they are comfortable. Older and experienced individuals are mindful of past performance and prior experience and they try to relate the current circumstances to past, this makes the older more financially literate than the younger group.

### **2.2.4 Social Learning Theory**

Social learning theory illustrates how social factors such as sources of information and financial advice influence the shaping of a person’s behavior. Furthermore, the financial attitudes and values people have about money come from their environment as the effects of social interactions on individual behavior have been modeled, tested and applied to a wide variety of situations (Glaeser & Scheinkman, 2003).

Cultural differences play a role in financial literacy because different populations have dissimilar norms, attitudes, and experiences related to managing money (in some cultures debt is viewed negatively, which may deter individuals from taking loans to purchase homes and building credit histories). Social interaction may affect financial decisions as people receive and process information through interacting with others. Many individuals use information from peers when deciding on participation as they may lack their own reasoned information on financial products. Moreover, beliefs about social norms will additionally influence individual’s decisions due to a desire to behave similarly to those in their social group (Berkowitz, 2003).

## **2.3 Theoretical Framework**

This study is based on Transformative learning theory, Multi-media learning theory, Bounded rationality theory and Social learning theories.

**Transformative learning theory** explains how humans revise and reinterpret meaning through a perspective transformation process that has three dimensions: psychological (changes in understanding of the self), convictional (revision of belief systems), and behavioral (changes in lifestyle). Adults seem have a tendency of rejecting any ideas that do not correspond to their particular values, associations and concepts. This is due to our frames of reference that are of two dimensions: habits of mind (are harder to change) and points of view (easier to change). Where habits of mind influence our point of view and the resulting thoughts or feelings associated with them, but points of view may change over time as a result of influences such as reflection, appropriation and feedback. Transformative learning is said to take place when discussing with others the reasons presented in support of competing interpretations, by critically examining evidence, arguments, and alternative points of view. **Mezirow** developed this theory during the past two decades, and has evolved into a more comprehensive and complex description of how learners validate and reformulate the meaning of their experience. For learners to change their meaning schemes thus specific beliefs, attitudes, and emotional reactions, they have to engage in critical reflection on their experiences, which in turn leads to a perspective transformation. Mezirow believes that at times less frequent transformation may occur and results from a disorienting dilemma, which is triggered by a life crisis or major life transition, although it may also result from an accumulation of transformations in meaning schemes over a period of time. Perspective Transformation is explained by **Mezirow** as a result of Disorienting dilemma, Self-examination, Sense of alienation, Relating discontent to others, Explaining options of new behavior, Building confidence in new ways, Planning a course of action, Knowledge to implement plans and Experimenting with new roles. An important part of transformative learning is for individuals to change their frames of reference by critically reflecting on their assumptions and beliefs and consciously making and



implementing plans that bring about new ways of defining their worlds which makes this process fundamentally rational and analytical.

This theory clearly explains the Level of Education variable in the study and its relation to budgeting, planning on finances, saving habits, opening of bank accounts and even individual views on bankruptcy and debt management.

**Multimedia learning theory** elaborates on the use of visual and auditory teaching materials that may include video, computer and other information technology while focusing on the principles that determine the effective use of multimedia in learning. The main emphasis is on using both the visual and auditory channels for quality information processing. The auditory channel deals with information that is heard while the visual channel processes information that is seen. Generally, the visual channel holds less information than the auditory channel since most of the information is in pictorial form. However, if both the visual and auditory channels are presented with information then, more knowledge will be retained. Information provided should be precise and clear since if too much information is delivered it is inadequately processed and long term memory is not acquired. Multimedia learning seeks to give instructors the ability to stimulate both the visual and auditory channels of the learner, resulting in better progress.

This is the main strategy used by most financial and non financial institutions today to educate their targeted groups. For Advertisements, emphasis is placed on the presentation, attractiveness and the theme color. Great graphics is involved to entice the viewers on the best financial products.

This theory elaborates further on the concepts of level of education, income level and sources of financial information as an individual will be able to identify auditory and visual information to what they would have learnt or experienced before and be able to relate to them.

**Bounded rationality theory** explains the limitations faced by individuals to the access of factors influencing their financial literacy levels. This theory is relevant to the study because it tries to explain why individuals are financially illiterate and this could be due to being bound to the level of education accessed, the age factor (the current age of the individual), type of occupation they participate in and even their level of income.

This theory is relevant to the study as it clearly illustrates financial literacy based on the demographic factors thus age and gender.

Financial Literacy level has been found to be low among the young, highest among middle-age respondents (particularly 40 to 60), and declines slightly at an advanced age of 61 or over.

In other studies it was found out that, there was a problem in underdeveloped economies, where social structure and economic problems deprived women of basic education since illiteracy among women was higher than for men. For example, the rate of literacy is 43% for women and 55% for men in Bangladesh. Illiteracy excluded women from possibilities to access information through which they could identify and assess different entrepreneurial opportunities. This included financial information and resources as their ability to exploit an opportunity was hampered as women were not able to read, write and count subjects. This exposed them to the risks of being financially exploited by others and having to operate in the informal sector as they needed to rely on others for information on what is happening around them. This was unfortunately the case for many women entrepreneurs in developing economies, both in Africa and Asia, since the combination of high levels of illiteracy and low social position exposes women to a high risk of exploitation and violence.

**The theory of Social learning** shows that an individual's financial literacy could be influenced by social factors such as sources of information and financial advice that influence the shaping of a person's behavior. The financial attitudes and values people have about money come from their environment as the effects of social interactions have been found to model an individual's behavior. Cultural differences is also significant to financial literacy because different populations have dissimilar norms, attitudes, and experiences related to managing money (in some cultures debt is viewed negatively, which may deter individuals from taking loans to purchase homes and building credit histories). Social interaction may affect financial decisions as people receive and process information through interacting with others as individuals use information from peers when deciding on participation as they may lack their own reasoned information on financial products. This is significant because individuals seem to trust financial information that their peers or community members know more than to that which the financial advisors could. The role of primary caregivers such as parents and guardians is critical, just like the social and cultural norms of the family and community. The social context of family life, individual boundaries, and human interactions plays a significant role in how money is viewed among individuals.

There is evidence that correlation between financial literacy and financial education has been found to be present at the early stages of lifecycle where children of college graduates perform better on numerical test. Furthermore, the attitudes acquired in the family have a greater impact on the future financial behavior of individuals especially the young people (for instance the propensity to save and take risks) than the knowledge acquired in formal schooling.

## **2.4 Conceptual Review**

This section will review and explain the concepts which form the basis of the conceptual framework. It will provide a theoretical background on all study objectives, outlining the existing debates and provide enough literature on these concepts. These include; Financial Literacy, Level of Education, Age, Gender, Occupation status, Income Level and Sources of Financial information or advice. Its only from understanding this concept as a researcher will I be able to show the relationship between the independent variables and the dependent variables.

### **2.4.1 Concept of Financial Literacy**

Financial literacy has been defined as a combination of awareness, knowledge, understanding, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial well being. It entails the knowledge of properly making decisions pertaining to certain personal finance areas like real estate, insurance, investing, savings, tax planning and retirement. Moreover, it involves depth knowledge of financial concepts such as compound interest, financial planning, the mechanics of credit card, the best savings methods, consumer rights and time value of money. Financial literacy has been labeled a key element in the formula for maximizing returns in the financial markets as it improves investors' decision making; whether to have a portfolio, consult a professional analyst, invest in equities, bonds or both (Brown, 2009).

Financial literacy, if implemented, comprehended and applied, should lead to a successful future and to a better economy overall. Currently there is increase in bankruptcies, poor debt management, household debt and poor investments being among the reasons we should recognize that there is need for financial literacy.

Financial literacy helps the investor to manage funds; thus preventing problems arising with financial obligations and creditors, at the same time it aids investors on understanding financial options and seizing new investment opportunities. Moreover, financial literacy enables the investor to evaluate and compare between different types of investment products, the cash outlay needed and the period of investing as it enlightens them in a way that is relevant to their lives.

As a result of the ever changing economic conditions in the world and volatility of the market, financial literacy remains an essential survival tool that if used properly can lead to economic growth in a country as a whole. Otherwise poor financial choices; low financial literacy can be the stepping stone for economic downfall in a country and poor living standards for individuals (Kefela, 2010).

A study done in Pakistan, showed that individuals simply know that they are depositing money in various institutions in order to get more wealth in name of profit. They did not know what exactly they were doing and they were ignorant about the functions and existence of financial markets and other financial institutions hence generated the need to study and measure financial literacy in Pakistan.

In previous studies it has been shown that lack of financial literacy can both lead to and arise from differences in opportunities to gain knowledge and exposure to financial issues. In recent years financial literacy has been an issue of great interest to many, as financial products have become complex and it has been difficult to make informed choices. The ultimate goal of financial stability can only be achieved through financial literacy in developing countries.

In developing countries like Kenya financial literacy is relevant since many people have limited financial resources and information hence exposed to high risk. In Kenya the necessity for financial literacy has been considered greatly by the government, Non Governmental Organizations, Financial institutions and Non financial Institutions among others.

