RELATIONSHIP BETWEEN THE LEARNING OF AGRICULTURE IN SECONDARY SCHOOLS AND EMPLOYMENT CREATION BY OUT-OF-SCHOOL YOUTH IN EMUHAYA SUB-COUNTY, VIHIGA COUNTY, KENYA

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DECLARATION AND RECOMMENDATION

Declaration

I declare that that this is my original work and has not been presented for an award of a degree, diploma or certificate in this or any other University/Institution.

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Recommendation

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DEDICATION

This thesis is dedicated to my loving parents Hellen Lukelesia and Ruphas Aholi, my beloved husband Timona Matuku, my daughter Precious and son Smith whose love, patience and understanding during my study period enabled me to complete this thesis.

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I wish to register my special gratitude to the Almighty God for sustaining me throughout the study period. To Egerton University for providing a conducive environment and personnel to study. To my supervisors Prof. Joash Kibett and Dr. Jacob Konyango for their professional guidance and commitment throughout my research period. To all the lecturers whose dedication provided an inspiration in my life, broadened my knowledge and perspective of life through education. To my parents, my husband and my children for their patience. To all my friends and relatives who contributed in one way or another to the success of my studies, I say God bless you richly. To God is the glory forever and ever. Amen.

ABSTRACT

Secondary school Agriculture in Kenya should equip the learners with knowledge and practical skills necessary for creation of employment. Agriculture is believed to be the backbone of the Kenyan economy contributing to over 30% of the Gross Domestic Product and employs about 80% of the rural population. Kenya Vision 2030 positions agriculture as a key driver for delivering the 10% annual economic growth. It is estimated that 64% of unemployed persons in Kenya are youth, indicating a serious employment problem. The purpose of this study was to determine the relationship between the learning of Agriculture in secondary schools and employment creation for out-of-school youth in Emuhaya sub-County. The relationship between secondary school Agriculture learning and youth employment creation to be determined was in terms of the knowledge gained, practical skills acquired by the students, methods of learning and learning resources used by the out-of-school youth. The study was done in Emuhaya sub-County and adopted descriptive research design method. The target population was the youth who learnt Agriculture in secondary schools. Proportionate simple random sampling was used to sample 150 youth out of a total population of 2,736 youth who sat for KCSE in Emuhaya sub-County between 2010-2012. Emuhaya sub-County being an agricultural potential area, little attention has been taken to identify why the youth who have studied Agriculture in schools are unemployed and idle. Data was collected using structured questionnaire. Academic experts from the Department of Agricultural Education and Extension validated the instrument. The instrument had a Cronbach's Alpha reliability coefficient of 0.8 at 0.05 level of significance. The data was analyzed using the Statistical Package for the Social Sciences, version 20 based on the objectives and research questions. The relationship between the learning of Agriculture in secondary school and employment creation was determined using frequency tables and percentages. The study established that learning of Agriculture in secondary schools practically with use of agricultural resources promoted skill acquisition, which promotes employment creation for out-of-school youth in Emuhaya sub-County, Vihiga County. The study recommends curriculum developers to outline aspects of knowledge, teachers to involve learners during instruction, teachers to employ various learning methods to students and schools to avail learning resources all these geared towards youth to create employment in agriculture. The study also recommends replicating similar studies in other levels of education such as primary schools and universities.

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LIST OF ABBREVIATIONS AND ACRONYMS

AFC	Agricultural Finance Corporation
ASDA	Agricultural Sector Development Agency
ASDS	Agricultural Sector Development Strategy
ASK	Agricultural Society of Kenya
CBS	Central Bureau of Statistics
CES	Cambridge Examinations Council
COMESA	Common Market for East and South Africa
EAEC	East Africa Examinations Council
ERA	Economic Review of Agriculture
FAO	Food and Agriculture Organization
FFA	Future Farmers of America
GDP	Gross Domestic Product
GOK	Government of Kenya
IDA	International Development Agency
ILO	International Labor Organization
IVR	Integrated Voice Recording
JICA	Japan International Cooperation Agency
KBC	Kenya Broadcasting Coporation
KCE	Kenya Certificate of Education
KCSE	Kenya Certificate of Secondary Education
KICD	Kenya Instruction and Curriculum Developers
KIE	Kenya Institute of Education
KNBS	Kenya National Bureau of Statistics
KNEC	Kenya National Examinations Council
MoA	Ministry of Agriculture
MoE	Ministry of Education
NACOSTI	National Council for Science Technology and Innovation
NCAE	National Council for Agriculture Education
NCOEOP	National Committee on Educational Objectives and Policies
PWPSU	Presidential Working Party on the Second University
SPSS	Statistical Package for the Social Sciences
U S	United States

USAID	United States Agency for International Development
YFC	Young Farmers Club

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

School Agriculture originated in Europe where according to Case (2010) was referred to as the classical model of Agricultural education. In 1896, there emerged the North European model that offered prevocational education, and this included apprenticeship. In 1910, there was the North American model, which emphasized vocational education; it included demonstration plots by students in schools and homes. There were classrooms and a group of Future Farmers of America [FFA] a young, as well as adults' farmer class. Between 1930 and 1950, there was the East European model, which offered pre-vocational training that included polytechnism. This model had a state farm, and from 1960 to the present, we have a neo-classical model that offers mainly pre-vocational training and education in learning institutions that offer Agriculture as a subject (Case, 2010).

The introduction of Agricultural Principles and Practices Syllabus in 1969 was a major innovation in curriculum development, for it introduced a new syllabus that never existed, and this formed the foundation in the entire East Africa, as it became the East Africa Examination Council [EAEC] Agriculture syllabus. Ngugi, Temu and Kitalyi (2002) further echoed that, Agricultural education remains the key to industrialization by virtue of agricultural produce being the main source of raw materials for agribusiness and agric-industry. In East Africa, according to Ngugi *et al* (2002), it is a top priority in almost all national development plans. The importance of agricultural development is underlined by its potential contribution to national food security, foreign exchange earnings, Gross Domestic Product [GDP] and employment in both formal and informal sectors. Konyango (2010) says that, school Agriculture is considered in most countries around the world to be the key to social and economic prosperity.

The examination and the nature of the question papers at the EAEC and later Kenya Certificate of Education [KCE], between 1963 and 1984 reflected both the practical and rural nature of the syllabus (EAEC, 1976; Kenya National Examination Council [KNEC], 1987). Konyango, Onyango and Kibett (2010), concluded that the introduction of Agriculture as a vocational subject contributed not only to curriculum diversification but also towards positive attitude to, not only Agriculture but also practical education in Kenya's education system of which this study will look at the practical skills acquired from school Agriculture. The United

States Agency for International Development [USAID] and International Development Association [IDA], contribution to vocational Agriculture programs, made a breakthrough by introducing Agriculture subject in the secondary education system. From 1985 to the present, there is the Kenya Certificate of Secondary Education [KCSE] an examination that examines Agriculture at the end secondary school education in form four.

Maxwell (1965) further indicated that, during the introduction of Agriculture in Kenya, the USAID project set out the following objectives; the need for technical advice and assistance in teaching vocational Agriculture; Making rural secondary education in Kenya more practical and more responsive to the developmental needs of the country; Developing a system of education that will facilitate starting similar courses in more rural secondary schools in the country. According to Konyango (2010) Vihiga County is the origin of secondary school Agriculture in Kenya, which started at Chavakali High School, in 1959 January, with 35 boys and 2 teachers, it had no head teacher, and it was the first day secondary school in Kenya and the first to be initially financed from local sources.

The decline of the agricultural sector underscores the precarious food security and nutrition status of the estimated 80 percent of the Kenyan population that derives its livelihood from a declining sector (Central Bureau of Statistics [CBS], 2004). Kenya was a food surplus country until 1998 but now has developed a structural deficit and is a net importer of all the staple cereals, pulses and livestock products (Ministry of Agriculture [MoA], 2010). Wayne (2012) claimed that, the ultimate purpose of Agricultural education is to train the individuals to think such that they may solve social and economic problems, which they may meet and to prepare them for complete living. Kenya Vision 2030 is the nation's new development blueprint for 2008 to 2030, which aims at making Kenya an industrialized middle-income country and to provide high quality life for all its citizens by the year 2030.

The Agriculture curriculum has topics, which require well-equipped Agriculture workshop, school farm, and machines that should be available in most schools (Konyango, 2010). This study also aimed at determining resources used in schools for learning Agriculture that may help the youth in employment creation. Students should attend field trips and visit agricultural institutions or research stations where the learners can have tangible experience of the facilities and resources or in Agricultural Society of Kenya [ASK] shows. A forward-looking program of Agricultural education always involves recognition of changing social

and economic needs of the contributions of scientific and technical knowledge. This study looked at the knowledge gained in secondary school Agriculture.

Secondary school Agriculture is one of the subjects that aim at meeting the needs of the students who terminate their education after secondary school (Education Info Centre, 2006). Methods of teaching such as project method, experimental method, co-operative method among others, aid to expand the learners' scope of thinking and acting on various Agricultural principles. As well, it ought to be used to solve daily problems of unemployment prevalent in the rural community by carrying out agricultural activities. This study also looked at how the methods of learning Agriculture in secondary schools, helped the youth, once out-of-school, to take up employment in agriculture, to reduce unemployment cases as well as rural to urban migration of the out of school rural youth.

Young farmers play an important role in ensuring food security for future generations although they face many challenges. Statistics on rural youth employment are scarce because the country's employment data is not disaggregated according to locality (rural/urban) and age group (International Labor Organization [ILO], 2007). Kenyan youth are all individuals in the Republic who are between 18 and 35 years. It is estimated that 78.31% of Kenyans are below 35 years and that 64% of unemployed persons in Kenya are youth. Only 1.5% of the unemployed youth have formal education beyond secondary school level and the remaining 98.5% have no vocational or professional training with majorities in rural Kenya (Kenya National Bureau of Statistics [KNBS], 2010). Emuhaya sub-County has, 155,065 youth comprising of 72,012 males and 83,053 females where only 34,242 males and 37,793 females are employed but the remaining 83,030 youths, comprising 37,770 males and 45,260 females are unemployed (KNBS, 2010). This shows a serious unemployment problem. Most of these secondary school leavers don't get formal employment hence proper Agriculture education offered in schools should provide the school leavers with core skills in agriculture which will enable them to be self reliant through self employment.

The Ministry of Agriculture [MoA] (2010) as reported by the Agricultural Sector Development Agency [ASDA] revealed that the sector accounts for 65% of the Kenya's total exports; provides more than 18% of formal employment; accounts for more than 70% of informal employment in the rural areas and generally provides a livelihood for close to 80% of the Kenyan population. This study intended to establish the status of Agriculture in secondary schools to determine how the learners view the usefulness of learning Agriculture

in the secondary school curriculum in relation to employment creation after school. The various stages in which Agriculture has undergone since its introduction in 1926 also assisted in focusing this study. First, the subject was introduced in 1926 followed by its drop in 1931 because the parents associated it with manual work yet they wanted their children to get white-collar jobs. It was re-introduced in 1960 at Chavakali in Vihiga County where Emuhaya sub-County is located. Since then it has elicited numerous arguments both at policy and school levels as to whether the subject should be retained or withdrawn form the secondary school curriculum (Konyango, 2010). With all these, the subject since its introduction has not received the dignity it deserved considering its vital role. Currently, the subject is placed under electives in secondary school curriculum. The question was to determine the relationship between teaching of Agriculture and employment creation in secondary schools. This study attempts to answer this question and targets the 2,736 out of school youth who studied Agriculture as their technical subject in KCSE from the year 2010 to 2012 in the 32 secondary schools who are the actual consumers of the curriculum in Emuhaya sub-County.

Agriculture is learned in Kenyan secondary schools as a technical and applied subject to help learners apply the knowledge and skills after school. Kenya gained independence with a pledge to fight ignorance through provision of quality and relevant education, to meet the demands of her people such as employment, illiteracy reduction, food production and the need to industrialize were the critical issues of concern at independence. Education commissions were constituted to recommend ways of improving the education sector. Agriculture is the backbone of Kenya's economy thus the main stay of Kenya's economy currently contributing to 24% of the GDP directly, and 27% indirectly (GoK, 2012).

1.2 Statement of the Problem

Secondary school Agriculture is one of the subjects that aim at self-reliance since it is a technical and applied science subject. It is estimated that 78.31% of Kenyans are below 35 years and that 64% of unemployed persons in Kenya are youth. Only 1.5% of the unemployed youth have formal education beyond secondary school level and the remaining 98.5% have no vocational or professional training with majority in rural Kenya. Studies have been carried out on enrollment, performance and other aspects of secondary school Agriculture but none has been done to determine the relationship between how the subject is learned in relation to youth employment creation. This study focused on the 2,736 youth who

sat for their Kenya Certificate of Secondary Education examination between the years 2010 and 2012 in Emuhaya Sub-County. The sub-County borders Kakamega and Siaya Counties, which offers a ready market for agricultural produce. The area has good fertile soils and favorable climate for agriculture yet the youth do not use these opportunities for agricultural employment. The rate of youth unemployment in Emuhaya sub-County is high; the youth are idle, which lead to problems of increase in crime and other social related vices among the youth. Food insecurity is also a major concern now, yet Agriculture should offer vital skills to school leavers for self-reliance or salaried employment while on the other hand producing sufficient food through improved modern farming techniques and biotechnologies. Little attention has been taken to identify whether the original objectives of making agriculture a dignified and profitable occupation have been diverted or shelved in Emuhaya sub-County. The critical question of this study was to find out why unemployed youth who studied Agriculture fail to take up agriculture for employment in Emuhaya Sub-County.

1.3 Purpose of the Study

The purpose of the study was to determine the relationship between the learning of Agriculture in secondary school and employment creation for out-of-school youth in Emuhaya sub-County, of Vihiga County, Kenya. This will facilitate improvement of teaching and learning processes in order to inspire the youth to create employment in agriculture.

1.4 Objectives of the Study

This study was guided by the following objectives:

i. To determine the relationship between the knowledge gained in secondary school Agriculture and employment creation for out-of-school youth.
ii. To determine the relationship between the practical skills acquired in secondary school Agriculture and employment creation for out-of-school youth.
iii. To determine the relationship between secondary school Agriculture learning methods and employment creation for out-of-school youth.
iv. To determine the relationship between Agriculture learning resources in secondary school and employment creation for out-of-school youth.

1.5 Research Questions

The research questions below guided the study:

i. What is the relationship between the knowledge gained in secondary school Agriculture and employment creation for out-of-school youth after school?

ii. What is the relationship between practical skills acquired in secondary school Agriculture and employment creation for out-of-school youth?
iii. What is the relationship between Agriculture learning methods in secondary school and employment creation for out-of-school youth?
iv. What is the relationship between Agriculture learning resources in secondary school and employment creation for out-of-school youth?

1.6 Significance of the Study

This study examined the relationship between learning secondary school Agriculture and employment creation for out-of-school youth. Agriculture teachers could be the direct beneficiaries of this study as they could use the findings to improve the curriculum implementation. The teachers may as well motivate learners to take agricultural activities as employment after secondary school education in the sub-County, to reduce unemployment rates in the sub-County. Study findings will inform policy makers to device policies to adjust the teaching in schools, towards employment after school. Policy makers may be required to create improved, appropriate and affordable methods of learning Agriculture for youth employment after school. Since implementation of secondary school Agriculture instruction for employment requires resources, policy makers may set funds aside to expand both on-and off-farm income activities for youth living in the rural areas. Agricultural technology development of these youth may need to focus beyond yield enhancement and address other features that complement other off-farm employment activities. Improved food security in the sub-County and marketing will enable the youth to sell the surplus produce for income generation thus reducing crime and other social vices youth may engage in when they are idle.

1.7 Scope of the Study

This study was conducted in Emuhaya sub-County that borders Kakamega and Siaya Counties that offer good market for agricultural products from the sub-County. The study focused on the 2,736 youth as provided by the Emuhaya sub-County KCSE results, the out-of-school youth aged 18 to 35 years who studied Agriculture in 32 secondary schools in the sub-County from the year 2010 to 2012. Relationship between school Agriculture aspects namely; knowledge gained, practical skills acquired, methods of learning, learning resources and attitudes of youth towards Agriculture with employment creation by out-of-school youth were studied.

1.8 Limitation of the Study

i. Due to differences in facilities, teachers and methods of learning Agriculture in various schools, the youth from different schools may have varied opinions and perceptions hence creating wide differences that were overcame by assuming similar environment applied to all respondents.

ii. The study was limited to 2,736 out of school youth who sat for their KCSE Agriculture as a technical subject from the year 2010 to 2012 in the 32 secondary schools in Emuhaya sub-County.

1.9 Assumptions of the Study

The study had the following assumptions:

i. The respondents will be cooperative and will give true and accurate information.

ii. The youth will not be migratory during the study period.

1.10 Definition of Terms

Adoption: The decision to start using something such as an idea, a plan or a name (Hansel, 2009). For the purpose of this study, it refers to the out-of-school youth utilization of the improved methods of Agricultural practices learnt in school.

Employment creation: A task made available that one undertakes to earn a living (Curtis & Stewart, 2010). In this study, it refers to agricultural practices the out-of-school youth engage in for economic sustenance such as crop and livestock production, marketing agricultural products, processing, transportation and value addition on agricultural products.

Gross Domestic Product (GDP): Total value of all goods and services produced by a country in a specified year. It includes the goods and services produced by the foreign companies and foreigners within a country (GoK, 2012). In this study, it explains the importance's of agriculture to the economic development of a country.

Knowledge: The information, understanding and skills that one gains through education or experience (Atwe, Taylor & Singh, 2005). In this study it refers to information, understanding and skills the youth got in school during Agriculture instruction processes on agricultural practices, such as principles of crop and livestock production, processing of farm produce, value addition, soil and water conservation.

Learning methods: Special strategies and styles for lessons that include structure, desired learners' behavior, in terms of goals of instruction and an outline of tactics necessary to implement the lesson (Torskar, 2011). For this study, it refers to the techniques that the Agriculture teacher uses to deliver the lesson, such as project method, experimental learning, problem solving method.

Learning Resources: Things or facilities that can be used to help achieve an aim (Toskar, 2011). For this study, it refers to books, facilities or equipment that can be used during instruction process in school for learning agriculture for youth employment after school, such as school farm, and farm buildings and facilities such as crop and animal husbandry and horticultural farm.

Out of School Youth: The youth who are not in school but at one time were in school (Hysell, 2009). For this study, it refers to youth who had completed Form 4 secondary school education in Kenya and did Agriculture in KCSE as their technical subject.

Practical: Something or an act connected with real situations rather than with theories (Lauglo, 2004). In this context, it refers to learning by doing, that is, real or actual agricultural practices the out of school youth are involved in for employment, such as machine operation, crop and animal production as well as soil and water conservation.

Relationship: The way in which two or more things are connected (Lauglo, 2004). For this study, it refers to how the teaching of Agriculture may enable the learners after school to connect and apply the knowledge and skills acquired in school to practice agricultural principles for employment and earn a living.

Teaching of Agriculture: Use of special strategies by teachers during the instruction process to achieve the objectives set for the Agriculture lesson (Torskar, 2011). For this study it refers to all the instruction procedures used by the Agriculture teacher to instill knowledge and skills in the learner that may enable him or her to apply to earn a living after school.

Technical Subject: Subjects that are done for a vocation (Lauglo, 2004). For the purpose of this study, technical subjects refer to those subjects in-group IV by KNEC that involve use of cognitive and psychomotor skills.

Youth: Young people considered as a group. In different parts of the World, specific criteria are used to judge who a youth is and who a youth is not The republic of Kenya considers youth as young people aged between 18 and 35 (KNBS, 2010). In this contest, the term is used to show the age category between 18 and 35 years of age for the proposed study.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature related to this study. It is divided into the following themes;- Historical development of secondary school Agriculture in Kenya, Knowledge gained in school Agriculture, Practical skills acquired for youth employment, Methods of learning secondary school Agriculture for youth employment, Resources for learning secondary school Agriculture for youth employment, Role of secondary school Agriculture in youth employment, Infrastructure and market opportunities for youth agricultural employment and the Potential the youth have in agriculture for employment and income generation, the Conceptual as well as the Theoretical framework.

2.2 Historical Development of Secondary School Agriculture in Kenya

School Agriculture originated in Europe where according to Case (2010) was referred to as the classical model of Agricultural education. In 1896, there emerged the North European model that offered prevocational education, and this included apprenticeship. In 1910, there was the North American model, which emphasized vocational education; it included demonstration plots by students in schools and homes. There were classrooms and a group of Future Farmers of America a young, as well as adults' farmer class. Between 1930 and 1950, there was the East European model, which offered pre-vocational training that included polytechnism. This model had a state farm, and from 1960 to the present, we have a neo-classical model that offers mainly pre-vocational training and education in learning institutions that offer Agriculture as a subject (Case, 2010).

In East Africa, according to Ngugi *et al* (2002), agriculture is a top priority in almost all national development plans. The importance of agricultural development is underlined by its potential contribution to national food security, foreign exchange earnings, GDP and employment in both formal and informal sectors. The introduction of Agricultural Principles and Practices Syllabus in 1969 was a major innovation in curriculum development, for it introduced a new syllabus that never existed, and this formed the foundation in the entire East Africa, as it became the EAEC Agriculture syllabus. Ngugi *et al* (2002) further echoed that, Agricultural education remains the key to industrialization by virtue of agricultural produce being the main source of raw materials for agribusiness and agric-industry. Konyango (2010)

says that, school Agriculture is considered in most countries around the world to be the key to social and economic prosperity.

The examination and the nature of the question papers at the EAEC and later KCE between 1963 and 1984 reflected both the practical and rural nature of the syllabus (EAEC, 1976; KNEC, 1987). Konyango, Onyango and Kibett (2010), concluded that the introduction of Agriculture as a vocational subject contributed not only to curriculum diversification but also towards positive attitude to, not only Agriculture but also practical education in Kenya's education system of which this study will look at the practical skills acquired from school Agriculture. The USAID and IDA, contribution to vocational Agriculture programs, made a breakthrough by introducing Agriculture subject in the secondary education system. From 1985 to the present, there is the KCSE an examination that examines Agriculture at the end secondary school education.

The Beecher report of (1949) became the turning point in the subject and in 1959, the subject was re-introduced at Chavakali High School. GoK (1981), The Mackay report oriented the content of curriculum towards technical education. This paved way for the introduction of 8-4-4 system of education in Kenya in 1985, in which Moi (1987) as cited in Nyandusi (2001), states that, the 8-4-4 system was born out of the need to impart enjoyable technical and scientific knowledge to learners at each stage by promoting technical and vocational education. The vocational Agriculture idea of the Chavakali program was based on what according to Covington and Dobbins (2004) later referred to as the Vocationalization of secondary school, which was taken to mean curriculum change in a practical direction.

Agriculture as a practical skill education was learned in upper primary schools (Okech & Asiachi, 1992). Currently, Agriculture subject is in group 4 under applied practical skills and technical and vocational subjects, where students choose one subject from among a variety of subjects in the category. Okaka (2001) lists these technical and vocational subjects as; Agriculture, wood work, metal work, power mechanics, electricity, drawing and design, building and construction, business education, art and design and music.

Kathuri (1990) said, the objectives therefore determine the expected outcomes of learning and are there after used for selecting materials, content, instructional procedures and preparing tests. Kenya Institute of Education [KIE] (2002), states that, secondary school Agriculture teaching had a number of objectives governing it. It cites the current objectives of

teaching Agriculture to be:- To develop an understanding of Agriculture and its importance to the family and nation; To promote interest in Agriculture as an industry and create awareness of opportunities existing in agriculture and related sectors; To demonstrate farming as a dignified and profitable occupation; To enhance skills needed in carrying out agricultural practices; To provide a background for further studies in Agriculture; To develop an occupational outlook in Agriculture; To enable schools to take an active role in national development; To create awareness of the role of agriculture in technology, industrial and technical development; To enhance understanding of the role of technology and industrialization in agricultural development; and To promote consciousness of health promoting activities in agricultural production. Mukweru (2006) defined objectives as statements outlining terminal behavior change in the learner after being exposed to a set of experience. A careful examination of these objectives of secondary school Agriculture subject, reveal that if they are implemented then, the out-of-school youth should find it gainful to create employment in agriculture.

For the objectives of secondary school Agriculture to be met, Agriculture teachers who are the curriculum implementers are very important such that they should teach the subject keeping the objectives in consideration for accomplishment. According to the GoK (2005) (b), the current government programs for teacher education aim at providing qualified teachers and are therefore central to ensuring the provision of quality education. Rotumoi (2005) said that the teacher's qualification plays an important role in teaching because they influence instructional competence and may determine existence of instructional problems in specific subject.

2.3 Knowledge Gained in Secondary School Agriculture for Youth Employment

According to Bloom (1976), technical subjects were seen to provide an opportunity for students to develop their domains of cognitive, affective and interactive skills. Thus according to GoK (1988) there is emphasis of technical and vocational education hence ensuring that students graduating at every level, have some scientific and practical knowledge that can be utilized for self employment, salaried employment or further training.