Inadequate financial knowledge and lack of understanding may put individuals at risk, as they may not take basic measures before they enter into investments and contracts with various financial service providers.

### **2.4.2 Concept of Level of Education**

The Organization for Economic Co-operation and Development (OECD) has defined financial education as the process by which investors in the market gain financial literacy through a formal (schools, universities) or informal (such as seminars) setting to provide them with familiarity on investment securities, risks and opportunities so that they can make clear informative choices in their investments (Seth et al., 2012).

Financial education is the process by which financial consumers improve their understanding about financial products, concepts and risk through financial information, instruction and objective advice hence they develop the skills and confidence of financial risks and opportunities awareness so as to make informed choice, access help and take effective action to improve their financial well being. Individuals could also be exposed to financial education policies and programmes to increase their financial literacy and know how.

Financial education has been identified as one solution to improve financial literacy across all boundaries in the world having many countries opting to establish a national financial strategy. However,

guidance and direction has to be offered to the developing countries to effectively set up the same strategy (Holzmann, 2010).

According to (Johnston 2005), literature and findings on financial literacy show that there is still a big number of financially illiterate investors across the world who have failed to understand their needs and which financial instruments to use.

Financial education programs have been designed and established to improve financial literacy levels of individuals as potential investors so as they can make better financial decisions. The programs are not sufficient for anyone to become an expert rather they help to groom investors towards making the best decisions available in the market.

There is evidence that people in the United States with limited English proficiency ( a limited liability to read, write, speak or understand English language) were more likely to have low educational attainment and level of education can affect financial literacy. Researchers with the Board of Governors of the Federal Reserve System who reviewed consumer survey data from the University of Michigan found a statistically significant correlation between respondents' levels of formal education and their ability to correctly answer a series of true-false questions concerning savings, credit, and other general financial management matters. Also the report by Lutheran Immigration and Refugee Service stated that advanced literacy skills are needed to understand the terms and conditions tied to most financial contracts and that it can take up to 5 years of regular English communication and practice for an immigrant who is not a native English speaker to achieve that level of advanced literacy.

In prior studies, it has been proven that individuals with limited English proficiency who are not literate in any language face clear barriers to learning about and understanding financial issues, which can greatly impede their ability to conduct their everyday financial affairs. Some service providers and advocates have that other factors other than language affect the financial literacy of people with limited English proficiency, translations of financial products and financial education materials may not be sufficient to address obstacles to financial literacy. It was found out that, while overcoming language barriers is important, efforts to improve the financial literacy and well-being of people with limited English proficiency must also address underlying cultural and socioeconomic issues.

Researchers have found out that consumers with limited English proficiency were more likely to use alternative financial services and were more susceptible to fraudulent and predatory practices and did not have accounts at banks and other mainstream financial institutions. The Lutheran Immigration and Refugee Service report noted that some immigrants may trust financial service providers who speak their native language even if they do not understand the legalities of agreements they make. Lack of proficiency in English can create significant barriers to financial literacy and to conducting everyday financial affairs. However, Interpretation (oral translation) could be used, but it can also be of limited usefulness if the interpreter does not fully understand or is not able to explain the material, a problem exacerbated by the fact that adults with limited English proficiency often receive assistance from their minor children.

Despite a lack of systematic research, a variety of researchers agree that lack of proficiency in English can create significant barriers to financial literacy and to conducting everyday financial affairs given the complexity of financial products and the language often used to describe them. Some explained that, because language is the medium most used to access information and ideas, individuals lacking English language skills are limited in their ability to communicate with English speaking financial service providers and to perform certain tasks necessary to initiate financial transactions and access financial tools and educational materials such as Completing key documents, Managing bank accounts, Resolving problems and Accessing financial education. Financial education is a determinant of financial literacy such that individuals who had lower levels of education ( elementary stage- primary level) are deemed to have low financial literacy levels than degree holders and graduates, emphasis is however placed on the type of subjects and courses learned. (Almenberg and Sävje-Söderberg 2011).

Researchers have identified the need for reform in the teaching of financial economic knowledge and the introduction of programmes aimed at increasing interest in financial matters. It would be important to teach this kind of knowledge efficiently in the lower levels of the education system, as most people do not continue their studies in higher education.

Emphasis should be placed on practical training as several researchers have demonstrated that the interest in financial matters and the interest vested in them have a positive effect on the financial literacy of individuals, so special emphasis should be given to this aspect in addition to imparting financial knowledge.

In addition to the above, correlation between financial literacy and financial education has been found to be present at the early stages of lifecycle where children of college graduates perform better on numerical test. (Mandell, 2004, 2008)

Certain studies have shown that financial education is not sufficient for providing adequate information and developing skills, since the attitudes acquired in the family have a greater impact on the future financial

behavior of individuals especially the young people (for instance the propensity to save and take risks) than the knowledge acquired in formal schooling (Hanti, 2011).

### **2.4.3 Concept of Age**

Age is regarded as the length of time that a person has lived or a thing existed (Cambridge English dictionary). Researchers have found out that Age has an effect on the level of financial knowledge the student's financial knowledge which develops over time as they grow older. This seems to be evident, just as in other areas and aspects of life, where we gain more knowledge in finances in the course of our lives. In addition, as they grow older, young adults more frequently find themselves in situations such as taking out a loan and buying a real property that help expand their financial knowledge.

Studies show that family background also influences the financial knowledge value achieved by the young people in the family especially if some of their parents and grandparents have a higher degree.

The relationship between financial literacy and age had its peak (high financial literacy levels) at 40 years in India and 45 years in Indonesia. (Xu and Ziaa, 2012).

Age been found to have a significant association with financial literacy, a study on financial literacy by Van Rooij et al. (2007) found the profile of basic literacy to be negatively skewed with regards to age. Financial Literacy level has been found to be low among the young, highest among middle-age respondents (particularly 40 to 60), and declines slightly at an advanced age of 61 or over.

Similar findings were reported in the Australian context with the youngest (18-24) and the oldest (70 & over) age groups displaying the lowest financial literacy scores (ANZ, 2008).

In one of Worthington's (2004) studies on financial research, he concluded that financial literacy levels in old people in Australia (51-60 years old) was lower compared to young individuals (21-49 years old). Almenberg (2011) found out similar results that financial literacy among the 35-50 year old group was higher when compared to the 65 year old group in Sweden. They explained the relationship between financial literacy and age using a curve, the curve showed financial literacy at different ages of an individual. The curve was at its peak at around 35 years and lowest at 65 years. On a similar note, Lusardi and Mitchell (2006) noted a five percent better performance on financial literacy test scores with prime age group (25-65) than those under 25 or over 65 years old; U.S retirees in the 51-56 years old age group were the least financially literate. Consequently, research in India and Indonesia found high literacy levels were highest at 40 and 45 years respectively (Cole et al., 2008).

Lusardi et al. (2006) discovered that retirement also played a role in influencing financial literacy levels of US baby-boomers (51-56 years) as they had the lowest financial literacy levels among all the age groups and concluded that financial literacy decays as individuals become older

Finke et al. (2011) likewise in their research explained that old age was associated with lower financial literacy levels all over the world and showed that it was due to cognitive processes declining at a very fast rate at old age, hence affecting the ability to remember important aspects of finance.

Beal and Delpachitra (2003), did a study on financial literacy of Australian college students and compared their literacy to adults aged between 30-45 years and found out that financial literacy in the adults aged between 30-45 years was higher than that of college students in Australia. The conclusion was that the difference of financial literacy levels resulted from adults having more exposure to real life financial issues than the college students.

### **2.4.4 Concept of Gender**

FAO (Food and Agriculture Organization), (1997) defines gender as the relation between men and women in the society and often governs the processes of production, reproduction consumption and distribution. Gender is defined as the state of being either male or female used with reference to social cultural differences rather than biological differences.

Gender has been found to be a predictor of financial literacy in numerous studies that have been done by researchers all over the world. Several researchers such as Mandell (2008), Almenberg & Save Soderbergh (2011), Chen and Volpe (1998) and Lusardi et al (2006, 2008) have concluded that men perform much better on various financial literacy tests than women of the same age. Almenberg and Save-Soderbergh (2011) explain that women have lower financial literacy levels compared to men because all financial decisions in the house are made by the man in Sweden. Goldsmith and Goldsmith (1997) have explained as a result of women natural disinterest in matters of finance in the household they usually score worse than men in topics such as investments and personal finance.

According to the several findings, men performed better on the test measuring financial knowledge than women hence it is assumed that men are more interested in financial matters than women and as a result they are better informed.

Studies suggest that women have lower financial literacy levels than men as they possess little knowledge on securities, investing and the market (Hira&Mugenda, 2000; Loibl&Hira, 2006). Ford and Kent (2010), noted that the difference in financial literacy levels between men and women is as a result of three things; women have no interest at all in financial matters that are taking place in the financial markets, they are also intimidated by the complexity of investing in the markets and they have no situational awareness as they have little financial information about the markets at any time. The factors caused lack of interest in personal financial management hence leading women to be disinterested in the activities of the financial markets in the long run.

Fonseca et al. (2009), stipulates that since women have been known to live longer scientifically and a small percentage of them have professional jobs then their low financial literacy levels are of great concern as they would be financially vulnerable. He adds that financial education is the critical factor in explaining why men have high levels of financial literacy. He maintains that if more women especially in third world countries are allowed to pursue their education, then with time there would be no gender based differences in financial literacy levels.

#### **2.4.5 Concept of Occupation**

Occupation has been linked with financial literacy by many researchers being shown as a determinant of financial literacy. Worthington (2006,2008), demonstrated higher financial literacy levels with Australians working in white collar jobs, while the financial literacy levels of those who were unemployed or working in blue collar jobs was the worst as financial literacy scores are typically higher amongst individuals' who are in professional and managerial occupations. Monticone (2010) asserts that the most financially literate group in Italy was the white-collar group followed by the self employed individuals and found that his most illiterate group was made up of individuals working in blue collar jobs, the unemployed and individuals working in health and tourism sectors. He explained that the levels of financial literacy were also dependent on which type of white collar job or self employment an individual was involved in. For instance, he pointed out that individuals working as accountants or working in the financial sector had very high financial literacy levels than computer technicians or doctors. This was because accountants get to learn several financial aspects as they keep on doing their work while doctors and computer technicians have no high levels of financial literacy as a result of the nature of the work they are involved in.

Cole et al. (2008) argued that in Indonesia individuals working as entrepreneurs' registered high levels of financial literacy compared to the village farmers who had lower financial literacy levels. Similarly, a survey of United Arab Emirates investors found that individuals' who worked in the field of finance/banking or investment, display higher levels of financial knowledge than those in other occupations fields (Al-Tamimi& Bin Kalli, 2009).

#### **2.4.6 Concept of Income level**

This concept was first brought into light by Delavande et al. (2008) and Peress (2004). Delavande et al. (2008) argued that investments and risky assets held by an investor speak volumes on the financial literacy level of the individual investor. Thus if an investor has invested in stocks, then his/her returns are a determinant of the financial literacy possessed by the investor. Financial literacy scores have been found to be generally associated with personal income levels as higher financial literacy scores are likely to be displayed by individuals with higher levels of personal income and lower scores by those with lower incomes (ANZ, 2008). Higher income levels have been shown to be a motivating factor in improving financial literacy levels, since individuals would seek financial knowledge to manage their income effectively. Guiso et al. (2008), Lusardi et al (2007), Lusardi et al (2009), Alessie et al. (2007, 2008), all show that income plays an important role and is a critical factor of financial literacy (Xu and Zia, 2012).

Studies done on students show that the more income students have and the less of it comes from the family as support, the more advanced their financial knowledge is, as the students with a higher income can make financial transactions such as investments which their less wealthy peers cannot afford.

Furthermore, higher income can increase interest in financial processes due to exposure, as that the students who have to rely on other sources to generate income for instance on student loans could, as a result acquire new financial knowledge.

Traut-Mattausch& Jonas (2011) found that the relationship between financial literacy levels and saving is moderated by the income levels which have a positive association with saving behavior. Several studies suggest that wealth factors (such as investment held) have a positive impact on financial literacy since the acquisition of financial knowledge may be motivated by the need to manage own models were supported by various empirical findings that financial literacy increases with wealth (Guiso&Jappelli (2008), Lusardi& Mitchell (2008)). Wealth accumulation increases financial literacy as individuals seek to increase their financial

literacy in order to understand the investments they hold while those with less wealth are less likely to increase their financial literacy levels.

There is sufficient evidence to show the causal effect of income on financial literacy. Numerous researches have shown that income has an impact on financial literacy as the need for personal financial management motivates the acquisition of financial knowledge (financial literacy). Willis et al. (2008) argue that there exists a frontier (mean-variance) which an investor can continue to make sufficient returns on his returns at any given risk level so long as he remains inside the frontier. The three researchers concluded that, although any investor will have to spend (cost) on gaining financial literacy the benefits they would obtain from higher risk adjusted returns will be substantial and above average. Hence, as costs rise with the financial literacy gained so do the returns; higher levels of literacy ensure higher expected returns that will compensate for any costs associated with gaining financial literacy. Thus, high income earners should be highly motivated to gain financial literacy as this predicts the high levels of returns that they would receive in their investments.

Peress' (2004) study however, has pointed out that high income earners have much to spend than low income earners, as such high income earners can spend more in gaining financial literacy that is the information on products and services in the market thereby branding them risk takers or risky businessmen. Peres stipulates higher costs incurred in gaining financial literacy will raise portfolio adjusted risk and returns thus tolerance to high costs of investing from the high income earners makes them suitable candidates to expect huge returns from the markets. He cautions that while high income earners can follow his model of high risk- high returns suitably low income earners cannot enjoy the same privilege as his model depicts that gaining financial knowledge (literacy) about the market is not worth the cost for any low income earner. There exists a threshold where any investor earning below 50 percent of the per capita income cannot practice the model efficiently (the model has been established under the assumption that financial literacy about the market increase portfolio risk-adjusted returns for any investor who is above the set threshold).

#### **2.4.7 Concept of Sources of Financial Information or advice**

The study will review a number of sources of information and choice of financial advisors often relied on and their effect on individuals' literacy levels. These are; Informal tools such as peers and family and Formal tools such as financial experts, television sets, newspapers, magazines and internet.

Studies have shown that a high proportion of individuals with low financial literacy tend to rely on informal tools such as; family, friends and acquaintances for financial advice. A study on financial literacy and stock market participation by van Rooij et al (2007) found that households with low financial literacy tended to get advice from peers or family rather than formal sources while, individuals who displayed high levels of financial literacy were more likely to rely on formal tools such as; newspapers, consult financial advisors, and seek information on the internet rather than informal ones (van Rooij et al., 2007).

Lusardi et al. (2005) found that financial literacy correlates with tool use. The factors that directly influence financial literacy levels may also indirectly affect the choice of financial advisors and information sources. For instance, the type of occupation would determine the sources available for the individual such that an accountant will have more logical with referential information will a doctor will rely on financial materials available in financial institutions and financial advisors.

Furthermore, the financial attitudes and values people have about money come from their environment as the effects of social interactions on individual behavior have been modeled, tested and applied to a wide variety of situations (Glaeser & Scheinkman, 2003). Social interaction may affect an individual's financial literacy level as people receive and process information through interacting with others. Cultural differences play a role in financial literacy because different populations have dissimilar norms, attitudes, and experiences related to managing money (in some cultures debt is viewed negatively, which may deter individuals from taking loans to purchase homes and building credit histories).

#### **2.5 Empirical Review**

A study done by Monticone, (2010) on the theory and empirical evidence on financial literacy and financial advice found the determinants of financial literacy to be; Demographic characteristics, such as being male and white, which were commonly associated with greater financial knowledge in several countries (Lusardi and Mitchell, and Lyons et al., 2007 for the US). He pointed out that there is some evidence of an inverse U-shaped age profile of financial knowledge, meaning that middle-aged adults report higher scores than both their younger and older counterparts (Australia and New Zealand Banking Group, 2008). The initial rise with age was related to an increase in experience, while the subsequent decline related to the result of deteriorating cognitive functions (Agarwal et al., 2009).

A higher level of education was associated with a higher degree of financial knowledge. Other factors he looked at that related to financial literacy were time preferences, family background (Lusardi et al., 2010) and household wealth resources. The literature exploring the role of household resources as a determinant of

financial knowledge was mainly based on empirical contributions. Meier and Sprenger (2008) show that knowledge is positively associated with income level, while in Italy, Guiso and Jappelli (, 2008) find that high income and financial wealth were associated with greater financial knowledge scores and a greater amount of time spent every week to obtain information on investing one's savings.

OECD (organization for economic cooperation and development,(2004) investigated the factors that could promote a more responsible and inclusive globalization. They held their 2<sup>nd</sup> OECD conference of ministers responsible for small and medium sized enterprises SMEs in Istanbul, Turkey. This was their final report among the ten others that set out some policy messages and recommendations to the Austrian economy. They explored why women's entrepreneurship was different from men in both form and quality.

Among the reasons they found out was that, there was a problem in underdeveloped economies, where social structure and economic problems deprived women of basic education since illiteracy among women was higher than for men. For example, the rate of literacy is 43% for women and 55% for men in Bangladesh. Illiteracy excluded women from possibilities to access information through which they could identify and assess different entrepreneurial opportunities. This included financial information and resources as their ability to exploit an opportunity was hampered as women were not able to read, write and count subjects. This exposed them to the risks of being financially exploited by others and having to operate in the informal sector as they needed to rely on others for information on what is happening around them. This was unfortunately the case for many women entrepreneurs in developing economies, both in Africa and Asia, since the combination of high levels of illiteracy and low social position exposes women to a high risk of exploitation and violence.

The World Bank development research group, Cole, et al, (2011) in their paper reported experimental results of a study to measure the impact of financial education on three layers of financial knowledge that is numeracy skills, basic financial awareness, and attitudes towards financial decisions among the low income urban households in India. Their findings suggested that financial education had limited effects in increasing financial numeracy. Specifically, they did not find that financial literacy training fosters individual abilities to calculate and compare interest returns, insurance costs, or household income and expenses, even when provided with monetary incentives, respondents were unable to answer these questions correctly.