According to Griffiths (1971) knowledge on rural science, rural studies, practical Agriculture or gardening, should be taught as alternatives to some of the regular items in the syllabus. This is important so that those who did not succeed in getting white-collar jobs, would at least be partially prepared to take part in the improvement of rural life and they could

continue their agricultural training in special vocational schools. In other words, the schools should have a double aim, that is, education leading to salaried white collar or technical employment and education leading to unsalaried farming and an enlightened attitude to rural improvement. There is a crucial need to educate the Africans to conserve their environment, especially the rural development (Munthali, 2004). According to the Japan International Cooperation [JICA] (2008), educational development is central to human resource development and the foundation for any socio-economic development of a country, hence, lack of education and training reduces people's ability to exploit the opportunities around them making them more vulnerable and is a major cause of poverty.

The EAEC (1976) reported that Agriculture was taught in schools mainly to impart knowledge to students and inculcate in them a positive attitude towards agriculture as a dignified and profitable occupation. More than this, the intention was to prepare them for life in the rural areas. The success of effective school Agriculture can be measured by, those who actually go to the land, live there and earn their living through agriculture (Ray & John 1996). The fundamental purpose of the Agricultural education should ensure a better country life, as good as possible for practical activities and subsequent potential for self-employment of youth after school.

The GoK (1988) states that, the government will continue to ensure that principles of Agriculture in crops and livestock production are firmly incorporated in the syllabus and curricula of primary and secondary schools, specialized Agriculture training institutes and at the university. This is to reinforce agriculture as a gainful source of living and employment. Due to the demanding nature of Agriculture, some students opt for less demanding ones without knowing that Agriculture equips them with skills, knowledge and dispositions needed after school (Atwe *et al* 2005). Hansel (2009), however argues that students enroll for Agriculture courses because they have a certain degree of preference for Agriculture related careers.

Wanjala (1991) said that, agriculture plays a vital role in the economy of the country by ensuring increased income and employment to the rural population, especially small-scale producers. This is why some African countries (such as South Africa) but not Kenya, have made Agriculture compulsory (Vandenbosch, 2006). It is worth noting that, agriculture is the backbone of the Kenyan economy and it is a livelihood of many people especially in Kenya. This important role is evidenced by setting up of many institutions offering careers in

Agriculture and the expansion of agricultural industries that are important in building the economy.

Nyerere (1967) said that education was to foster self-reliance, that is; Agricultural education was not only to serve smallholder farmers but also to provide Agricultural education to future farmers in local schools. Though secondary Agriculture education and the concept of the community school is a coat of many colors' but a common thread woven through it is that, the school should serve the whole community of which is a physical part and encourage the community in efforts that are beneficial to the wider social and economic needs of the society.

2.4 Practical Skills Acquired in School Agriculture for Youth Employment

The Agricultural education should ensure that the recipients of the program are equipped with practices needed in and of employable skills. A report by Maxwell (1966) says that the Young Farmers Club [YFC] movement is one of the ways of imparting the skills through the club's activities. The movement promotes a hand on experience more so, if practiced in conjunction with the ASK. The learners get hands on involvement in farming activities that reinforce what they are taught in class, these practical activities have a positive influence on the student perception of Agriculture. According to Hewitt (2010) factors influencing career choice can either be intrinsic, extrinsic or both. This helps the youth to appreciate agricultural practices that motivate learners to take agricultural employment after school from the observation and appreciation of flourishing activities at school. The Agriculture teachers as well, should teach the subject more in the practical oriented areas, for the learners to become more acquainted with practical agriculture and the real farm skills and hands on experience, and this may largely contribute to economic sustenance in various youth.

During the post- independent Kenya, vocational subjects were required to equip the youth with practical skills necessary for both salaried employment and self-reliance and to engage in meaningful farming activities to enhance food production and to meet the challenges of industrialization. GoK (1984), the government realized the importance of vocational education by introducing Agriculture in all secondary schools. Kathuri (1990) argues that, the 8-4-4 system emphasized teaching more technical and vocational skills in secondary schools in order to serve those who could not continue with further studies. Professor Ngeno said this when he was the minister for education at launching the 8-4-4 system said, "In this regard, Agriculture will be taught in all our secondary schools to enable many of our youth to

appreciate the role of agriculture in national building effort", (GoK, 1994). According to Nyandusi (2001), specific vocational training should be given to all secondary school graduates who have no immediate promise for further education. Koros (2008) reported that, technical and vocational education is fundamental to the world of work. The 8-4-4 system of education was initiated out of the need to vocationalize the curriculum to instill relevance in education as a means of meeting the market demand in terms of employment.

Ongeti (1986) said that Vocationalisation of the curriculum was thus seen as a way of instilling education relevance to enable school leavers become either directly employable or become self employed. The expansion of teaching Agriculture in all schools and at all levels was not just to add to the factual knowledge and basic skills but what was considered more important was the acquisition of basic understanding to enable the student to participate in social and economic changes (Kathuri, 1990). At independence, the government saw the need for education as a tool to human resource development and the government's overall strategy; hence, a relevant curriculum was necessary to cater for the aspiration of the youth as well as serving various interests of national development (Eshiwani, 1993). The documentation by the KIE (2002), records that Agriculture must be highly emphasized in schools since it transforms the country into an industrial nation because of its vital roles. The government's vision of education is "Quality education and training for development" (GoK 2005) (b). This meant that education is important for the transmission of vital skills necessary for development. Phipps, Dyer, Lloyd, and James (2008), stated that Agricultural education should include training in not only vocational Agriculture but also in those skills needed to be successful in any occupation including preparation for advanced education.

The Presidential Working Party on the Second University [PWPSU], GoK (1981) which emphasized the need to make learners self reliant by the time they leave school, by offering them a broad based and practical oriented curriculum. These can be achieved when the skills needed in carrying out agricultural practices are enhanced. Mattee (1978); GoK (1988) noted that, Agricultural instruction in schools is to be used to instill a positive attitude towards Agriculture and a way of improving relevancy in education.

2.5 Methods of Learning Secondary School Agriculture for Youth Employment

As noted by Elias (2004) that all education comes through experience and that was the basis of vocational Agriculture in the United States [U.S.], through the FFA. The Phelps–Stokes commission recommended among others that education be geared towards the local needs

(Laauwen, 2004). A study by Ohiwerei and Nwosu (2009) states that a teacher is the central point of learning in the classroom situation because, it is the methods and styles of teaching that create motivation to students through various teaching strategies. Agriculture teachers also have influence on the students' personal development in making the choice to become teachers either as role models or by the type of activities that involve the students in the educational program (Lawver & Torres, 2011).

According to Maxwell (1965) in the early years following the introduction of Agriculture in secondary schools, good links existed between the schools, the surrounding farming communities and extension agents. Members of young farmers clubs in schools maintained these links through field tours and participation in agricultural shows. The clubs competed in farm produce and livestock judging. This can really help to equip rural youth with the modern principles for better farming. GoK (1981) the Mackay report emphasized the need to make learners self reliant the time they leave school, by offering them a broad-based and practice-oriented curriculum.

Davies, Shqiponje, Hutton, Adnett and Coe (2004) are of the opinion that expectations held by the teacher will guide the students along routes appropriate for them. Hence, prior education is very important to enable the out-of-school youth to practice what already have prior knowledge about from school. Agricultural projects done by students offer very good hands on experience to the learners under individualized supervision. This enables the learner to know the exact requirement of the curriculum for maximum productivity of which if the out-of-school rural youth perform, then maximum production can be achieved. Good teaching and learning methods of Agriculture in the secondary schools in the country will as well enable the learners to go for further studies in Agriculture hence come with increased knowledge in Agriculture that can lead to better development of agriculture and employment in the region. Food and Agriculture Organization [FAO] (2005) the pre-service education and information given to rural small-scale farmers and its organization, tends to influence the quality of any given program and its effectiveness.

Teachers should be well trained for effective teaching, yet although training aspect is widely advocated for effective teaching, GoK (2005) (b) reports that, some teachers are inadequately trained. As stipulated by Robin (2008) learning with practical reality based cases is a good example of how teachers can exchange methods to meet student's needs and those of the larger society; hence, Agriculture becomes a very important subject in secondary school for

agricultural employment after school. Methods of learning such as the project method, experimental, problem solving approach, co-operative learning, and learning practical skills are good in enhancing skills acquisition by the students'. Koros (2008) said that, the lack of human and material resources, poor attitudes towards agriculture and lack of administrative support poses great challenges in implementation of technical and vocational subjects like Agriculture since it leads to more of theoretical learning instead of practical learning.

A study by Kathuri (1985) on prospects and problems in secondary school Agriculture, revealed that, the head teacher and Agriculture teachers have a significant role to play in making the learning of Agriculture practical. The teacher has a significant role; the head teacher, being in control of all the finances in the school, would be expected to release the funds. He/she is supposed to understand this role from both academic and economic point of view, since the school is the most appropriate place for these youth to get the required facilities than in the villages though there may be organized youth groups. Ongeti (1986) says training of youth in the village polytechnics for farming is frustrated by the unavailability of farming land. This is an indication to the effect that, school land is a factor that can influence learning of skills for use after school. Martin (2013) says that, Agricultural education is based on three critical components: technical Agriculture, experimental learning and human development.

2.6 Resources of Learning Secondary School Agriculture for Youth Employment

According to (Wark [1975]; EAEC [1976]; and Sifuna, [1976]) education was considered to be a very critical centre of the society and therefore necessary for all sectors and the well-being of the pre-dominantly rural society such as Kenya. Initially, the policies were for vocational Agriculture in rural schools, with a vision on youth employment and development of the rural areas. The content of education was to ensure that schooling must find out what is relevant to young people (Maxwell 1967; Foster 2002; Laauwen 2004;).

A number of resources and facilities were recommended between 1959 and 2004 for the implementation of school Agriculture. These include the vocational Agriculture learning facilities, the photographs, and diagrams for practical's (KNEC, 2004).Vocational Agriculture tools and equipment, the school farm, the school demonstration plots and the home demonstration plots, as well as farm structures. The Vocationalization of secondary education is taken to mean curriculum change in a practical or vocational direction (Mwiria, 2005). Konyango *et al* (2010) show that facilities' such as Agriculture workshop and workshop

tools, farm tractors, implements and attachments once they are used at school during instruction help the youth to have the knowledge of their usage after school for employment. The facilities for learning Agriculture such as the school farm, Agriculture workshop tools equipment and machinery should be available at schools for learners to be acquainted to these facilities for ease of use during and after school.

A study by Temu and Kitalyi (2005), say that, Agriculture was taught in schools mainly to impart knowledge to students and inculcate in them a positive attitude towards farming. More than this, the intention was to prepare them for life in the rural area. Schools that do well in a given vocational subject in the KCSE tend to show more interest and to set aside more resources for their teaching as argued by (Mwiria, 2005). In the rural areas, the most important resource available for most youth at their disposal is the farm. Once the rural youth acquire appropriate knowledge and skills in Agriculture, they will be able to utilize the farm adequately; since the capital and recurrent investment required for maintaining the economic viability of a farm may be only this land for most youth who are out of school. Vandesbosch (2006) blames the African syllabuses that are overloaded with classroom work hence inadequate preparation of learners for work force demands in agriculture field.

2.7 Role of Secondary School Agriculture in Youth Employment

Maxwel (1970) contends that, the importance of agriculture to Kenya makes it imperative that students develop an appreciation for its central role in nation building. Agriculture provides virtually all the food required to feed the population thus a very important sector in the economy of a nation (KIE, 1985). The GoK (1994) argues that agriculture accounts for 30% of the GDP, and generates employment opportunities to over 80% of the rural population besides playing a very important role in the economy of Kenya. Agriculture supplies raw materials to industries and guarantees food security as well as earns foreign exchange.

The National Committee on Educational objectives and Policies [NCOEOP], GoK, (1976) indicated that the subject had heavy financial support from its inception in 1959. The view was to integrate rural development with education through funding of school Agriculture to promote employment through farming, hence a desire to change Agricultural education curriculum to meet the environmental and social changes to ensure a sustained agricultural production (Wallace, 1997). The improved Agriculture curriculum must produce youth who can deal with a wide range of societal problems. Including emerging issues and rural

development such as agriculture, natural resources, human settlement, biodiversity and entrepreneurship of which are some of the new challenges of an improved Agriculture curriculum, and which are some of the employment openings for out of school rural youth in employment. The school should prepare school leavers for appropriate productive work in the community, rather than for hard to find jobs in the modern sector in urban areas, Konyango (2010), hence agriculture remains the most appropriate activity for self-employment. If youth are oriented positively to life in the rural community, then rural life will be enriched and social unrest through educated unemployed youth in towns will be minimized.

According to Mattee (1978) Agricultural education was given to students, so that majority could pursue a productive life in farming, thereby remaining in rural areas. Land is the main source of capital and human and animal powers mainly used, which form the major source of employment for majority of the rural population for purposes of income generation. In the rural areas, farming is the most applicable and readily available form of employment for out of school youth, using the available land in the rural areas for either crop and or livestock production. Agriculture is the single most important sector in the economy, contributing approximately 25% of the GDP, and employing 75% of the national labor force (GoK 2005) (a). Agriculture is responsible for employment of over 80% of the rural population.