However, they found out that financial education influences participants' awareness of and attitudes towards financial products and financial planning tools available to them. Their results had important implications for advancing both research and policy, since their findings indicated that measuring financial literacy should not exclusively focus on questions that required high numeracy skills. Financial education programs could affect financial decisionmaking through channels other than financial numeracy, for instance by making individuals and households more aware about the details of financial products, or changing their attitudes towards purchasing and recommending formal financial products and services. These alternate channels may be as important, than enhancing numeracy skills. Furthermore, their finding that financial education influences financial awareness and attitudes provides evidence for establishing the causal framework between financial literacy training and financial outcomes. These changes in awareness and attitudes may allow individuals who have received the training to access appropriate financial products in the future. Although they sum up that their ongoing follow up data collection will allow them to assess whether this is true.

Tschache (2009) in Bozeman, Montana did a study to determine the importance of financial literacy and education for today's high school students and the content areas in the curriculum that the research participants believed to be the most important areas to teach in a financial education curriculum. The survey questioned teachers, administrators, parents, business owners, and community members. As a high school teacher, involved with today's youth, the researcher saw a need for financial education for the future consumers to be successful in the global economy as they will be forced to make financial decisions upon graduation that they have never made before by applying their financial literacy level. They only have a chance of being wise in their choices if they have an exposure to knowledge and skills in a class such as Personal Finance. The findings were that there is a definite need for financial education in our schools systems and curriculum areas today. There has been a steady growth of exposure to financial education making it even more valuable for the future, as indicated in the history of financial education, by instituting a Personal Finance class in a high school for the youth to have knowledge and skills to manage their finances and be aware of financial concepts as they relate to their everyday life. He noted that there were agencies, states, and mandates that supported this idea of financial literacy and that it was important to know what the teachers, administrators, parents, business owners, and community members of Bozeman, Montana to feel the value of the content of this type of curriculum whose content was also most important. The researcher believed that students could be exposed to instruction on managing their money through a Personal Finance class and increase their knowledge and skills to handle financial issues in their future. The researcher planned to offer a Personal Finance class to juniors and seniors at Bozeman High School to fulfill future mandates that their state might eventually be required to meet and also fulfill an acquisition of knowledge and skills that the students of Bozeman High School needed to function in an ever changing global economy. He recommended a more in depth study of the concepts that were currently

being taught as they might be helpful to know what is being taught in the elementary grades as well as the middle school leading up to the high school.

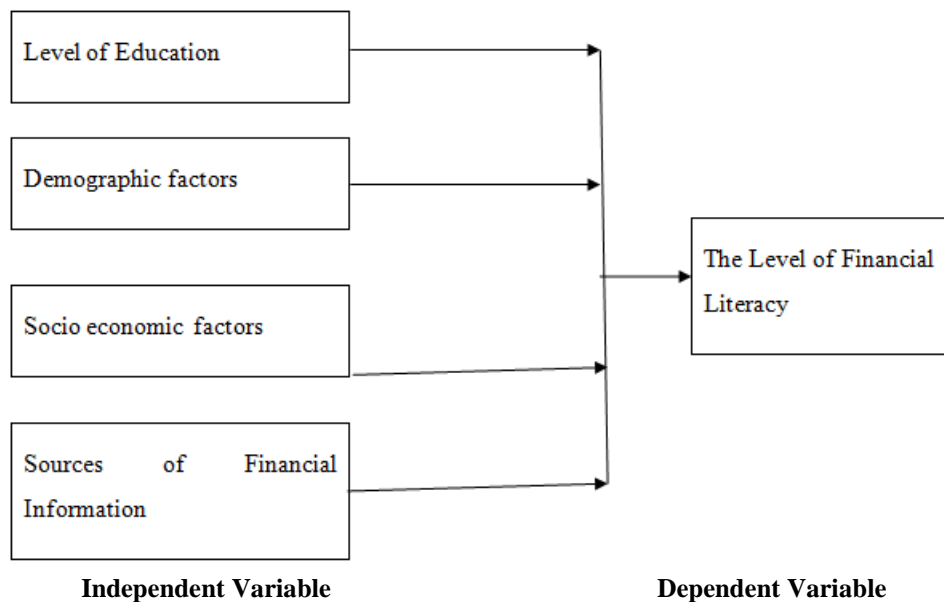
Furthermore, researchers could branch out from that study and look at growth in the financial curriculum in all subject areas for the state of Montana in the year 2014.

## 2.6 Summary of Literature Review and Research Gaps

A detailed review of the literature reveals that the following factors influence financial literacy. These are; Level of education, Gender, Age, Income level, Occupational status and the Sources of Financial information and advice. It shows that individuals in many nations are financial illiterate and this has been acknowledged by many nations globally, who are finding better ways and measures put in place to curb this problem that constantly changes due to the complex and dynamic financial products and services. The studies done on factors influencing financial literacy in Kenya are limited and do not address the independent variables in this study directly. This research therefore, seeks to cover this gap by investigate on these factors that influence financial Literacy in Meru County, Kenya.

## 2.7 Conceptualization

Conceptual framework is a diagrammatic presentation of the relationship between dependent and independent variables (Mugenda & Mugenda, 2003). In this study, the dependent variable is financial literacy, the independent variables are the factors influencing financial literacy as identified in chapter one. The conceptual framework to be developed in the study will provide a strong basis for conducting further surveys to provide empirical evidence that will enhance understanding of the factors that influencing financial literacy in Meru County.



**Figure 2.2;** Conceptual Framework

**Financial Literacy** has been defined as a combination of awareness, knowledge, understanding, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial well being.

**Level of Education** is the process by which financial consumers improve their understanding about financial products, concepts and risk through financial information, instruction and objective advice hence they develop the skills and confidence of financial risks and opportunities awareness so as to make informed choice, access help and take effective action to improve their financial well being. Education can be in terms of formal or informal education. Formal education can be categorized into primary, high school and universities.

**Age** is regarded as the length of time that a person has lived or a thing existed (Cambridge English dictionary). In this case we have the young (18-40), the middle aged (40-60) and the old individuals (over 61 years).

**Gender;** FAO (Food and Agriculture Organization), (1997) defines gender as the relation between men and women in the society and often governs the processes of production, reproduction consumption and distribution. Gender is defined as the state of being either male or female used with reference to social cultural differences rather than biological differences.



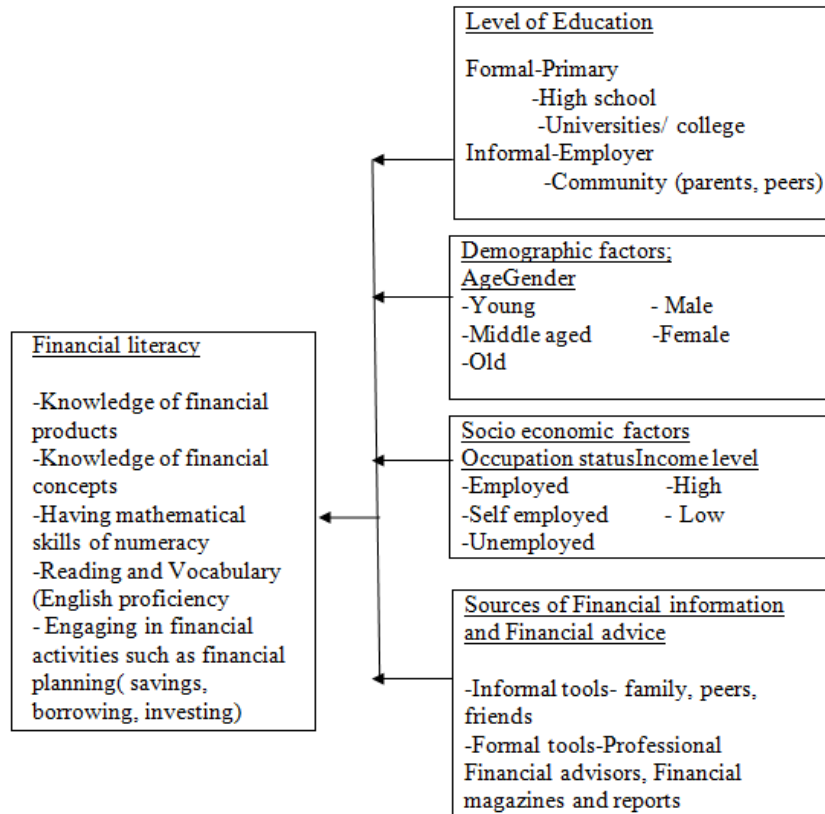
**Occupation status** This can be termed as a state of being employed, self employed or unemployed and this could be in regards to white collar jobs or Blue collar jobs.

**Income level** can be classified in terms of lower income earners, thus a group below the Pay As You Earn threshold, the middle-income earners and the high-income earners.

**Sources of Financial Information and financial advice** include; the formal and informal tools. The formal tools include professional advisors, financial magazines and reports, while informal tools include family, friends and peers

### 2.8 Operationalization

The operational framework below shows the relationship between the independent variables and the dependent variable. It also states the indicators that will be used to measure each of the variables.



### Dependent Variable and independent variables Statistics

Figure 2.3; Operational Framework

## III. Research Methodology

### 3.1 Introduction

This chapter provides a discussion of the research methodology that was used in carrying out this study. This includes the research design with respect to the choice of the design, the target population of the study, sample design and sample size, data collection methods, reliability, validity data analysis and presentation and finally ethical considerations adopted in the study.

### 3.2 Research Design

This study employed descriptive survey research design that included surveys and fact findings enquiries of different kinds. According to Wangai (2006) descriptive research is a scientific method of investigation in which data is collected and analyzed in order to describe current conditions, term or the relationships concerning a problem. The research design for the study according to Zikmund and Babin, (2007), not only can one collect general data from a relatively large sample size, but can provide a quick, inexpensive, efficient and accurate method of accessing data regarding the target population. The descriptive survey minimizes bias, saves time providing insight and actual information that maximizes reliability of the evidence collected. In this case to give accurate description of the association between the two variables, that is, the

dependent variable (Financial Literacy) and the independent variables (Level of education, age, gender, occupation status, income level and sources of financial information and financial education).

### **3.3 Target Population**

A population is a complete set of elements in the study that is the persons or objects that possess some common characteristics defined by the sampling criteria established by the researcher. We have two groups of population namely, target population and accessible population. The Target population is the entire group of people or objects to which the researcher wishes to generalize the study findings while Accessible population is the portion of the population to which the researcher has reasonable access to and may be a subset of the target population. In this study, the population was expected to be all individuals residing in Meru County. According to the Kenya National Bureau Statistics of Kenya, as by the year 2009 Census Meru County has a total of 1,356,301 people hence the target population for the study will be men, women and the youth in Meru County.

### **3.4 Sample Design and Sample Size**

The study used a non-probability sampling method which of the convenience sampling technique. Non-Probability sampling is done without consideration of equity of selection among the elements. The convenience sampling technique is often used because of reality, where we cannot draw a sample, but we have a group that is accessible, is a representative of our target population and just available to the researcher. The technique allows the researcher to get a higher rate of response as the respondents are easily available, time is saved and there is no need for long distance travel in search of particular correspondents hence it is inexpensive.

A sample size is the representative portion of the whole population (Brown 2009). A sample size of 400 was selected from the total population of 1,356,301 individuals in Meru County. This is due to the fact that with a confidence level of 95% and a population of 1,356,301, the sample size has to be 400 people. These people were chosen from Farmers Meetings and trainings, Salons and barbers, Market places such as Gakoromone Market, Main Matatu Stages, financial institutions and schools as they comprised of individuals with different characteristics that allowed for viable findings to be made.

The formula recommended by Yamane (1967) for calculating sample size. A 95% confidence level and  $P = 0.05$  are assumed

$$n = N / (1 + N(e^2))$$

Where;

n is the sample required

N is the total population

$e^2$  is the probability error

$$n = 1,356,301 / (1 + 1,356,301(0.05^2))$$

$$= 1,356,301 / (1 + 3,390.7525)$$

$$= 399.882$$

$$= 400 \text{ people}$$

### **3.5 Data collection Methods**

A questionnaire with both open and closed ended questions was used when collecting data. For closed ended questions multiple choice questions were used to collect the data from respondents. The questionnaire had five sections: section one; gathered data on the level of financial literacy, section two; on the level of education, section three; on demographic factors of Age and Gender, section four; on socio economic factors occupation status and income level and finally the fifth section on Sources of financial information. The sections one, two, three, four and five covered data on the independent variables mentioned and the dependent variable, which is the level of financial Literacy, this data was then be the basis of the analysis and conclusions of the research.

### **3.6 Reliability**

A pilot test was organized to measure the reliability of the questionnaire and the test model. Pre testing was done by administering the questionnaire to 50 respondents at Hand of God Cyber and Beauty Spa salon at Makutano area in Meru. These were strategic positions where individuals are likely to visit on daily basis as the access other facilities such as financial and non-financial institutions in Makutano area in Meru.

The questionnaire had been structured in a way that it will be easy for the respondents to answer in less time with minimum clarifications. The respondents were only allowed to answer the questionnaire within 15-20 minutes after which collection will be done. Answered questions were checked to find out if all the questions have been answered to meet the objective of the questionnaire.

The questionnaire was considered reliable when they gave consistent results, thus when pilot testing was done and the questionnaires given to a number of elements that were part of the population but not part of the sample studied then, they gave consistent results to that of the sample group. Reliability contributes to validity

### 3.7 Validity

This involves the content and the construct validity of the instrument to be used in this case the questionnaire. The content validity was tested on the framed questions of the questionnaire, while the construct validity was tested on whether the questions in the questionnaire that were used were relevant in achieving the objectives of the study. In order to ensure and enhance content validity, the questionnaires were composed of carefully constructed questions to avoid ambiguity and in order to facilitate answers to all to meet the objective of the study. The instrument was also presented to research experts such as my supervisors who will ascertain its face validity.

### 3.8 Data Analysis and Presentation

These data collected was summarized and categorized according to common themes, then analyzed using frequency distribution tables and measures of central tendencies such as mean as descriptive statistics was used to describe the general characteristics of the population. The measure of association used was chi-square as the chi-square test highlighted the relationships and differences of the variables. For further processing of the presentation of data results, the Statistical Package for Social Sciences (SPSS) version 21.0 was used. Finally, the data was then presented in terms of tables, graphs and figures for summary purposes.

### 3.9 Ethical Considerations

Confidentiality was highly practiced on the data and information provided by the respondents during and after data collection. The primary data in the questionnaires was handled with caution to ensure confidentiality as the information collected was used only for academic purposes. Moreover, the respondents were not required to include their names in the questionnaires.

## IV. Data Presentation, Analysis And Interpretation

### 4.1. INTRODUCTION

This chapter involves presentation, analysis of data collected and discussions on the findings based on the hypotheses tested. The presentation is in form of frequency tables and percentages. The variables of the study were measured using structured questions and likert scale. Study done was based on specific objectives that formed the research hypotheses.

### 4.2. RELIABILITY STATISTICS

According to Sakaran (2001), testing goodness of data by testing the reliability and validity of the measure is a pre-requisite for data analysis. The Reliability of the data collected was measured using the Cronbach's Alpha generated from SPSS (version 20). It is a function of the number of items in a test, the average covariance between item-pairs, and the variance of the total score. Based on the pilot study conducted prior to data collection, the instrument had a value of 0.8, which lies within the acceptable range of 0.7 to 1.0 and hence the instrument can be termed as reliable.

### 4.3. RESPONSE RATE

A total of 400 questionnaires were given to various individuals in Meru County but only 300 individuals were able to give back their questionnaire indicating a 75% response rate, while 23% non-response of those sampled. Compared to other responses rates for similar results by Chiocha (2009) of 47.14%, the 75% was found to be significant to carry out the analysis by the researcher.

**Table 4:1** Analysis of Response

	Male	Female	Total
Population	200	200	400
Completed questionnaires	167	133	300
Population Response rate	75%		

### 4.4. SAMPLE CHARACTERISTICS

This section presents the sample characteristics of the respondents such as their age group, gender, occupation, level of educational, Income level, professional qualifications and sources of financial information. The findings are presented below using descriptive statistics such as, frequencies and percentages.

#### 4.4.1 Sample characteristics

Responses	Frequency(f)	Percent (%)
<b>Gender</b>		
Male	167	55.7
Female	133	44.3
<b>Total</b>	<b>300</b>	<b>100</b>
<b>Age group</b>		
18-30 years	35	11.7
30-45 years	179	59.7
46-60 years	71	23.7
61 and over years	15	5.0
<b>Total</b>	<b>300</b>	<b>100</b>
<b>Professional Qualification</b>		
Teacher	37	12.3
Accountant	24	8.0
Other	82	27.3
Banker	18	6.0
Farmer	139	46.3
<b>Total</b>	<b>300</b>	<b>100</b>
<b>Level of Education</b>		
None	16	5.3
Primary	70	23.3
Secondary	134	44.7
College	64	21.3
University	16	5.3
<b>Total</b>	<b>300</b>	<b>100</b>
<b>Experience</b>		
Less than 3 years	58	19.3
3-6 years	97	32.3
7-10 years	125	41.7
More than 10 years	20	6.7
<b>Total</b>	<b>300</b>	<b>100</b>
<b>Occupation Category</b>		
Employed	86	28.7
Self Employed	143	47.7
Un employed	71	23.7
<b>Total</b>	<b>300</b>	<b>100</b>

#### 4.5 Variables of the Study

This section presents data of the various variable of the study in form of percentages and frequencies. It describes the questions asked relating to the variables and shows the overall results.