According to Maxwell (1970), the importance of agriculture to Kenya makes it imperative that students develop an appreciation for its central role in nation building. The National Council for Agriculture Education [NCAE] (1999) argues that, the Agriculture curriculum must foster appropriate knowledge to enable learners to contribute positively to environmental conservation and increased food products and it envisions a world where all people value and understand the vital role of agriculture. The vision 2030 aims at transforming Kenya into a newly industrialized country and it outlines the need to streamline vocational subjects in school to meet the needs of the society especially with regard to food production and employment (GoK, 2007).

Development of Agricultural education should be based on argument that secondary school Agriculture should lead to increased self-employment opportunities for young people who leave school and do not continue with higher education, who are the majority (Mattee, 1978; GoK, 1988). Phipps *et al* (2008) listed three functions of Agricultural and Agribusiness education, these included; Educating individuals for employment in the fields of agriculture and agribusiness; A vocational Agricultural course work and issues having to do with the

'food crisis'. The authors went on to explain that Agricultural education is based on decision making through problem solving, and is centered on experience and it addresses both individual and community needs; is related to resource management.

2.8 Infrastructure and Market Opportunities in Agriculture

A study by Julian, Philip and Michael (2001) pointed out that farming was to develop to a level where young farmers would be attracted to it. According to Konyango *et al* (2010) the objective of introducing Agriculture was to motivate young people towards agricultural activities in the view of the heavily agricultural nature of Kenya's economy. If the performance of agricultural enterprises in schools is good and learners' see the profitability of the practices as well as the good income from the sales, then after school, more youth will be attracted to it. For the needs of the out-of-school youth farmers to be met, income from the sale of the produce should be gotten from a ready market of the agricultural produce. For this study, Luanda market being one of the main markets in Vihiga County, and is strategically located along the Kisumu-Busia High way provides ready market for most of the agricultural produce in the area. This is of great benefit for the out-of-school youth, who follow the principles of crop and livestock production taught in schools practice them and take the produce to the market. The out of school rural youth, should also get information on modern agriculture.

Rural electrification has played a greater role since farmers are now able to use power for practicing modern intensive agriculture, such as green house production of horticultural produce. Usage of electronic media has also been made possible with use of computers, to research on modern farming technologies, breeding, pest and disease control, as well as market opportunities for agricultural produce. Mass media such as television facilitate programs such as the *'shamba* shape up', a program that is normally aired every Saturday and Sunday afternoon on Citizen Television. '*Soko hewani'*, which is normally aired on Saturdays evening by the Kenya Broadcasting Corporation [KBC] radio, which may reach the youth.

According to Archibald (1971) in most developing countries, the educated young account for half to three quarters, at least of those openly unemployed. Proper information and guidance can also be facilitated through out-of-school rural youth working together with agricultural extension officers. These officers are available in the sub-County agricultural offices as stakeholders and specialists of various rural Agricultural principles, to offer services, education and guidance during field days, on demonstration plots, giving incentives from the

government and non-governmental institutions, such as seeds, fertilizers, pesticides, herbicides and to offer storage facilities to farmers. The extension officers may also organize markets for agricultural produce for collective farmers to minimize exploitation by intermediaries for economic agricultural projects and to encourage youth to carry out farming as a form of self-employment using various skills and knowledge learnt in schools.

Beeby (1977) noted that more attention ought to be given to the quality of education in developing countries in that there must be a closer professional cooperation between the educator and the economist in educational planning. In Vihiga County, agriculture is the main economic activity including its Emuhaya sub-County. Most people operate on small scale farming for economic sustenance, where most farmers practice agriculture for subsistence, sale at the local markets, and a few who may produce in bulk sell to learning and medical institutions. According to Temu and Kitalyi (2002), the key to agricultural development is competent and well-resourced people on agricultural practices, competence from appropriate education and training; access to information and technology, enabling policies and institutional arrangements as well as adequate incentive for agricultural production. Maguire (2000); Stewart, Moore and Flowers (2004) concluded that, Agriculture is seen as yielding many educational benefits so long as it is given high level of organization and support it requires. The educated farmers and those who work alongside agricultural specialists like agricultural extension officers and secondary school Agriculture teachers may be at a better position to practice modern and intensive farming for better productivity, and extension officers may guide on market opportunities. Konyango *et al* (2010) recommended that attention of the Agriculture curriculum developers should be drawn to the fact that Agricultural education curriculum still has the challenge of providing education for rural development, but not on its own.

Sixty five percent of the Kenyan population is under 35 years thus, through transforming agriculture from purely subsistence to commercial farming; the youth are likely to be motivated to engage in farming (Kirui, Okello & Nyikal, 2010). These authors also added that, sector has set a goal of achieving an average growth rate of 7% by 2015. The main objective of the current agricultural development strategy is to increase productivity, commercialization and competitiveness of agricultural commodities and enterprises in order to make it more attractive to the youth (Kangai, Mburu & Nyikal, 2011). Some corporation like the Agriculture Finance Corporation [AFC] has a micro-credit facility known as *stawisha*

(Kiswahili for sustain) aimed at young people. It gives loans in the range of Ksh. 5,000 to 1 million and allows flexible repayment (GoK, 2012). The same corporation has also started *vuna* (Kiswahili for harvest) account that is designed for groups and individuals in agricultural business, hence an additional opportunity for the youth. This is partly aid in achievement of Vision 2030, that positions the agricultural sector as a key driver for delivering the 10% annual economic growth.

2.9 Potential the Youth have in Agriculture for Employment and Income Creation

Atweh *et al* (2005) noted that, the schooling years are meant to equip students with skills, knowledge and dispositions to meet their needs for future citizenship and participation in economic life including employment and careers. The economic competitiveness of a country depends on the skills of its work force (Mustapha & Greenan, 2007). Robin (2008), the role of motivation is to involve learners by doing. In Bangladesh, technical subjects are highly recognized due to their contribution to national development in areas of work force creation and running of industries (Gazi, 2008). In Malaysia, vocational subjects are meant to produce educated, skilled and motivated workforce. Technical and vocational education is considered as an important measure for development of workforce (Syeda, 2010). Ryan and Bryan (2011), the secondary school system should give students the opportunity to practice what they can do much and with passion, especially Agriculture by virtue of it being a practical subject.

Social networks such as Face book can also be used to discuss these good agricultural practices (Omilola, Yade Karugia & Chilonda 2010). Through the Integrated Voice Recording [IVR] system, packaging of extension messages for young farmers is done to enable them assess the information at their most convenient time. The above authors further noted that the extension message is pre-recorded and through the service of a computer and a cell phone, which most young farmers have, the information is received. These young farmers can also record their questions so that the extension officers can provide answers to them and through the same technology communicate their responses to the farmers.

A project called a thousand gardens was initiated in Africa where school kitchen gardens were set up in order to create awareness on where food comes from, how and by whom it is produced (FAO, 2010). This is based on intergenerational learning where elders are involved in telling children stories thus transmit their knowledge on farming (Omilola *et al,* 2010). Growth in agriculture projects can be adopted in areas with high agricultural potential to

stimulate investment and develop regional value chains (Winters, Carletto, Davis & Zezza 2010). There is a large agricultural workforce where 65% of Africa's population lives and works in rural areas. The workforce is estimated to be predominantly young by 2040; one in five of the world's young people will live in Africa and further confirmed that, around 4% only of cultivated land in Sub-Saharan Africa is irrigated leaving over 90% potential land for irrigation; thus, the youth can increase agriculture through more irrigation(Pratt, 2011)..

A report by the Economic Review of Agriculture [ERA], FAO (2010) revealed that, in 2003 intra Common Market for East and South Africa [COMESA] trade in maize was only 4% implying that 96% was sourced from outside COMESA. Kenya imports about 33% of the wheat and over 50% of the rice used in the country. In the same year, intra COMESA trade for cotton and cotton products was only 7% with 93% being sourced from non-COMESA countries. In Kenya, existing, new and expanding markets are due to rapid urbanization and integration into regional and international markets. This has provided an opportunity to gear agriculture into an accelerated commercial direction as well, Local investment in the cereal sector to reduce importation is an opportunity that can be exploited, this shows an absence of regional maize and cotton supply chain and value addition (Kangai *et al*, 2011). In 2006 only 7% of the horticultural produce in Kenya was exported and 93% was marketed locally, this can be improved to increase the horticultural exports. Due to the diverse agro-ecology, the country can produce a wide range of temperate, tropical and subtropical products.

According to Mburu, Nyota, Nyikal, Kangai and Muchigiri (2009), large and expanding markets for traditional products like maize and other cereals, beef and dairy products, tea, coffee and pyrethrum exist. Dalla (2010) observed that global demand for horticultural products and emerging livestock such as ostrich, guinea fowl, crocodile, frogs and butterflies; and emerging crops such as assorted resins and essential oils and aloe remain underexploited. Vast opportunities are opening up in the production of bio-fuels from sugarcane, maize, millet, sorghum and other oil-bearing seeds. Youth should thus be encouraged to exploit these opportunities hence make a living in agricultural sector moreover, indicated that abundant human resources are available due to primary, secondary and tertiary education (Kirui *et al* 2010). These are noted to have expanded and produce thousands of graduates every year. This can be used to change the face of Agriculture if young people from these institutions are to be attracted to Agriculture as a career and the human resource could be used in training and

research to develop new and relevant technologies and to create and expand agribusiness (Herbel & Lee. 2010).

According to Afsaw, Dgmar and Hermann (2007) further argued that tripling national average yields of major crop and livestock production systems in the country is easily achievable. The vast livestock potential in the arid and semi-arid areas that cover 80% of the country remains untapped as does the fisheries potential (Mburu *et al*, 2009). A study by Krishna (2010) revealed that, potential for increasing production can be improved and increased in multiples through better use of unused land in traditional farming areas and through irrigated agriculture and this could include creating special schemes for youth to hire land for high value farming. Increasing yields of crops and livestock are far below their optimum. There is potential for increasing yields in Kenya, if Kenyan youth embrace farming as a noble profession. Herbel and Lee (2010) confirmed that, value addition should be undertaken which include processing, branding, quality certification and accreditation, as well as farm-level quality improvements. It is estimated that 91% of total agricultural exports are in raw or semi processed form (Kangai *et al*, 2011). Thus, the country loses billions in earnings by not adding value to her produce. Potential for adding value to products such as coffee, tea, pyrethrum, hides, skin, beef, fruits and vegetables remains untapped.

According to Wambugu, Franzel, Cordero and Stewart (2006), it has been noted that, inability of farmers to acquire good production has been blamed on several causative issues like; inadequate or lack of proper information and education from Agricultural specialist. This study aims to look at how school Agriculture teaching may lead to a better performance in terms of employment in Emuhaya sub-County. Reza (2006) noted that, local conditions are fairly a representative of those in a region. No region is uniform and differences can occur in various forms. Secondary school students in rural areas mostly learn in mixed day and or boarding hence gender balance always has to be maintained. Herbel and Lee (2010) observed that a change in strategy to locate agro-industries in rural India is reported to have increased the rural per capita income significantly. This is an idea Kenya can borrow and run with and particularly involve the youth in value addition practices. Valerie (2011), points out that, Agriculture education institutions may increasingly have gender sensitive admittance policies however due to traditional barriers female graduates continue to have problems finding employment in agriculture.

A study by Koros (2008) indicates biasness towards the choice of technical and vocational subjects with girls preferring Agriculture to boys. The study did not however elaborate on how the gender difference influences employment. Strategies, curricula and policy shifts need to emphasize and include women as role models and leaders in agriculture. Gender sensitivity should at best result in training programs in which female students are treated equally with male students though a slight different treatment may have to be given in order to take into consideration the different needs, time constraints and productive activities of women. The curriculum does not discriminate on either gender; hence, the youth should be able to take on agricultural activities for employment after secondary school, as in the way the school curriculum offers.