##### 4.5.1 Financial Literacy

The dependent variable of this study is financial literacy level which was analyzed using questions 1, 2, 3, 5 and 6

Responses	Frequency(f)	Percent (%)
Knowledge of Compound interest and simple interest		
Yes	152	50.7
No	148	49.3
<b>Total</b>	<b>300</b>	<b>100</b>

*Determinants of the level of financial literacy in Meru county, Kenya: A Survey of Meru County*

Those with insurance policies		
Yes	108	36
No	192	64
<b>Total</b>	<b>300</b>	<b>100</b>
<hr/>		
Those that work with domestic budgets		
Yes	86	28.7
No	214	71.3
<b>Total</b>	<b>300</b>	<b>100</b>
<hr/>		
Personal ratings on savings		
Very poor	70	23.3
Poor	90	30
Good	45	15
Better	80	26.7
Best	15	5
<b>Total</b>	<b>300</b>	<b>100</b>
<hr/>		
Riskiness to fraud and being misguided on investment decisions		
I don't know	30	10
Lowest	6	2
Low	90	30
High	24	8
Highest	150	50
<b>Total</b>	<b>300</b>	<b>100</b>

From the above it can be observed that; Knowledge of Compound interest and simple interest had 50.7% of the respondents, those with insurance policies were only 36%, those that work with budgets were only 28.7%. This means that the level of financial literacy is quite low since those that are financially illiterate are more from the data above.

From the above data, it was determined that 49.3% of the respondents do not have the idea of the compound and simple interest concepts, but they have had about interest. For those that had about both interests 90% was learnt in schools and this was mostly for those that attended secondary school. More over 64% do not have insurance policies, and 71.3 % do not use domestic budgets on spending. The trend is relatively the same when it comes to personal ratings on savings which is at 30% as poor saving habits and riskiness to fraud and being misguided on investment decisions being at 50%. This is a worrying trend that the government together with concerned parties should take into consideration.

#### 4.5.2 Level of Education

The highest level of education attained was secondary level with 44.7%, primary had 23.3%, undergraduate with 21.3%, graduates with 5.3% and those that attended no school are with 5.3% as shown in the figure below. The questions used here were 4, 8 and 10

Responses	Frequency(f)	Percent (%)
The organization that should provide Financial information		
Financial Institutions	128	42.7
Government	165	55.
NGOs	7	2.3
<b>Total</b>	<b>300</b>	<b>100</b>

Responsibility to the youth on financial matters		
The government	150	50
Schools	75	25
Their parents	60	20
Their personal experience	15	5
<b>Total</b>	<b>300</b>	<b>100</b>
<hr/>		
Level of Education attained		
None	16	5.3
Primary	70	23.3
Secondary	134	44.7
College	64	21.3
University	16	5.3
<b>Total</b>	<b>300</b>	<b>100</b>

From the data collected, most respondents expect the government to provide information and data on financial matters and be responsible to ensure that the citizens benefit with these information, especially the youth. With 50% suggesting that the government was responsible of equipping its citizens with the necessary skills and knowledge to enhance economic development.

### 4.5.3 Demographic factors

#### 4.5.3.1 Age

From a total of 300 respondents, 11.7% were 18-30 years, 59.7% were 30-45 years, 23.7% were 46-60 years and 5% were 61 and over years. The question used here was 12

Responses	Frequency(f)	Percent (%)
<b>Age group</b>		
Below 30 years	35	11.7
30-45 years	179	59.7
46-60 years	71	23.7
61 and over years	15	5
<b>Total</b>	<b>300</b>	<b>100</b>

Majority of the respondents were 30-45 years of age thus 59.7% of the respondents, This is an active stage where many are preparing for future by investing in their own businesses, most are thinking of investing for retirement purposes, and the resultant was from the farmers who were the majority respondents during the Meru Dairy Annual Field day held at Agricultural Showground Kenya in Meru on 7<sup>th</sup> October, 2016. The test depicted that the financial literacy level of respondents aged between 59.7% aged between 30-45 years will only 5% for those above 61 years were literate

#### 4.5.3.2 Gender

From the respondents that were randomly selected for sampling purposes 55.7% of the respondents were male while 44.3% were female. The question used here was 13

Responses	Frequency(f)	Percent (%)
<b>Gender</b>		
Male	167	55.7
Female	133	44.3
<b>Total</b>	<b>300</b>	<b>100</b>

#### 4.5.4 Socio economic factors

##### 4.5.4.1 Income Level

Income level had 13.7% as high income earners with above 80,000, 46.0% as medium income earners with 30,000-79,000 and 40.3% as low income earners with 29,000 and below per month. The question used here was 18

Responses	Frequency(f)	Percent (%)
<b>Income Level</b>		
Low income(below 29,000)	121	40.3
Medium(30,000-79,000)	138	46.0
High income(Above 80,000)	41	13.7
<b>Total</b>	<b>300</b>	<b>100</b>
<b>Prioritize income spend</b>		
On Family	213	71
You and friends	8	2.7
Saving & investing	44	14.7
All of them	35	11.7
<b>Total</b>	<b>300</b>	<b>100</b>

On the prioritized income spending that take the biggest portion, we have spending on family with the highest 71%, this was mostly from the young category of 18-30 and 30-45 years, while the 14% of investing was majorly from the old group category of 46 years and above.

##### 4.5.4.2 Occupation

Occupation category had 28.7% as employed, 47.7% as self-employed and 23.7% unemployed from the data collected from the respondents during the study. The question used here was 14 and 16

Responses	Frequency(f)	Percent (%)
<b>Occupation category</b>		
Employed	86	28.7
Self employed	143	47.7
Un employed	71	23.7
<b>Total</b>	<b>300</b>	<b>100</b>
<b>Source of Income</b>		
Family	130	43.3
Employment	94	31.3
Sponsorship	9	3.0
Loans	67	22.3
<b>Total</b>	<b>300</b>	<b>100</b>

60% of those employed were in private sectors, 20% in public sector and 20% in financial institutions. For the self-employed, 90% were farmers both dairy and cash crop farmers majority of whom are small scale. For the source of income, 43.3% was from family run businesses especially farming, for those that had loans 22.3% majority were students and were unemployed, while those that sourced their income from employment was 31.3% of the total respondents in the study.

#### 4.5.5 Sources of financial information

From the study, 12.7% of respondents preferred financial information from peers most of whom are of the same age bracket, 13.7% were more confident with financial information from family members, especially the most experienced family members were seen as the main source of advice on financial matters, 65.7% preferred financial information from financial institutions and 8.7% preferred the media as they were more confident of what is advertised as it seemed more legitimate to them.

Responses	Frequency(f)	Percent (%)
<b>Source of Information</b>		
Peers	38	12.7
Family	41	13.7
Financial Institutions	195	65.
Media	26	8.7
<b>Total</b>	<b>300</b>	<b>100</b>
<b>Financial experts advice</b>		
Never	35	11.7
Sometimes	86	28.7
Always	179	59.7
<b>Total</b>	<b>300</b>	<b>100</b>

For trust placed on financial experts' advice, 11.7% of respondents did not consider getting financial information from financial experts, as they dependent on their peers and experience. 28.7% were practicing consultation with the financial experts, while 59.7 % depended solemnly on the financial information provide by experts, this comprised mainly of those that go to financial institutions to seek financial information and see that the financial institutions are responsible to providing adequate information on finance.

#### 4.6 Coding of Responses for the Variables

Data collected in the questionnaires was entered in the SPSS(version 20)as the following values; '18-30 years=1', '30-45 years=2', '46-60 years=3', '61 and above years=4, before the data collected was analyzed. For the purposes of analysis, dichotomous outcomes like 'Yes='1' and No='0', while for scale questions '18-30 years' and '30-45 years' were coded 1 whereas '46-60 years' and '61 and above years' were coded 2 for 'young' and 'old' respectively. For point scale question, the question was coded 1 for half positive extreme categories and 2 for half negative extreme categories.

#### 4.7Hypothesis Tests

The hypothesis tests were done at 5% level of significance using the Chi- square test of significance done using SPSS (version 20). The Chi square option is a test for independent or correlation coefficient. Correlation analysis was done to determine the questionnaire items of independent variables with the highest correlation to the dependent variable question were chosen for cross tabulation of chi square analysis presented in frequency tables and percentages.

##### 4.7.1Specific Hypotheses

H<sub>1</sub> Level of education has no significant relationship financial literacy in Meru county.

H<sub>2</sub> Demographic factors have no significant relationship with financial literacy in Meru county.

H<sub>3</sub> Socio- economic factors have no significant relationship with financial literacy in Meru county.



H<sub>4</sub> Sources of Financial information have no significant relationship with financial literacy in Meru County.

**4.7.1 Results obtained in Chi Square Analysis**

**Table 4.7:** *Chi-Square Tests of level of education against financial literacy*

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.685	1	0.001

**Table 4.8:** *Symmetric Measures of level of education against Financial literacy*

		Value	Approx. Sig.
Nominal by Nominal	Phi	0.189	0.001
	Cramer's V	0.189	0.001

From the results in Table 4.7, the null hypothesis was rejected,  $\chi^2 (1) = 10.685, p \leq 0.05$ . Since 0.001 is lesser than Alpha 0.05 it reveals that the result is a great significant between level of education and Financial Literacy, hence we reject the null hypothesis thus, there is significance of association between the variables that is level of education and financial literacy. Table 4.8 above indicates the strength of the relationship with Phi value which is similar to the Pearson's R which in this case was found to be 0.189. This value indicates a moderate effect of the relationship between the two variables. Phi defines perfect association as predictive monotonous and defines null relationship as statistical independence. In this case, the percent difference with financial literacy independent (column) is 19%, and with level of education as independent is 19%. Phi is the mean percent difference between financial literacy and level of education with either considered as be resulting to the other.