2.10 Theoretical Perspectives to the Study

This study was guided by the functionalist theory of French sociologist Emile Durkheim. This theory sees education as the transmission of the society's norms values and skills (Banks 1968; Haralambos & Martin, 2013). The learning of Agriculture in secondary school should promote employment creation by out-of-school youth through application of the knowledge and skills learnt in school to earn a living rather than sitting idle and getting involved in social related crimes. These include development of competency in practical skills. The pragmatist perspective of education, in which John Dewey said that, the schools should produce on the child's brain the typical doings and the occupations of the larger mature society into which the child is expected to enter (Elias, 2004). This theory will be further reinforced by the concept of the importance of the curriculum to the rural environment as recorded by (Covington and Dobbins, 2004; Hedges, 2001; Kerre, 1991; Lynch and Kirpal 2012) on the belief that, the school should serve the local community and its needs. This theory is important to the youth and in this study because Aksoy (2012) declares that youth are the main source of productive labor in agriculture and if motivated to participate actively in agriculture, then it will promote industrial revolution. These theories are vital for the objectives of this study to be realized in the relationship between secondary school Agriculture learning and employment creation for the out-of-school youth from the year 2010 to 2012 in Emuhaya sub-County. Based on the functionalist and the pragmatist theories that emphasize vocational and practical subject, while the concept of the importance of the Agriculture curriculum to the rural environment, this emphasizes change and improvement on the curriculum for self-reliance, since 80% of the people in the rural areas derive their living

from agriculture. Thus, the practical nature of Agriculture should be seen in the skills that should be applicable to solving rural youth unemployment problems.

2.11 Conceptual Framework

Figure 1 depicts the variables of the study and their relationship. The purpose of the conceptual framework is to help the reader to see the proposed relationship between the variables (Mugenda & Mugenda, 2003). The conceptual framework was developed from the reviewed literature. The independent variable in this study is the learning of secondary school Agriculture in terms of the knowledge gained, practical skills acquired, learning methods used and teaching resources used in learning secondary school Agriculture. The dependent variable is youth employment measured in terms of crop production, livestock production, value addition, transportation and marketing. The intervening variables influence the effects of the independent variable on the dependent variables. These are performance of school agricultural projects and conduciveness of agro-ecological conditions and sources of funds for the agricultural activities. Intervening variables were controlled through random sampling.

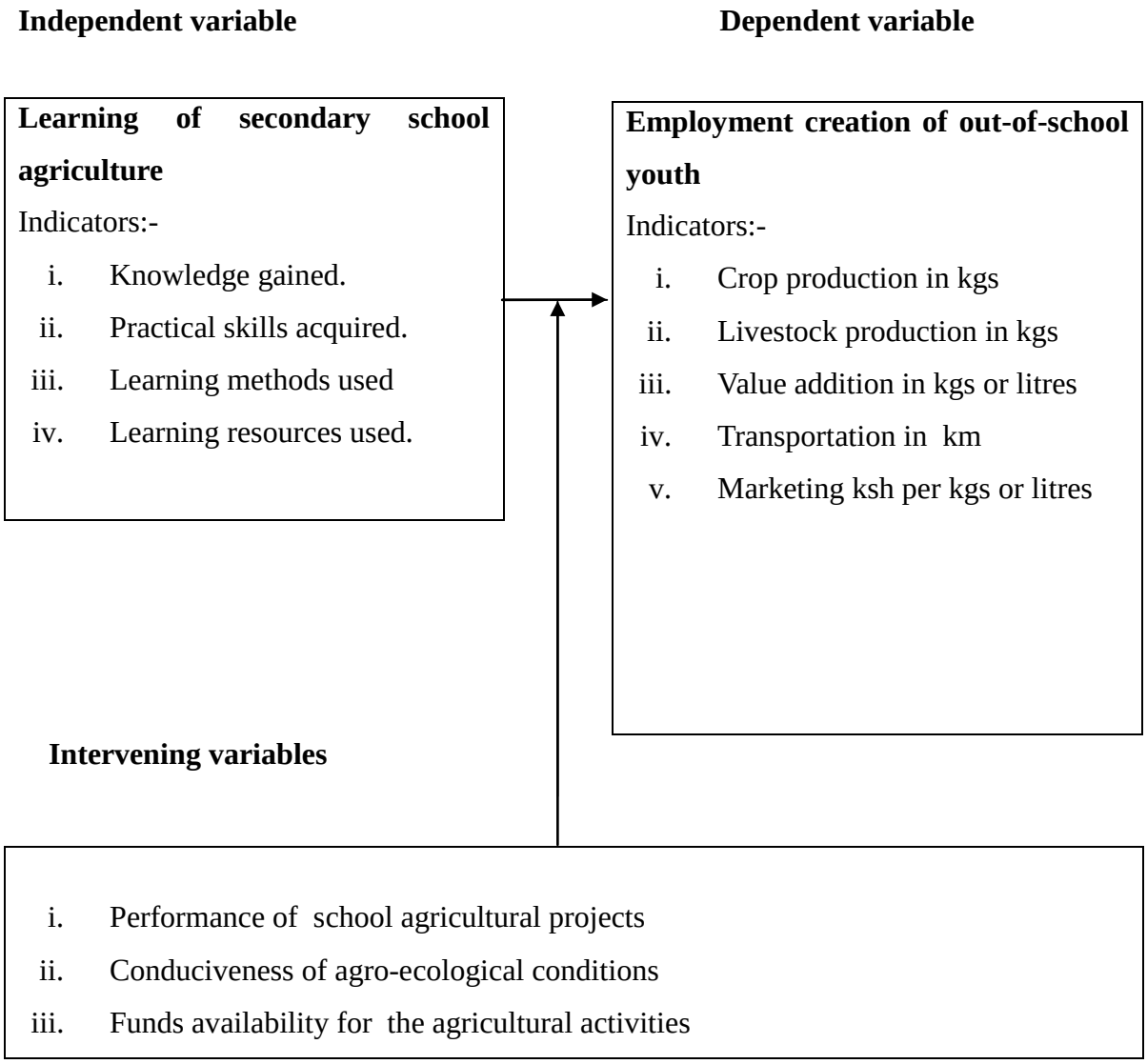

Figure 1: Conceptual Framework showing the Relationship between Learning Secondary School Agriculture and Employment Creation of the Out-of-School Youth.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methodology that was used to carry out the research study. It outlines the research design that was used to collect data for the study. It also describes the population of the study and sampling technique in terms of geographical location, sampling procedures outlined and the process of obtaining the required sample size of the study description as well as description of data collection, instrumentation or instruments for data collection was described. The section will also describe data analysis procedures.

3.2 Research Design

This study adopted a descriptive survey research design. It involved drawing data from a select population of interest (Kathuri & Pals, 1993). It is a design that used to study a wide field of issues, population and activities in order to determine and describe any generalized occurrences'. Cohen and Manion (1994) perceived a descriptive survey as useful in gathering data on a one-short basis and hence was economical and efficient. It also captured data from both open and closed ended questions, observation schedules. The variety of foci that historical research uses such as issues movements concepts, approaches, theories and development as noted by Arry, Jacobs and Razavieh (1985); Crosely and Graham (1997) were used in this study. This helped to follow trends in employment of youths who have studied Agriculture in secondary schools. Some of these youths were employed in different fields, others were in training in different institutions, and the majorities were unemployed. According to Kothari(2004) a research design is a conceptual structure within which a research is conducted. The design was perfect in assessing the current situation because it made possible to study self-reported facts about the respondents, their feelings, opinions and attitudes (Kumar, 2005; Kendall, 2007). This descriptive survey provided appropriate information on the relationship between secondary school Agriculture learning and employment creation by out-of-school youths.

3.3 Location of the Study

This study was conducted in Emuhaya sub-County located in the Vihiga County of Kenya, South of Kakamega, West of Nandi, North-West of Kisumu and East of Siaya Counties. The sub-County covers an area of 94.50km^2 with a population of 95,064 people (KNBS, 2010).

The sub-County receives a bimodal type of rainfall. The average annual rainfall range is 1500-2000mm per annum. The long rains starts from March and ends in May while short rains season starts in October and ends in December. The rainfall pattern is convectional with lightning and at times hailstorms. Rainfall is well-distributed and approximately 85% reliable (GoK, 2009). Administratively the sub-County is divided into 3 Wards namely, North East Bunyore, Central Bunyore and West Bunyore Wards, and 20 sub-locations. Emuhaya sub-County is one of the sub-counties in Vihiga County. The average farm holding is about 2ha. Mixed farming is mainly practiced on small scale. Farmers keep cattle, sheep, goats, poultry, and plant crops such as maize, beans, sorghum, millet, groundnuts, cowpeas and sweet potatoes (MoA, 2011). Weaving of baskets, ropes and mats is also done from sisal and papyrus reeds. Agribusiness is mainly done in Luanda a major market along the Kisumu-Busia highway.

3.4 Target Population

The target population was youths who studied Agriculture up to form four in secondary schools in North-East Bunyore, Central Bunyore and West Bunyore Wards of Emuhaya sub-County between 2010 and 2012. These years were chosen since the study was on out-of-school youth thus their ages could fit within the 18 to 35 years bracket. These youth were involved in activities such as, crop production, livestock production, marketing, value addition and transportation of agricultural products for employment creation. Schools in North East, Central and West Bunyore Wards had 930, 843 and 963 youths respectively who sat for the Agriculture subject in Kenya Certificate of Secondary Education Examination between the years 2010 and 2012.

3.5 Sampling Procedure and Sample Size

Proportionate simple random sampling was used to select out-of-school youth from every ward. A list of all the out-of-school youth between the years 2010 to 2012 was obtained from Emuhaya sub-County education office. The list constituted the sampling frame. With the aid of the table of random numbers, 150 participating youth were identified. This allowed every out-of-school youth to have an equal independent chance of being included in the sample. This sample size was adequate as Kathuri and Pals (1993); Denscombe (2007) recommend a minimum of 100 subjects as ideal for a survey research in social sciences. The extra 50 were necessary to take care of none response and dropouts. Respondents of the target population and their employment in agriculture related activities. With assistance of sub-County

Extension Officers, out-of-school youth were selected and given the questionnaires. Table 1 gives the wards in the study area and the corresponding number of respondents that were selected.

Table 1: Summary of the sample selection per ward

Ward	No of youth	Proportion of population	No selected
North-East Bunyore	930	34%	51
Central Bunyore	843	31%	46
West Bunyore	963	35%	53
Total	**2,736**	**100%**	**150**

(s=150)

3.6 Instrumentation

This study utilized a self-administered structured questionnaire to collect data. The questionnaire design in this study was based on the principles of questionnaire design outlined by (Oppenheim, 2000). A questionnaire was chosen because of its simplicity in administration and ease of scoring besides being readily analyzed (Cohen, Manion, & Morrison 2007). It was also useful in that the type of response facilitated consistency across the respondents (Denscombe, 2007). The instrument consisted of both open and closed ended questions and was administered to the respondents to fill on their own. This type of instrument was useful in that it allowed participation by all literate respondents and allowed clarification of any ambiguity in addition to minimizing discrimination of the less articulate (Leung, 2001; Kvale & Brinkmann, 2009).

The questionnaire was divided into 5 sections numbered A to E. Section A of the questionnaire dealt with the Bio data which will mainly consisted of closed ended questions. The section mainly described the respondents in terms of their characteristics. Section B of the questionnaire dealt with secondary school Agriculture education and employment creation for the out-of-school youth. This section consisted of statements, which the respondent chose a statement that is most applicable to him or her and a five point likert-type scale in which the respondent was required to respond to given statements. Section C of the questionnaire required the respondents to give their views or comments about school Agriculture in relation to employment creation after school. Opinions in this section were not subjected to statistical tests but rather were analyzed and presented in discussion form. Section D dealt with agricultural activities the out-of-school youth engaged in for employment after school.

Section E of the questionnaire dealt with the challenges faced by the youth while practicing Agriculture learnt in secondary school as employment.

3.6.1 Validity

Validity is the extent to which an instrument measures what it is intended measure. It is the systematic error in measurement. Borg and Gall (2006); Kasomo (2006) argue that instruments' validation can be improved through experts' judgment. A panel of five experts in instrument validation from the Department of Agricultural Education and Extension of Egerton University judged the appropriateness of the items in terms of content and recommended modifications that improved the validity of the instrument. The focus was on face and content validity. Kumar (2005) argued that an instrument could be judged face valid by the researcher. Kasomo (2006) defines face validity as the appeal and appearance of the instrument. That is if the instrument 'look like' it is measuring what it is supposed to. At times, the instrument may elicit biased or incorrect response when respondents do not take the task seriously because of lack of face validity. Content validity refers to the representativeness of the items on the instruments as they relate to the entire domain or universe of the content being measured (Kothari, 2008). To have content validity, the measure must sample adequately the domain of content the researcher claims it measures.

3.6.2 Reliability

Reliability is the degree to which a particular measuring procedure gives consistent results over a number of repeated trials (Orodho, 2003; Kasomo, 2006). Reliability was determined through a pilot test. This was established by use of Cronbachs' alpha coefficient method. This is an appropriate method since it involves a single administration of the instrument hence it will yield a greater internal consistency (Kothari, 2008). The structured questionnaire instrument was pilot tested in Vihiga sub-County, in Vihiga County, which has similar subjects, climatic and agro ecological characteristics as the study location. Mugenda and Mugenda (2003) recommend that at least 10% of the sample size be used in testing reliability of the research instrument. Consequently thirty out of school youth respondents were used during the pilot test. The piloting of the instrument helped to assess its appropriateness and aid in further refinement based on its reliability coefficient. The study established Cronbachs reliability coefficient of at least alpha of 0.8, which was found to be significant enough. Kothari (2008) confirms that instruments for data collection require a reliability coefficient of at least alpha 0.70 at 0.05 significance level.

3.7 Data Collection

A letter of approval was obtained from the Board of Graduate Studies of Egerton University and was presented to the National Commission for Science, Technology and Innovation [NACOSTI] to obtain a research permit. Once authority was obtained, arrangement was made to visit the Vihiga County education office and Emuhaya sub-County Agriculture Office, for permission and authority to conduct research in the sub-County. A few youth were reached through the sub-County agricultural officers as they came for agricultural advices, these led to reaching others who some were found in the farms and homes especially those who practiced crop and livestock production and at the market centers for those who practiced value addition, transporting and marketing agricultural products. Questionnaires were given to the respondents to fill and the researcher personally collected them after two days.

3.8 Data Analysis

This study used qualitative data analysis and synthesis techniques. Qualitative method was used to answer interpretive and explanatory questions of why, how and which way. Data was evaluated, classified and categorized into appropriate themes based on the objectives and then coded. Analysis of data collected using document report analysis was an on-going process where emerging trends were categorized based on research objectives. Data was coded and analyzed using Statistical Package for the Social Sciences [SPSS] version 20. Frequency tables and percentages were used to summarize and present the data.

CHAPTER FOUR
RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents results and discussions on the relationship between the learning of Agriculture in secondary school and employment creation for out-of-school youth in Emuhaya sub-County, Vihiga County, Kenya.

The chapter is divided into the following sections: (i) characteristics of the respondents, (ii) relationship between the knowledge gained in secondary school Agriculture and employment creation, (iii) relationship between the practical skills acquired in secondary school Agriculture and employment creation, (iv) relationship between secondary school Agriculture learning methods and employment creation, and (v) relationship between Agriculture learning resources in secondary school and employment creation.

4.2 Characteristics of the Respondents

The characteristics of the respondents interviewed have been organized in three categories namely; gender, age and agricultural activities practiced by respondents after learning the subject. This form of categorization of respondents was envisaged to generate responses that are representative of the general view of out of school youth in Emuhaya sub-County, Vihiga County, Kenya. 150 questionnaires were distributed to the respondents to seek their opinion on the relationship between the learning of Agriculture in secondary school and employment creation for out of school youth, 137 questionnaires were collected back with a return rate of 91.3%, which was significant to answer the set objectives of the study.

4.2.1 Gender of Respondents

Majority of the respondents 78.8% were males compared to 21.2% who were females. This finding supports Koros (2008) who analyzed a closer examination of girls' enrollment in technical and vocational education subjects like Agriculture, revealing a heavy traditional bias for Agriculture.

Table 2: Gender of Respondents

Gender	Frequency	Percent
Male	108	78.8
Female	29	21.2
Total	**137**	**100.0**

n=137

4.2.2 Age of Respondents

Age of respondents was important to the study in understanding the age distribution of out of school youth who practiced various aspects of agriculture in Emuhaya sub-County, of Vihiga County, Kenya.

Table 3: Age of Respondents

Age	Frequency	Percent
18-20	22	16.1
21-25	88	64.2
26-30	27	19.7
Total	**137**	**100.0**

n=137

Two thirds of the respondents 64.2% were between the ages of 21 and 25 years, with 19.7% whose ages was between 26 and 30 years and 16.1% whose ages between 18 and 20 years. This finding reveals that agriculture was practiced by people whose ages were tending to middle age with few young energetic people of ages between 18 and 20.

4.2.3 Agricultural Activities Practiced by the Respondents

Agricultural activities practiced by respondents were important in revealing stages of agricultural activity in the value chain of the out of school youth.

Table 4: Agricultural Activities Practiced by the Respondent

Activity	Not Practiced		Practiced		Total	
Crop production	37	(27.0%)	100	(73.0%)	137	(100%)
Livestock production	98	(71.5%)	39	(28.5%)	137	(100%)
Value addition	130	(94.9%)	7	(5.1%)	137	(100%)
Transportation of agricultural products	129	(94.2%)	8	(5.8%)	137	(100%)
Marketing of agricultural products	127	(92.7%)	10	(7.3%)	137	(100%)

n=137

The study established that crop production was practiced with over two thirds of the respondents, 73.0% compared to 27.0% who did not, yet 71.5% did not keep livestock 28.5% who kept livestock, 94.9% did not practice value addition compared to 5.1% who practiced, 94.2% did not practice transportation of agricultural products compared to 5.8% who practiced, 92.7% did not practice marketing of agricultural products compared to 7.3% who practiced. The Agriculture teachers as well, should teach the subject more in the practical oriented areas, for the learners to become more acquainted with practical agriculture and the real farm skills and hands on experience, and this may largely contribute to economic sustenance in various youth. This finding reveal that out of school youth in Emuhaya sub-County, Vihiga County, Kenya only practiced crop production and did not keep livestock, transportation of agricultural products, value addition and marketing of agricultural products.

4.3 Agricultural Knowledge gained and Employment Creation

This section presents data related to the objective number one of this study, which stated: to determine the relationship between the knowledge gained in secondary school Agriculture and employment creation for out of school youth. Agriculture is a subject that helps students to develop their domains of cognitive, affective and interactive skills. This ensures that students graduating at secondary school have some scientific and practical knowledge that can be utilized for self-employment, salaried employment or further training. The out of school youth were requested to state knowledge gained and skills acquired on various Agricultural practices and how such knowledge and skills helped them in employment creation.

4.3.1 Aspects of Secondary School Agriculture knowledge that were well conducted

Majority of respondents 81.8% indicated that knowledge gain on Agricultural practices was well conducted, 12.4% said, got adequate skills 5.1% mentioned that learning Agriculture

using various methods was well conducted, and 0.7% observed that developing positive attitude towards Agriculture as a subject and occupation was well conducted.

The study finding supports GoK (1994) that, the government will continue to ensure that principles of Agriculture and livestock production are firmly incorporated in the syllabus and curricula of primary and secondary schools, specialized Agriculture training institutes and at the university. This is to reinforce agriculture as a gainful source of living and employment.

Table 5: Aspects of School Agriculture knowledge that were well conducted

Variable	Frequency	Percent
Knowledge on agricultural principles	112	81.8
Knowledge on skills in agricultural practices	17	12.4
Used various learning methods to get knowledge	7	5.1
Developed positive attitude in agriculture from knowledge gained	1	0.7
Total	**137**	**100.0**

n=137

4.3.2 Aspects of Agriculture knowledge that Lead to Creation of Employment

Over two thirds of the respondents 65.0% mentioned that acquisition of adequate skills in Agriculture promoted employment in agriculture. A 15.3% reported that the use of various resources to learn Agriculture promoted employment, few 13.1% indicated that knowledge on Agricultural principles promoted employment and 5.1% mentioned that learning Agriculture using various methods promoted employment while 1.5% said that positive attitude towards Agriculture as a subject and occupation promoted employment by out of school youths in Vihiga County.

This study finding reveals that out of secondary school youths in Vihiga County had adequate skills in Agriculture practices, which promoted the creation of employment. This finding supports GoK (1984) which observed that the government realized the importance of vocational education by introducing Agriculture in all secondary schools. According to Nyandusi (2001), specific vocational training should be given to all secondary school graduates who have no immediate promise for further education. Koros (2008) reported that technical and vocational education is fundamental to the world of work. Kathuri (1990)

argued that, the 8-4-4 system should emphasize teaching of more technical and vocational skills in secondary schools in order to serve those who could not continue with further studies. Professor Ngeno when he was the Minister for Education at launching the 8-4-4 system said, "In this regard, Agriculture will be taught in all our secondary schools to enable many of our youth to appreciate the role of agriculture in national building effort, (GoK, 1994).

Table 6: Major Aspects of Agriculture knowledge that Lead to Employment Creation

Aspect	Frequency	Percent
Knowledge on skills in Agricultural practice	89	65.0
Used resources to gain knowledge	21	15.3
Knowledge on Agricultural principles	18	13.1
Learnt Agriculture using various methods	7	5.1
Developed positive attitude Agriculture	2	1.5
Total	**137**	**100.0**

n=137

4.3.3 Areas of Agriculture knowledge used for Job Creation

The study reveals that over two-thirds of the respondents 73.1% practiced crop production using knowledge gained in secondary school for employment creation. A few respondents reported that 9.5% of them practice transportation of agricultural produce and 8.6% practice livestock production. Very few 5.1% practice processing of agricultural produce and 3.7% also practice marketing of agricultural products.

Table 7: Areas of Agriculture knowledge used for Job Creation

Activity	Frequency	Percent
Crop Production	100	73.1
Livestock Production	12	8.6
Processing of agricultural products	7	5.1
Transportation of agricultural products	13	9.5
Marketing of agricultural products	5	3.7
Total	**137**	**100.0**

n=137

4.3.4 Aspects of Agriculture Knowledge that lead to agricultural Productivity

Over two third of the respondents, 70.1% indicated that, knowledge on Agricultural principles lead to improvement in agricultural productivity among the out of school youth, while few 13.1% said that acquisition of adequate knowledge on Agricultural practices lead to improved agricultural productivity yet very few 6.6% mentioned that, learning Agriculture using various methods and use of various resources lead to agricultural productivity and 3.6% mentioned that positive attitude by out of school youth improved agricultural productivity.

Table 8: Major Aspects of Agriculture knowledge that lead to agricultural Productivity

Aspect	Frequency	Percent
Knowledge on Agricultural principles	96	70.1
Acquired adequate skills on Agricultural practice	18	13.1
Learnt Agriculture using various methods	9	6.6
Used various resources to learn Agriculture	9	6.6
Developed positive attitude Agriculture	5	3.6
Total	**137**	**100.0**

n=137

4.4 Practical Skills Acquired in School Agriculture for Employment Creation

This section presents data related to the objective number two of this study; to identify the relationship between the practical skills acquired in secondary school Agriculture and employment creation for out of school youth. This objective was based on GoK (1981) the Mackay report which emphasized the need to make learners self-reliant by the time they left school, by offering them a broad-based and practice-oriented curriculum.

Majority of the respondents 94.2% agreed that knowledge gained in Agriculture from schools helped out of school youth in creating employment. Yet 68.9% disagreed that existence of high satisfaction on the practical skills acquired youth in secondary school Agriculture created self-employment after school. Over half of the respondents, 58.5% disagreed that students were exposed to various methods of learning Agriculture, which were useful in creating agriculture related employment after school compared to 40.8% who agreed. Majority of the respondents, 81.0% disagreed that, there were various Agriculture learning resources that helped students when they were out of school in employment creation, yet 64.3% disagreed that learning Agriculture in secondary schools made youth to appreciate rural life and farming occupation, which, in turn made them avoid rural-urban migration.

Table 9: Aspects of Secondary School Agriculture Skills that Aid in Employment Creation

Aspects	SD	D	U	A	SA
Knowledge gained on skills help in creating employment	5.8	-	-	7.3	86.9
Practical skills help in creating self-employment	11.7	56.2	-	23.3	8.8
Various learning methods on Agricultural skills created employment	8.8	49.7	0.7	29.9	10.9
Resources helped in acquiring skills creating employment	24.8	56.2	0.7	15.3	3.0
Agriculture skills help to reduce rural-urban migration	16.1	48.2	2.9	24.1	8.7

n=137

4.4.1 Agricultural Skills Applicable for Employment Creation

Over half of the respondents 58.4% reported that crop production skills were most used for job creation, followed by 27.7% who said that they used livestock production. Few 2.2% mentioned that they used transportation of agricultural products in job creation, while 9.5% used value addition and 2.2% used marketing of agricultural products to create jobs.

Table 10: Agricultural Skills Applicable for Employment Creation

Activity	Frequency	Percent
Crop Production	80	58.4
Livestock Production	38	27.7
Processing of agricultural products	13	9.5
Transportation of agricultural products	3	2.2
Marketing of agricultural products	3	2.2
Total	**137**	**100.0**

n=137

4.5 Secondary School Agriculture Learning Methods and Employment Creation

This section presents data related to the objective number three of the study that stated; to determine the relationship between secondary school Agriculture learning methods and employment creation for out of school youth. The learning methods analyzed included agricultural projects, agricultural experiments, group discussions, problem solving, practice in the farm and lectures on agricultural principles.

Over half of the respondents 58.4% reported that they carried out Agricultural projects as learning methods compared to 41.6% who did not use the method also 59.9% indicated that they performed experiment compared to 40.1% who did not use. Majority of the respondents 77.4% did not learn through group discussions compared to 22.6% who used the method. 86.1% did not learn through problem solving method compared to 13.9% who used the method. Two thirds of the respondents 63.5% mentioned that they carried out practice in the farm compared to 36.5% who did not. Half of respondents 52.6% indicated that they were lectured on Agricultural principles in class as compared to 47.4% who did not.