**Table 4.9:** *Chi-Square Tests of Age against Financial literacy*

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.597	1	0.058

**Table 4.10:** *Symmetric Measures of Age against Financial literacy*

		Value	Approx. Sig.
Nominal by Nominal	Phi	0.109	0.058
	Cramer's V	0.109	0.058

From the results in Table 4.9, the null hypothesis was rejected,  $\chi^2 (1) = 3.597, p \leq 0.05$ .

Since 0.058 is slightly greater than Alpha 0.05 it reveals that the result is some weak significant between age and Financial Literacy, hence we reject the null hypothesis thus, there is fairly significance of association between the variables that is age and financial literacy. Table 4.10 above indicates the strength of the relationship with Phi value which is similar to the Pearson's R which in this case was found to be 0.109. This value indicates a moderate effect of the relationship between the two variables. Phi defines perfect association as predictive monotonous and defines null relationship as statistical independence. In this case, the percent difference with financial literacy independent (column) is 10.9%, and with age as independent is 10.9%. Phi is the mean percent difference between financial literacy and age with either considered as be resulting to the other with other.

**Table 4.11:** *Chi-Square Tests of gender against Financial literacy*

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.706	1	0.401

**Table 4.12:** *Symmetric Measures of gender against Financial literacy*

		Value	Approx. Sig.
Nominal by Nominal	Phi	0.048	0.401
	Cramer's V	0.048	0.401

From the results in Table 4.11, the null hypothesis was accepted,  $\chi^2 (1) = 0.706, p \geq 0.05$ . Since 0.401 is greater

than Alpha 0.05, it shows that there is highly no significance, hence we accept the null hypothesis thus H<sub>0</sub>, no significant of association between the variables that is Gender category and financial literacy. Table 4.12 above

indicates the Phi value which is similar to the Pearson's R which in this case was found to be 0.048. This value indicates totally no effect of the relationship between the two variables. The percent difference with financial literacy independent (column) is 4.8%, and with gender as independent is 4.8%. Phi is the mean percent difference between financial literacy and gender with either considered as being causing the other.

*Table 4.13: Chi-Square Tests of occupation against Financial literacy*

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.432	1	0.511

*Table 4.14: Symmetric Measures of occupation against Financial literacy*

		Value	Approx. Sig.
Nominal by Nominal	Phi	0.038	0.511
	Cramer's V	0.038	0.511

From the results in Table 4.13, the null hypothesis was accepted,  $\chi^2 (1) = 0.432, p \geq 0.05$ . Since 0.511 is greater than Alpha 0.05, it shows that there is highly no significance, hence we accept the null hypothesis thus  $H_0$ , no significant of association between the variables that is Occupation category and financial literacy. Table 4.14 above indicates the Phi value which is similar to the Pearson's R which in this case was found to be 0.038. This value indicates totally no effect of the relationship between the two variables. The percent difference with financial literacy independent (column) is 3.8%, and with occupation category as independent is 3.8%. Phi is the mean percent difference between financial literacy and occupation category with either considered as being resulting to the other with other.

*Table 4.15: Chi-Square Tests of Income against Financial literacy*

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.095	1	0.758

*Table 4.16: Symmetric Measures of Income against Financial literacy*

		Value	Approx. Sig.
Nominal by Nominal	Phi	0.018	0.758
	Cramer's V	0.018	0.758

From the results in Table 4.15, the null hypothesis was accepted,  $\chi^2 (1) = 0.095, p \geq 0.05$ . Since 0.758 is greater than Alpha 0.05, it shows that there is highly no significance, hence we accept the null hypothesis thus  $H_0$ , no significant of association between the variables that is income category and financial literacy. Table 4.16 above indicates the Phi value which is similar to the Pearson's R which in this case was found to be 0.018. This value indicates totally no effect of the relationship between the two variables. The percent difference with financial literacy independent (column) is 1.8%, and with income category as independent is 1.8%. Phi is the mean percent difference between financial literacy and occupation category with either considered as being resulting to the other.

*Table 4.17: Chi-Square Tests of sources of information against Financial literacy*

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.391	1	0.238

*Table 4.18: Symmetric Measures of sources of information Financial literacy*

		Value	Approx. Sig.
Nominal by Nominal	Phi	-0.068	0.238
	Cramer's V	0.068	0.238

From the results in Table 4.17, the null hypothesis was accepted,  $\chi^2 (1) = 1.391, p \geq 0.05$ . Since 0.238 is greater than Alpha 0.05, it shows that there is highly no significance, hence we accept the null hypothesis thus  $H_0$ , no significant of association between the variables that is sources of information and financial literacy. Table 4.18

above indicates the Phi value which is similar to the Pearson's R which in this case was found to be 0.068. This value indicates totally no effect of the relationship between the two variables. The percent difference with financial literacy independent (column) is 6.8%, and with income category as independent is 6.8%. Phi is the mean percent difference between financial literacy and sources of information with either considered as being causing to the other.

#### **4.7 Summary of the Chapter**

From the analysis done above on the hypotheses, it is evident that two independent variables thus level of education and age, had fairly significant association with financial literacy. There was no evidence to support any significant association of gender, income level and sources of information with financial literacy. Level of education had the most significance, followed by age, then sources of financial information, followed by gender, then occupation category and the least is income level as in order of significance with financial literacy. This strongly supports the transformative learning theory which states that more comprehensive and complex description of how learners validate and reformulate the meaning of their experience. For learners to change their meaning schemes thus specific beliefs, attitudes, and emotional reactions, they have to engage in critical reflection on their experiences, which in turn leads to a perspective transformation that results of Self-examination, Relating discontent to others, Explaining options of new behavior, Building confidence in new ways, Planning a course of action, Knowledge to implement plans and Experimenting with new roles. The theory suggests that, learning that lasts should be provided to the youth by integrating learning, development and performance in schools as this would be reflected in age, occupation and even source of finance information.

### **V. Summary, Conclusions And Recommendations**

#### **5.1 Introduction**

This chapter presents the analysis of data collected from the researched items in the study questionnaire. The findings were analyzed and presented in the form of frequency tables, numerical values and percentages. The responses are presented followed by a brief interpretation guided by the research objectives and a discussion on research findings from the analysis of the data. It will provide a summary of the study, discuss and make recommendations on each objective and possible further research.

This research examined and analyzed data collected to identify the determinants of financial literacy in Meru County. The determinants that were studied were; Level of education, Demographic characteristics of gender and age, Socio-economic factors Occupation category and income level and finally sources of financial information. All the primary data collected for data analysis was based on the responses of respondents in the questionnaires provided during the research, hence reflects their opinion. Data analysis was done using Chi-Square test of significance with 5% significance level aided by SPSS version 20.

#### **5.2 Summary of Findings**

In this section, the summary of the findings of the study will be provided for each variable, comparing the results to empirical findings from other researchers. This will aid in making a more generalized conclusion and recommendations on the determinants of financial literacy in Meru County.

##### **5.2.1 Level of Education**

The Organization for Economic Co-operation and Development (OECD) has defined financial education as the process by which investors in the market gain financial literacy through a formal (schools, universities) or informal (such as seminars) setting to provide them with familiarity on investment securities, risks and opportunities so that they can make clear informative choices in their investments (Seth et al., 2012).

Holzmann (2010), states that financial education has been identified as one solution to improve financial literacy across all boundaries in the world having many countries opting to establish a national financial strategy.

According to Almenberg and Säve-Söderbergh (2011) financial education has been considered a determinant of financial literacy such that individuals who had lower levels of education (elementary stage-primary level) are deemed to have low financial literacy levels than degree holders and graduates, emphasis is however placed on the type of subjects and courses learned.

This study postulated that level of education would have a positive relationship with financial literacy just as the studies above purport to. However, According to Hanti (2011) financial education is not sufficient for providing adequate information and developing skills, since the attitudes acquired in the family have a greater impact on the future financial behavior of individuals especially the young people (for instance the propensity to save and take risks) than the knowledge acquired in formal schooling.

### **5.2.2 Age**

Age is regarded as the length of time that a person has lived or a thing existed (Cambridge English dictionary). According to Almenberg (2011), financial literacy among the 35-50 year old group was higher when compared to the 65-year-old group in Sweden. Finke et al. (2011) likewise in their research explained that old age was associated with lower financial literacy levels all over the world and showed that it was due to cognitive processes declining at a very fast rate at old age, hence affecting the ability to remember important aspects of finance.

Researchers have found out that Age has an effect on the level of financial knowledge the student's financial knowledge, which develops over time as they grow older. This seems to be evident, just as in other areas and aspects of life, where we gain more knowledge in finances in the course of our lives. In addition, as they grow older, young adults more frequently find themselves in situations such as taking out a loan and buying a real property that help expand their financial knowledge.

Xu and Ziaa (2012) identified the relationship between financial literacy and age to be at its peak (high financial literacy levels) at 40 years in India and 45 years in Indonesia.

In this study we do not have a perfect significant evidence on the relationship between age and financial literacy but it is rated second among the other factors discussed and studied hence we agree with the findings from the other researchers above.

### **5.2.3 Gender**

FAO (Food and Agriculture Organization), (1997) defines gender as the relation between men and women in the society and often governs the processes of production, reproduction consumption and distribution

Almenberg and Save-Soderbergh (2011) explain that women have lower financial literacy levels compared to men because all financial decisions in the house are made by the man in Sweden. According to Ford and Kent (2010), the difference in financial literacy levels between men and women is as a result of three things; women have no interest at all in financial matters that are taking place in the financial markets, they are also intimidated by the complexity of investing in the markets and they have no situational awareness as they have little financial information about the markets at any time.

However, in this study we found inconsistent results with previous studies as the analysis indicates that Gender does not have a great significant association with financial literacy as gender was rated fourth among the variables studied. There seems to be a balance between the financial literacy of man and women, this could be attributable to the fact that, both men and women are now being exposed to equality measures of education, sources of financial information and even being involved in budgeting of domestic spending.

### **5.2.4 Occupation**

Monticone (2010) asserts that the most financially literate group in Italy was the white-collar group followed by the self-employed individuals and found that his most illiterate group was made up of individuals working in blue-collar jobs, the unemployed and individuals working in health and tourism sectors. Al-Tamimi and Bin Kalli (2009) similarly, found that individuals' who worked in the field of finance/banking or investment, display higher levels of financial knowledge than those in other occupations fields.

The occupation category was studied in terms of employed, unemployed and the self-employed. For purposes of analysis, self employed and employed were coded the same to differentiate them from the unemployed. Majority of those unemployed were students hence their level of financial literacy was considerably high. The study's findings are inconsistent results with previous studies as the analysis indicates that occupation category does not have a great significance association with financial literacy as occupation category was rated fifth among the variables studied. There seems to be a balance between the financial literacy of the occupation categories studied, this could be attributable to the fact that, financial information is today readily available in the media, trainings provide by financial institutions and even the government.

### **5.2.5 Income Level**

Traut-Mattausch & Jonas (2011) found that the relationship between financial literacy levels and saving is moderated by the income levels, which have a positive association with saving behavior. Several studies suggest that wealth factors (such as investment held) have a positive impact on financial literacy since the acquisition of financial knowledge may be motivated by the need to manage own models were supported by various empirical findings that financial literacy increases with wealth.

In this study, the above was not confirmed as the variable income level was rated last. It had the least significant association with financial literacy.

### **5.2.5 Sources of financial information**

Studies have shown that a high proportion of individuals with low financial literacy tend to rely on informal tools such as; family, friends and acquaintances for financial advice. A study on financial literacy and stock market participation by van Rooij et al (2007)

The study showed that this was fairly significant as the variable was rated third among those that have significant association with financial literacy. Therefore, the evidence is not perfect but is leaning towards the previous studies with is good as it will help in providing conclusion that indeed sources of information influence financial literacy to a certain extent. This is because, it is not obviously true that those with low financial literacy tend to rely on informal tools, because one may rely on the informal tools from their family members who are well educated, experienced and have access to beneficial sources of financial information that can be used to help the other family members.

### **5.3 Conclusions**

In terms of education, the government, financial institutions and other stakeholders such as parents have been trying to instill financial education to the youth and other citizens to promote financial literacy in Kenya. However, the method of implementation or teaching is a set back to the achieving the maximum financial literacy levels goals aimed at equipping the individuals to make informed choices of the dynamic financial products being catalyzed by globalization today. It can be concluded that education can be taught in all sectors and sections of the country in trainings, seminars and all academic levels.

### **5.3 Recommendations**

On the basis of the findings in this study the below recommendations have been proposed to elevate and improve the level of financial literacy in Meru county. It is recommended that, Transformative learning should be taught in schools to explore educational theory, practice, and research and demonstrate how learning frameworks help shape curricula and teaching strategies that enable students to cultivate integrative and expansive learning capabilities throughout their lifetimes.

PsycINFO Database Record (c) (2016), shows that results taken from two decades of longitudinal research on the curriculum at Alverno College are used to formulate a theory of "learning that lasts" defined as an integration of learning, development, and performance and core curriculum principles are presented. Generally, basic assumptions about student learning, development, and practice were analyzed and concrete suggestions for methods with which faculty and academic staff can work together to form effective curricula, design innovative programs, implement key institutional goals, and renegotiate the college culture are presented. The meaning and implications of learning that lasts at each level of educational practice, from the collaborative work of faculty and staff to the level of collegiate culture as a whole, are explored. Therefore, the county government in conjunction with the government should audit the current teaching methods and policies and improve them to make them more effective.

Money management programs should be financed and advocated for to enhance public participation and promote money management habits such as savings and budgeting prior to spending. In addition, retirement schemes should be funded by the county government to provide insightful benefits of savings for purposes of retirement.

The public should be reminded more frequently on the awareness of risks and the importance of insuring against the risk.

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**APPENDICIES**

**LETTER OF TRANSMITTAL**

Dear Respondent,

I am a student of Kenya Methodist University undertaking a research for the completion of my Masters degree in Business Administration majoring in Finance. I am undertaking a research on the "Factors influencing Financial Literacy in Meru County". Kindly assist me to fill the required as honest as possible. Any information provided will be used purely for academic purposes and will be kept confidential. Kindly tick or give short answers where appropriate, I would appreciate you attempting to answer all the questions. Thank you for your cooperation and assistance.

Yours Faithfully,

Njehia Milcah Wanjiru

**Questionnaire**

This questionnaire has been designed to collect data that will aid in the clear understanding of the factors that influence financial literacy in Meru County.

You are kindly requested to tick or fill the blank space where appropriate as you attempt to answer all the questions honestly. For confidentiality purposes please do not write your name on the questionnaire.

**Section One: The Level of Financial Literacy**

1. Have you ever had of the term Compound interest and simple interest?

Yes  No

2. Are you insured with any insurance institution? Why (briefly explain)

Yes  No

3. Do you prepare domestic budgets? Why (briefly explain)

Yes  No

4. From your point of view, whom do you think should teach the youth on financial matters?

The government  Their parents  Their personal experience

5. How well can you rate yourself on savings?

The Best  Better  Poor  Very poor

6. How would you rate your riskiness to fraud and being misguided on investment decisions?

Highest  High  Low  I don't know

7. Do you think there is adequate financial literacy resources and materials in Meru County?

Too much  Enough  Little  None

8. Which organization do you think should provide information on financial literacy?

Financial institutions  Government  NGOs  Schools

**Section Two: Level of Education**

9. Which language do you prefer for provided Financial information?

English  Kiswahili  Academic   
 10. Which level of education have you attained?  
 Primary  Secondary  College  University  None   
 11. Type of professional qualification  
 Teacher  Accountant  Secretary  Banker  Farmer

**Section Three: Demographic Factors; Age**

12. Which age bracket do you belong to?  
 18-30yrs  30-45yrs  46-60yrs  and over yrs

**Gender**

13. What is your gender?  
 Male  Female

**Section Four: Socio economic Factors; Occupation**

14. Which occupation category do you fit in  
 Employed  Self employed  Unemployed   
 If employed, which organization?  
 Private sector  Public sector  Financial institution  Other (specify)   
 15. How long have you been working?  
 Less than 3 years  3-5 years  5-10 years  more than 10 years

**Income level**

16. What is your source of income  
 Family  Employment  Sponsors  Loans   
 17. How do you spend the biggest portion of your income?  
 On family  Yourself and friends  Saving and investing  All of them   
 18. Which level would you classify your self?  
 High income earner (above 80,000 p.m)  Medium income earner (30,000-79,000)  Low income earner (29000 and below)

**Section Five: Sources of Financial Information or advice**

19. Which source of financial information do you prefer?  
 Peers  Family  Financial institutions  Media   
 20. Do you trust the information provide by financial experts? (briefly explain why)  
 Always  Sometimes  Never

**Thank you for your cooperation!**

**TIME LINE**

TIME ACTIVITY	June 2015	August 2015	November 2015	January 2016	February 2016	March-August 2016	September-October 2016
Title development and approval	X						
Chapter one approval		X					
Chapter two approval			X				
Chapter three and Questionnaire approval				X			
Proposal defence					X		
Data collection and analysis						X	
Data presentation and thesis compiling							X
Thesis defences							X

Source: Author, (2016)

**CASH BUDGET**

DETAILS	AMOUNT IN KSHS
Stationary	4,000
Transport and travelling	8,000
Secretarial expenses	10,000
Photocopy and binding	10,000
Miscellaneous	10,000
<b>TOTAL</b>	<b>42,000</b>

Source: Author, (2016)

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