The study finding reveals that secondary schools in Vihiga County carried out Agricultural based projects, performed Agricultural experiments, carried out Agricultural practices in the school farms and were lectured in classroom on Agricultural principles. Learning through group discussion and problem solving were not used. The study finding supports Robin (2008) who found out that learning with practical reality based on cases is a good example of how teachers can exchange methods to meet students' needs and those of the larger society. Methods of learning such as the project method, experimental, problem solving approach, co-operative learning, and learning practical skills are good in enhancing skills acquisition by the students'.

Table 11: Secondary School Agriculture Learning Methods and Employment Creation

	Did not Use		Used	
Method	**f**	**%**	**f**	**%**
Project	57	(41.6)	80	(58.4)
Experiment	55	(40.1)	82	(59.9)
Group discussion	106	(77.4)	31	(22.6)
Problem solving	118	(86.1)	19	(13.9)
Practice in farm	50	(36.5)	87	(63.5)
Class work	72	(47.4)	65	(52.6)

n=137

4.5.1 Activities Practiced for Income Generating Activity from Learning Methods

Less than half of the respondents, 48.9% indicated that they used crop production for job creation, followed by 34.3% who used livestock production. Few 2.2% used transportation of agricultural products in job creation, 9.5% used value addition and 5.1% used marketing of agricultural products to create jobs.

Table12: Agricultural Activities Practiced due to various Learning Methods

Activity	Frequency	Percent
Crop Production	67	48.9
Livestock Production	47	34.3
Processing of agricultural products	13	9.5
Transportation of agricultural products	3	2.2
Marketing of agricultural products	7	5.1
Total	**137**	**100.0**

n=137

4.6 Agriculture Learning Resources in Secondary School and Employment Creation

This section presents data related to the objective number four of this study, which stated, to identify the relationship between Agriculture learning resources in secondary schools and employment creation for out of school youth. The key variables analyzed in this section include facilities and resources mostly used in learning Agriculture, how the schools used the facilities/resources, how the facilities/resources influenced students for purposes of job creation. Onyango (2001) states that planning for material resources involves the identification of the resource requirements, assessing quality in terms of the needs, establishing criteria for standards, determining the cost per unit and the use of the materials whether by individuals or groups.

Majority of the respondents, 90.5% reported that the school farm was mostly used in learning Agriculture compared to 9.5% who said they used of farm building. The study finding indicates that secondary schools in Vihiga County used the school farm as the main resource for learning Agriculture with few schools using farm buildings. None of the schools used other key resources such as horticultural facilities and agricultural engineering facilities indicating that either the schools did not have the resources or the students were not exposed to them. Respondents also reported that the school farms were used by the schools to grow

crops and keep livestock for the purposes of income generation by the schools. Farm buildings were used to house livestock and store the harvested crops and farm inputs.

Table 13: Facilities/Resources used for Learning Agriculture in Secondary Schools

Facility/Resource	Frequency	Percent
The school farm	124	90.5
Farm building	13	9.5
Total	**137**	**100.0**

n=137

4.6.1Area of Agriculture that resources are used for Job Creation

Majority of the respondents 75.2% indicated that crop production was mostly used for job creation, followed by 10.2% who said livestock production, 7.3% used transportation of agricultural products for job creation, 5.1% used value addition and 2.2% used marketing of agricultural products to create jobs.

Table 14: Area of Agriculture that Resources are used for Job Creation

Activity	Frequency	Percent
Crop Production	103	75.2
Livestock Production	14	10.2
Processing of agricultural products	7	5.1
Transportation of agricultural products	10	7.3
Marketing of agricultural products	3	2.2
Total	**137**	**100.0**

n=137

4.7 Agricultural Activity youth were willing to Practice for Future Employment.

Over two thirds of the respondents 68.6% reported that crop production was used for job creation, while 9.5% said livestock production and 2.9% used transportation of agricultural products. Yet few 19.0% mentioned to use marketing of agricultural products to create jobs. This study finding reveal that, out of school students were willing to apply knowledge, skills and Agricultural principles in crop farming activities for purposes of employment creation. Activities like livestock production, agricultural products value addition, transportation of agricultural products and marketing of agricultural products were not favorably used by out of school youths in employment creation.

Table 15: Agricultural Activity youth were willing to Practice for Future Employment.

Activity	Frequency	Percent
Crop Production	94	68.6
Livestock Production	13	9.5
Transportation of agricultural products	4	2.9
Marketing of agricultural products	26	19.0
Total	**137**	**100.0**

n=137

4.7.1 Appreciation of Agriculture as Employment Creation by Students

Majority of the respondents, 89.1% agreed that Agriculture was an important subject for employment creation compared to 10.9% who did not agree. Some of the reasons respondents gave included; students practicing crop farming after finishing school, other students practicing livestock production after school, others observed that some students started agricultural value addition enterprises. The study finding supports Mwiria (2002) who found that schools that do well in a given vocational subject in the KCSE tend to show more interest and to set aside more resources for their teaching. In rural areas, the most important resource available for most youth at their disposal is the farm. Once the rural youth acquire appropriate knowledge and skills on Agriculture, they will be able to utilize the farm adequately; since the capital and recurrent investment required for maintaining the economic viability of a farm may be the farm for most youth who are out of school.

Table 16: Appreciation of Agriculture as Employment Creation by Students

Response	Frequency	Percent
Yes	122	89.1
No	15	10.9
Total	**137**	**100.0**

n=137

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter provides a summary, conclusions and recommendations of the study that was carried out to determine the relationship between the learning of Agriculture in secondary schools and employment creation for out of school youth in Emuhaya sub-County, Vihiga County, Kenya.

5.1 Summary

Secondary school Agriculture is one of the subjects that aim at meeting the needs of the students who learned Agriculture in secondary school and are looking for employment opportunities. Agriculture is a subject, which helps out-of-school youth to create employment or be employed in agricultural related occupations. Self-reliance provides the initial importance of teaching Agriculture in schools. The study was done through the following objectives; To determine the relationship between the knowledge gained in secondary school Agriculture and employment creation for out-of-school youth; To identify the relationship between the practical skills acquired in secondary school Agriculture and employment creation for out-of-school youth; To determine the relationship between secondary school Agriculture learning methods and employment creation for out-of-school youth and To identify the relationship between Agriculture learning resources in secondary school and employment creation for out-of-school. The summary of the study findings are as follows:

The study organized the demographic characteristics of the respondents interviewed in three categories namely; gender, age and agricultural activities practiced by respondents after learning the subject. Majority of the respondents, were males compared to females. Two thirds of the respondents were between the ages of 21 and 25 years, with a fifth whose ages were between 26 and 30 years and a few whose age between 18 and 20 years. The study established that crop production was practiced by most of the respondents. Majority of the respondents did not practice livestock production. Most of the respondents did not practice value addition. Majority of the respondents did not practice transportation of agricultural products and most of the respondents did not practice marketing of agricultural products.

The first objective sought to determine the relationship between knowledge gained by out-of –school youth and employment creation. More than two-thirds reported that, they used knowledge learned on various skills in Agriculture to create employment after school. Most

respondents said that knowledge in Agricultural principles led to increased agricultural productivity. In addition, most of the out-of-school youth practiced crop production for employment creation using knowledge in Agriculture learned in school.

The second objective sought to find out the relationship between practical skills acquired in secondary school Agriculture by out-of-school youth and employment creation. The study found out that majority of the respondents strongly agreed that they acquired skills in terms of knowledge, which they used for employment creation. More than half of the respondents disagreed to have acquired practical skills in school for employment creation. Majority of the out-of-school youth created employment using learned skills in crop production.

Objective three sought to examine the relationship between secondary school Agriculture learning methods and employment creation for the out-of-school youth. The study established that learning Agriculture by practicing agricultural activities in the school farm to a greater extend helped the youth to create employment after school. Learning methods using Agriculture experiments and projects as well, helped most youth to create employment after school. The study found out that crop production was practiced for creating employment from the various methods of learning Agriculture.

Objective four sought to determine the relationship between learning resources used in secondary school Agriculture and employment creation by the out-of-school youth. From the study, it showed that almost all the respondents reported that they used the school farm as the major resource for learning Agriculture. The respondents also said that they mostly used farms for employment creation; moreover, most out-of-school youth practiced crop production on the agricultural farms for employment creation.

5.2 Conclusions

i. Knowledge on principles of Agricultural production is significant in secondary schools, since it formed the cognitive part, which the out-of–school youth used in employment creation. This mostly helped them to carry out crop production and consequently increased agricultural productivity. However knowledge on the other aspects of Agriculture learning such as livestock production, processing, transportation and marketing of agricultural products should be improved in schools in order to create more employment.

ii. Practical skills acquired by the out-of-school youth in Agriculture in secondary schools are limited yet, they are supposed to be psychomotor oriented by use of relevant learning resources, to enable the youth create employment than depending on white-collar jobs, which are actually scarce. The out-of-school youth in Emuhaya sub-County mostly had skills in crop production, which they adopted for employment creation but lacked skills in livestock production, processing, transportation and marketing of agricultural products.

iii. The study revealed that learning methods that enhanced psychomotor learning skills used secondary school Agriculture helped the youth to create employment opportunities in agricultural occupations. Practice in the farm, Agriculture experiments and project methods were of value in employment creation. The out-of-school youth mainly practiced crop production to create employment using the named methods of learning. However, some methods of learning like the lecture method which more than half of the respondents also learned Agriculture through it, contributes very little on employment creation.

iv. The school farm in almost all schools was the resource the out-of-school youth used in learning Agriculture. This explains why the out-of-school youth practiced agriculture on the farms for income generation. In the study none of the schools used horticultural or machinery and equipment. This further explains why most respondents practiced crop production for income generation and a few practiced livestock production.

5.3 Recommendations

i. The Kenya Instruction and Curriculum Developers [KICD] should outline all aspects of knowledge to ensure that knowledge acquired in secondary school Agriculture form the foundation of employment creation after school. The secondary school Agriculture syllabus should contain the correct content for knowledge acquisition, which should as well tally with the major examining body the Kenya National Examination Council in order to identify during assessment the content that needs more emphasis for a wholesome syllabus and achievement of the set curriculum objectives.

ii. Stakeholders in the education sector should ensure that Agriculture teaching process is participatory in schools and in the implementation of the agriculture entire value chain since it is a technical and applied science subject that greatly needs psychomotor skills. There was evidence of limited practical learning in Agriculture, which negatively affected employment creation. The key area that should be looked at during this process include; promotion of agriculture in all sectors of the economy,

iii. The curriculum developers should change management process in learning Agriculture in secondary schools and examination of Agriculture, for promotion of self-employment in agriculture. Teachers should use different methods of teaching learners a concept to enhance their mastery of its content. Different learning methods especially those that involved learners' participation such as practice in the farm, experiments and project methods tend to impact positively on employment creation of the youth after school as opposed to those that were teacher centered like the lecture method.

iv. Schools in Emuhaya sub-County should make resources available in secondary schools for learners to use in order to have tangible experience during instruction and for employment creation of youth after school. The knowledge and skills acquired while in school will help the youth to utilize available resources outside school for income generation and encourage other youth to develop positive mindset on farming as an occupation to reduce rural-urban migration for white-collar jobs further more apply advanced technologies for more food production.

5.3.1 Recommendation for further study

i. The findings of this study should help in replicating the study in other levels of education like primary schools, colleges and universities.

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APPENDICES

APPENDIX A: COVER LETTER FOR THE YOUTH

Dear Respondent,

Greetings. My name is Seraphine Sherry Aholi, a Master of Science student in Agricultural Education at Egerton University, Njoro Campus. As part of my studies, I am conducting a study on the relationship between the learning of secondary school Agriculture and employment creation for out-of-school youth in Emuhaya sub-County, Vihiga County. I am glad to inform you that you have been selected to participate in the study. Kindly, you are requested to sincerely respond to the items in the questionnaire. Your contribution will be useful not only to this study but also in the future planning and improvement of secondary school Agriculture education. Your responses are highly valued and will be treated with utmost confidentiality.

APPENDIX B: YOUTH QUESTIONNAIRE

Instructions

Kindly indicate the answers by marking a tick in the brackets or boxes, writing letters corresponding to the suitable response in brackets and writing down information where there are spaces to write in your responses. The response provided will be confidential.

SECTION A:

Demographic Information

Please mark a tick on your favorable response within the brackets.

1. Gender Male **( )** Female **( )**

2. Age

18-20 **( )**

21-25 **( )**

26-30 **( )**

31-35 **( )**

3. Select the major agricultural activity you practice for a living after learning Agriculture.

- Crop production. **( )**
- Livestock production. **( )**
- Processing of agricultural produce / value addition. **( )**
- Transportation of agricultural produce. **( )**
- Marketing of agricultural produce. **( )**

SECTION B:

4. Secondary school Agriculture education and employment creation.

- **Please indicate by writing a letter A,B,C,D or E that corresponds to your most preferred response within the brackets.**

i. Gained proper knowledge on Agricultural principles **(A)**

ii. Acquired adequate skills on Agricultural practices **(B)**

iii. Learned Agriculture using various methods **(C)**

iv. Used various resources to learn Agriculture **(D)**

a.) Select the major aspect of secondary school Agriculture you appreciated that was well conducted while you were in secondary school. **( )**

b.) Which major aspect of secondary school Agriculture, has promoted creation of employment in agriculture by out of school youth in Vihiga County? **( )**

c.) Choose the major aspect of secondary school Agriculture among the following that has led to improved agricultural productivity among the out of school youth in Vihiga County. **( )**

5. **Please indicate your opinion towards Agriculture as a subject for employment of rural youth by placing a tick against your level of agreement within the box using the suggested scale for each item for; Strongly Disagree (SD), Disagree (D), Undecided (U), Agree (A) and Strongly Agree (SA).**

No	Statement	SD	D	U	A	SA
a	The knowledge gained in Agriculture from school helps out of school youth in creating employment.					
b	There is high satisfaction on the practical skills acquired by youth in secondary school Agriculture in creating self-employment after school.					
c	In my school, we were exposed to various methods of learning Agriculture by my teacher(s) and were useful in helping youth to create agricultural employment after school.					
d	There were various agricultural resources for learning Agriculture in my secondary school that help the youth once out of school to utilize the skills in employment creation after school.					
e	Learning Agriculture in secondary school makes youth to appreciate rural life and farming occupations hence avoiding rural–urban migration of the out of school youth.					

SECTION C:

6. Comments on secondary school Agriculture for the employment creation of out of school youth.

Please write down your comments in the spaces provided for the questions in this section or mark a tick in the brackets where applicable.

a) Give ways in which knowledge gain can be enhanced in secondary school Agriculture to enable the youth to create employment after school in Vihiga County.

---

b) Which skills did you learn in secondary school that helps you in agricultural production for income generation?

---

c) Which Agriculture learning methods did your Agriculture teacher use to prepare you for agriculture employment after school?

Carried out projects **( )**

Performed experiments **( )**

Learned through group discussions **( )**

Learned to solve out problems **( )**

Carried out practicals in the farm **( )**

Lectured on Agricultural principles in class

d) Select the facilities /resources that were mostly used in your school in learning Agriculture in Vihiga County.

The school farm **( )**

Farm building **( )**

Horticulture facilities **( )**

Agriculture engineering resources **( )**

e) How did the school use the Agriculture facilities/resources that were present in your school?

---

f) Do students in schools in Vihiga County appreciate Agriculture because as an important subject for employment creation after school?

Yes **( )** No **( )**

-Give reasons for your answer above.

---

g) What makes out-of-school youth who learned Agriculture shy away from taking agricultural activities for employment creation?

SECTION D

7. Agricultural activities the out of school youth engage in for employment after school.

- **Please indicate by writing a letter A,B,C,D or E that corresponds to your most preferred response within the brackets after each question.**
  - Crop production **(A)**
  - Livestock production **(B)**
  - Processing of agricultural products **(C)**
  - Transportation of agricultural products **(D)**
  - Marketing of agricultural products **(E)**

i. Which area of agriculture do you apply knowledge gained in Agriculture in creation of employment after school? **( )**

ii. Name the major agricultural activity you apply the skills acquired in secondary school Agriculture for employment. **( )**

iii. Name one agricultural practice you do for income generation by applying the Agricultural principles using the various methods of learning Agriculture used by your teachers in learning Agriculture. **( )**

iv. Identify the agricultural activity you practice for employment creation using resources you used in secondary school to learn Agriculture. ( )

v. Point out one agricultural activity that you are likely to continue practicing as a form of employment in future. **( )**

SECTION E:

8. Challenges faced in learning secondary school Agriculture for creation of employment

- **Use the key to tick against your best level agreement to the statements in the boxes provided for; Strongly Disagree (SD), Disagree (D), Undecided (U), Agree (A) and Strongly Agree (SA).**

No	Statement	SD	D	U	A	SA
a	Knowledge gained from learning Agriculture in secondary school is only aimed at passing examinations					
b	Lack of practical learning once theoretical principles are learned in the classroom					
c	Lack of current resources and facilities on principles of Agriculture in secondary schools.					
d	Agriculture subject is for those who are not bright enough to do other technical subjects					
e	Low income from agricultural employment/jobs and produce					
f	Lack of information on agricultural opportunities and occupations after school.					

Thanks for responding.

APPENDIX C: LETTER TO EMUHAYA EXTENSION OFFICER

AHOLI, SHERRY SERAPHINE
DEPT OF AGRIC, EDUC & EXTENSION.
EGERTON UNIVERSITY
P.O BOX 536,
NJORO, KENYA.
1ST JUNE 2016

THE EXTENSION OFFICER,
……
……
……

Dear sir/madam

REF: RESEARCH ON RELATIONSHIP BETWEEN SECONDARY SCHOOL AGRICULTURE AND EMPLOYMENT CREATION FOR OUT-OF-SCHOOL YOUTH.

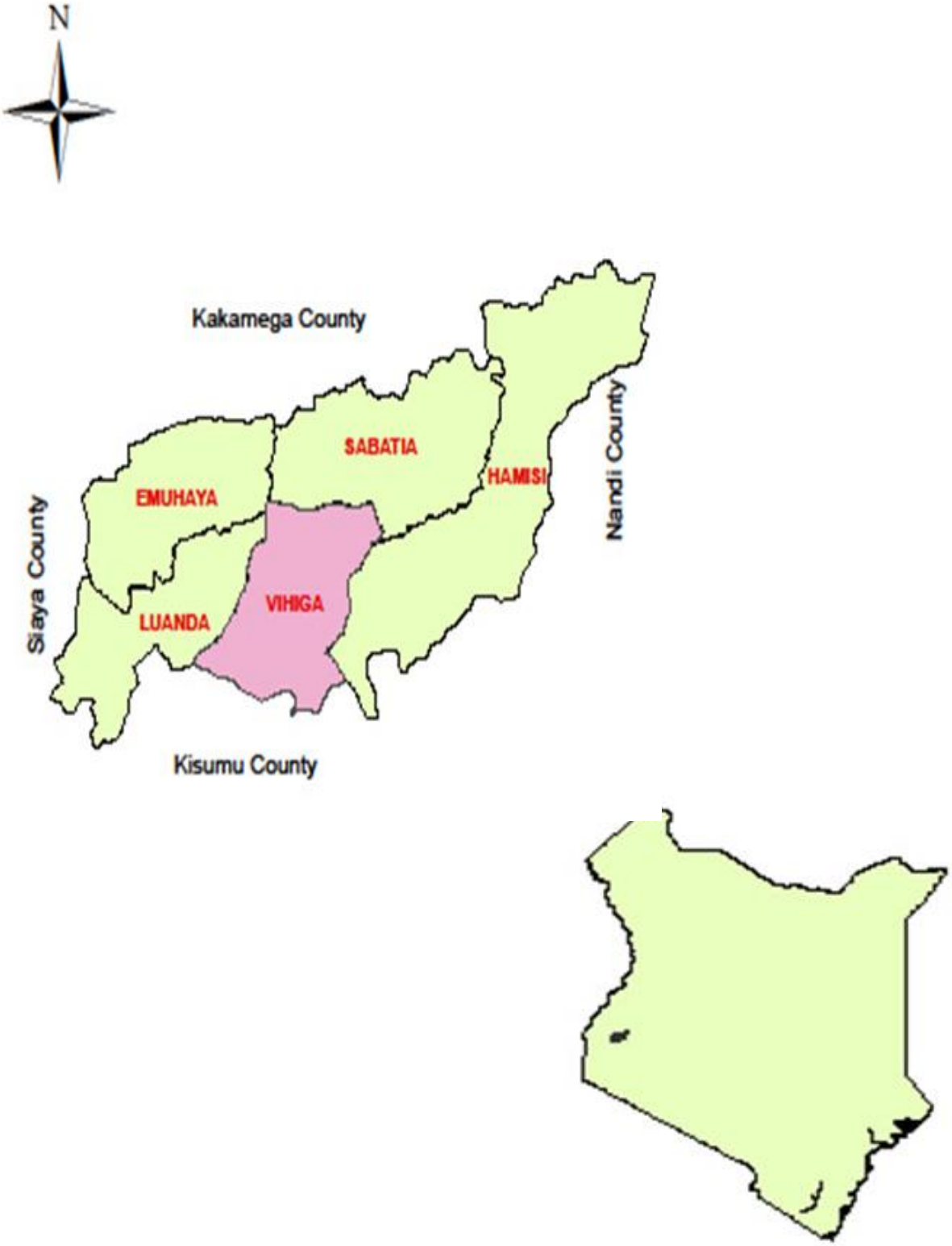
I am in a process of carrying out a research on the relationship between school Agriculture learning and employment creation of out-of-school youth in Emuhaya sub-County of Vihiga County. The needed information is to be gotten from the out school youth in the agricultural employment in the named sub-County.

I plan to visit your county and the named sub-County in the morning/afternoon of…..June 2016 to arrange for the research. I have attached copies of letters of authority to conduct the research from the National Commission for Science, Technology and Innovation. This research is a part of my Post Graduate Science Degree Program in Agricultural Education at Egerton University, Njoro campus. Any assistance provided to me will be highly appreciated. Thank you in advance.

Yours faithfully,

AHOLI SHERRY SERAPHINE.

APPENDIX D: A MAP SHOWING SUB-COUNTIES IN VIHIGA COUNTY



APPENDIX E: GRADUATE SCHOOL LETTER TO NACOSTI

EGERTON UNIVERSITY
Tel: Pilot: 254-51-2217620
254-51-2217877
254-51-2217631
Dir.line/Fax: 254-51-2217847
Cell Phone
Extension; 3606

P.O. Box 536 - 20115
Egerton, Njoro, Kenya
Email: bpgs@egerton.ac.ke
www.egerton.ac.ke

OFFICE OF THE DIRECTOR GRADUATE SCHOOL

Ref:...EM11/3232/12 Date:...18th May, 2015.....

The Secretary,
National Commission for Science Technology and Innovation
P. O. Box 30623-00100,
NAIROBI.

Dear Sir,

RE: REQUEST FOR RESEARCH PERMIT – AHOLI SHERRY SERAPHINE
REG. NO. EM11/3232/12

This is to introduce and confirm to you that the above named student is in the Department of **Agricultural Education and Extension, Faculty of Education and Community Studies.**

She is a bonafide registered Masters student in this University. Her research topic is entitled "**Relationship Between the Teaching of Agriculture in Secondary School and Employment Creation for Out of School Youth in Emuhaya Constituency, Vihiga County, Kenya.**"

She is at the stage of collecting field data. Please issue her with a research permit to enable her undertake the studies.

Yours faithfully,

DIRECTOR, BOARD OF POSTGRADUATE STUDIES * EGERTON UNIVERSITY P.O. Box 536, EGERTON * 20 MAY 2015

Prof. Michael A. Okiror
DIRECTOR, BOARD OF POSTGRADUATE STUDIES

MAO/ear

APPENDIX F: RESEARCH AUTHOURISATION BY NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/15/8992/8810**

Date:
4th December, 2015

Aholi Sherry Seraphine
Egerton University
P.O Box 536-20115
EGERTON.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Relationship between the teaching of agriculture in secondary school and employment creation for out of school youth in Emuhaya Constituency, Vihiga County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Vihiga County** for a period ending **1st December, 2016.**

You are advised to report to **the County Commissioner and the County Director of Education, Vihiga County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. S. K. LANGAT, OGW
FOR: DIRECTOR GENERAL/CEO

Copy to:

The County Commissioner
Vihiga County.

The County Director of Education
Vihiga County.

APPENDIX G: RESEARCH PERMIT BY NACOSTI

THIS IS TO CERTIFY THAT:
MS. AHOLI SHERRY SERAPHINE
of EGERTON UNIVERSITY, 0-40610
yala,has been permitted to conduct
research in *Vihiga County*

on the topic: *RELATIONSHIP BETWEEN THE TEACHING OF AGRICULTURE IN SECONDARY SCHOOL AND EMPLOYMENT CREATION FOR OUT OF SCHOOL YOUTH IN EMUHAYA CONSTITUENCY, VIHIGA COUNTY, KENYA*

for the period ending:
1st December,2016

Permit No : NACOSTI/P/15/8992/8810
Date Of Issue : 4th December,2015
Fee Recieved :Ksh 1000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation