KENYAN EDUCATION SYSTEM AND SELF-RELIANCE: A DECOLONIZING PERSPECTIVE

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DECLARATION AND RECOMMENDATION

Declaration

This thesis is my original work and has not been presented for the award of a Diploma or conferment of Degree in this or any other University.

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DEDICATION

This work is dedicated to my dad Daniel Murungi and my late mum Zaveria N. Murungi who propagated the kernels of independence and self-reliance in me.

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ABSTRACT

Education is meant to develop capacity and enhance productivity among members of society. African indigenous education systems inculcated self-reliance among members of society and every individual had a specific role. The colonial education system introduced and emphasized aspects of employment, resulting in job seekers and unemployment. In an effort to address growing mismatch between expectations by graduates and societal employment provisions, the government has undertaken reforms in the education system to promote self-reliance. Despite these efforts there has been growing concerns on the effectiveness of the current education system to inculcate self-reliance among graduates. This study sought to investigate the influence of decolonizing the Kenyan education system on self-reliance among students. The study was carried out in the universities in Kenya. This study utilized the descriptive survey and the correlational research designs. The target population for this study was 537,211 subjects made up of 520,893 students, and 16,318 Academic staff members in chartered public and private universities in Kenya. A sample size of 384 respondents made up of 60 members of academic staff and 324 fourth year bachelor of education students was selected to participate in the study. Data collection was done using questionnaires and interview schedules. The validity of the instruments was enhanced through the expert judgment of the researcher's supervisors, peers and other experts. Reliability of the instruments was tested by use of the Cronbach's Alpha co-efficient. An internal consistency co-efficient of $\alpha = 0.862$ was obtained. Descriptive statistics were used for measures of central tendencies including mean, standard deviation and coefficient of variation. Inferential statistics through correlation analysis using the Pearson's coefficient of correlation was used to measure the degree of influence of each independent variable (Decolonizing curriculum, Decolonizing pedagogical approaches, Decolonizing school environment and Decolonizing evaluation) on self-reliance. To test hypothesis, linear and multiple regression models were used to test significance of relationship between independent and dependent variables. Qualitative data from interviews was organized into themes, categories and patterns pertinent to the study. This study established that the contemporary curriculum influences self-reliance to a moderate extent and that integration of subjects that develop practical skills and nurture creativity would promote self-reliance to a large extent. It was found that the contemporary pedagogical approaches do not promote self-reliance. Changing the role of the student from a passive learner to a reflective thinker and problem solver as well as laying emphasis on practical rather than theoretical learning would enhance self-reliance. The contemporary school environment was found to have little influence on self-reliance and that an enhanced environment where teachers play the role of mentors, coaches and trainers would promote self-reliance. Embracing evaluation that measures problem solving skills and creativity rather than memory would promote self-reliance. It was concluded that Decolonizing curriculum, decolonizing pedagogical approaches, decolonizing school environment and decolonizing evaluation had significant influence on self-reliance among students in the Kenyan education system. Based on the findings of this study, the researcher recommends integration of aspect of African indigenous curriculum, pedagogical approaches, school environment and evaluation into the contemporary Kenyan education in order to promote self-reliance among students. It is hoped that the findings of this study will be useful to educational planners, policy makers, curriculum implementers and other stakeholders in promoting self-reliance among graduates from educational institutions.

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ABBREVIATIONS AND ACRONYMS

AIKs	African Indigenous Knowledges
A.R^2	Adjusted R Square
C.V	Coefficient of Variation
ESR	Education for Self-reliance
GoK	Government of Kenya
KCPE	Kenya Certificate of Primary Education
KCSE	Kenya Certificate of Secondary Education
KNEC	Kenya National Examination Council
MoE	Ministry of Education
M.S	Mean Square
S.D	Standard Deviation
S.E.E	Standard Error of the Estimate
SPSS	Statistical Package for Social Sciences
S.S	Sum of Squares
TVET	Technical Vocational Education and Training
UNESCO	United Nations Educational Scientific and Cultural Organization
VIF	Variance Inflation Factor

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Self-reliance has been one of the aims of education in Kenya since independence (Basic Education Act; Constitution of Kenya, 2010; Ominde Report, 1964; Gachathi report, 1976; Mackay Report, 1981; Kamunge Report, 1988; Koech Report, 1999). Self-reliance is commonly defined as the capacity to rely on oneself or one's own capabilities to meet one's personal needs. Agreement with statements such as "I depend on myself, not on others, to get what I want done" and disagreement with statements such as "Someone often has to tell me what to do" indicate a high level of self-reliance (Hmel & Pincus, 2002; Steinberg & Silverberg, 1986; Triandis & Gelfand, 1998). As a scholarly construct, self-reliance emerged in the 19th century in transcendentalist writings of the time, most notably Ralph Waldo Emerson's (1841) eponymous essay.

Ralph Waldo Emerson (1803-1882) coined the term "self-reliance" in a similarly titled essay published in 1841 that emphasized trust in one's present thoughts, skills, originality, belief in own capabilities and genius and living from within. The Oxford dictionary defines self- reliance as reliance on one's own powers and resources rather than those of others. Cambridge English dictionary defines self- reliance in terms of the ability of an individual to depend on him/herself or his/her abilities. Self-reliance is defined by independence, the ability to think and act without the help or influence of others as well as the ability to decide what to be or what to do (Edalia, 1990). In most cultures, self-reliance is a socially desirable trait that reflects an absence of excessive dependence on others, a sense of control over one's life, and personal initiative (Steinberg & Silverberg, 1982). In this study, self-reliance is conceived in terms of: possession of knowledge and skills by the individual to depend on himself/herself for survival; having an attitude of being self-reliant; autonomy or independence; confidence in own capabilities; adaptation to the physical environment; responsibility; possession of skills to work and earn a living independently; ability to provide basic needs for self/family; sense of belonging to community and willingness to participate in community.

In adopting self-reliance as one of the aims of its education, Kenya, therefore seeks to produce individuals who are independent, and have the ability to think and act without help or influence of others. For self-reliance to be achieved, education ought to be a subjective process where one learns to be a self-reliant person in society in all aspects of one's life (Njoroge & Bennaars, 1986). Irrespective of the limited resources in nature, a self-reliant individual uses the resources efficiently, effectively and sustainably to uplift one's own life and the lives of his/her fellow human beings (Makoyo, 2014). Historically, achievement of self-reliance has been central to the aims and philosophies of education for different societies through the ages. Dewey (1916) posits that education is not a preparation for life, rather it is the living. He observes that education is the process of living through a continuous reconstruction of experiences. It is the development of all those capacities in the individual which will enable him to control his environment and fulfill his possibilities.

Sifuna and Otiende (1994) consider education to be the training and instruction of the young for the business of life. This definition is especially appropriate to this study because since the beginning of human civilization this has been one of the most ancient concerns of humankind. Human societies endeavor to train future generations to be self-reliant by adapting them to the social, economic, cultural and political life of their society. Such an education is derived from the traditions of the people and conditioned by their worldview and environment as well as borrowed or imposed foreign factors. Situating education in the context of self-reliance in Africa, Adeyemi and Adeyinka (2003) argued that education should aim at enabling individuals to survive in a society, cultivate good habits and develop good citizens capable of earning a good living. African nations, therefore, educate their children in order to achieve self-reliance for the individual and the society at large.

Education is, and has been an integral part of the lives of societies across the world through civilizations. Literacy and formal schooling as they are known today did not exist in pre-colonial black Africa. However, African peoples had developed their own coherent systems of education through which their children were prepared to live efficiently in their environment (Sifuna, Chege & Oanda, 2006). Education as practiced by each of the many ethnic groups had its own distinctive features,

reflecting the particular life and culture of its people. The basic similarities in African Indigenous Education are that it was strongly adapted to the environment, both physical and social. According to Bogonko (1992) African indigenous education prepared the young to take up their place in society, a society in which religion; politics, economics and social relationships were inextricably interwoven. Indigenous systems of education in Africa varied from one society to another. However, the goals of these systems were strikingly similar. Bogonko (1992), Fafunwa (1974) and Sifuna, Chege and Oanda (2006) identified some of the goals of African Indigenous Education as: To prepare individuals for adult roles; To transmit the accumulated wisdom and knowledge of the ethnic group from one generation to another; To adapt children to their physical environment; To inculcate unity and collective responsibility; To produce a limited number of "professionals" who specialized as smiths, healers and diviners, experts in tribal law and custom and others like rain makers, medicinemen and midwives; To develop character; To understand, appreciate and promote the cultural heritage of the community at large.

Sifuna (2006) remarks that education in every African community was essentially an education for living, and its main purpose was to train the youth for adulthood within the society. He agrees with Fafunwa and Bogonko that education in the indigenous African sense was meant to adapt children to their physical environment and to teach them how to utilize it sustainably. There was strong emphasis on the learning of practical skills and the acquisition of knowledge which was useful to the individual and the society. African Indigenous Education ensured that all children in the society were prepared to be useful in the society and self-reliant. The knowledge and skills offered ensured that each individual would participate in society, and use their talents for their own benefit and for the benefit of the society. Based on the opinions of Bogonko, Sifuna and Fafunwa, education in the African indigenous sense was a way of life and produced "graduates" who possessed knowledge and skills that were needed both by the individual and the society in general. The responsibility to impart the skills, knowledge, attitudes and spirit of self-reliance in the indigenous African setting was taken up by the family, peers and all members of society. The introduction of a Euro-centric type of education moved the responsibility from the family and society in general to a formal education system.

The arrival of European settlers and Christian Missionaries, the subsequent colonization and introduction of Christianity and a western type education had great impact on the lives of Africans and their education system. The type of Education introduced in Kenya by missionaries and the colonial government was organized on racial lines. It was argued that the different races in the country; Africans, Asians, Arabs, and Europeans had attained different levels of social, political and economic development and that each needed the kind of education that would preserve its culture and prepare its people for their "appropriate" role in the society (Eshiwani, 1990). Christian Missionaries played the biggest role in the introduction of the literacy-based education in Kenya. The main objective for missionary education was to bring Africans to the membership of their churches (Sifuna, Chege & Oanda, 2006). However, Sifuna and Otiende (1994) observe that there was the general agreement among Christian missionaries that Africans were lazy and manual labour was advocated as the panacea for this malaise. The belief in African inferiority and depravity led many to conclude that Africans could not possibly benefit from a literary education. With this in mind, black Africans were excluded from "academic scholarship" and were limited to rural and industrial manual education for service to the white settler (Sifuna & Shiundu, 1988).

Another important aspect of the early educational development in Kenya was missionary-government cooperation which led to the formation of the missionary Board of Education in 1909. Through the board, Professor Nelson Fraser of Bombay was commissioned to recommend the system of education in the East African Protectorate. In his report, Fraser placed emphasis on the provision of industrial education, reasoning that such type of education would make an assault on those undesirable qualities like self-conceit and insolence that were assumed to follow from giving Africans, literary education (Sifuna & Otiende, 1994). Other commissions established to address education in colonial Kenya made similar proposals with regard to education for Africans. Among these was the Phelps-Stokes Commission Report. The commission highlighted the need for agricultural and vocational education suitable for the natives and was totally opposed to an academic education for Africans (Kerre, 1991). With regard to the type of education that was advocated for Africans, there was a convergence in the ideas of both the early Christian missionaries and the

colonial government policy makers. Africans were not to be exposed to a liberal type of education.

Being practical in nature, the kind of vocational, agricultural and generally practical education that was advocated by Christian missionaries and the colonial government had some element of semblance with the type of education that Africans had offered to their children for ages. However, this new education did not match the spirit and principles of African indigenous education and carried an element of discrimination for black Africans. This education was associated with the negative aspects of colonization and to a large extent failed to take root in Africa. Thus, at the time of independence, black Africans rushed to throw off the "shackles" of colonial education to receive the academic and higher-technology education and training from which they had been systematically denied previously (McLeandand & Kamau, 1999). This gives impetus to this study.

After independence in 1963, the new government saw education as a vehicle to restore African dignity, to recapture the national heritage that had been dismissed by the imposition of an alien culture, and to prepare Kenyan society for its place in the modern international community (Republic of Kenya, 1964). Two major commissions: the Ominde Commission (1964-65) and the Gachathi Commission (1976) were appointed to review the educational system and to plan for its future (Republic of Kenya, 1964-65; Republic of Kenya, 1976). The most prominent outcome of the 1964-65 commission on Kenya's educational system was the expansion of schooling. The Kenyan primary and secondary education systems exhibited steady growth after independence in 1963 (Sifuna, 1992). The big increase in the school enrollments contributed to a large number of children being forced out of the school system each year mainly because of lack of sufficient places and facilities, especially at the primary school level (Indire, 1982). In addition, many graduates were not absorbed into the employment sector, and the general concern at the time was that they had no workable skills (Sifuna, 1986).

The growing number of primary school graduates along with a number of drop-outs was a main cause of unemployment of the youth in Kenya. The education system had

progressed faster than the labour market. Attempts to alleviate the problems of unemployment among youth, particularly the primary school graduates, were directed toward the establishment of non-formal vocational education and training institutions such as youth polytechnics and the national youth service (Sifuna, 2006: Bogonko, 1992: Merrifield, 1986). These programs were to absorb youth for a few years and give them marketable skills (Hoppers, 1985).

Government and church organizations responded to the unemployment crisis by establishing non formal education and training institutions with a strong vocational bias (Sifuna, 1984). Consequently, the first two decades after independence witnessed the establishment of many multi-skill training institutions including national youth service and youth polytechnics (formerly village polytechnics) (Sifuna; 1984; Republic of Kenya, 1988; UNESCO, 1968). The multi-skill training institutions tried to combat student temptations to seek work in the already scarce wage employment sector in the urban areas. The multi-skill training institutions were to absorb and train primary school graduates in various vocational skills. The skills would enable the youth to participate fully in the development of their rural areas; that is, to reduce rural-urban migration, and to increase their employment potential (Sifuna, 1984).

The restructuring of the Kenya education system to 8:4:4 was as a result of one of the recommendations of Presidential Working Party on the Second University whose report was presented to the President in September 1981 (Simiyu, 2009). The report was subsequently accepted by the Government in March 1982. One of the aims of the 8:4:4 system of education was to provide practical oriented curriculum that would offer a wider range of employment opportunities. The students graduating at every level were expected to have some scientific and practical knowledge that can be utilized for either self-employment, salaried employment or for further training (Okaka, 2001). At every level students were expected to explore a variety of subjects to develop a wide range of interests and skills and to enhance self-reliance.

According to Kamunge (1988) technical and vocational education in Kenya was incorporated in the 8-4-4 system of education with specific objectives that can be summarized as follows: To lay the foundations for the vocational skills required for

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socio-economic development; To expose students to scientific and technological trends, skills and ideas; To develop vocational and entrepreneur skills as basis for further training and employment. To develop appropriate vocational attitudes, initiative and creative thinking oriented to work; To inculcate skills applicable to various trades, vocations and professions; To develop an appreciation for the dignity of manual work.

While the objectives of the 8-4-4 system of education seem well calculated to promote the acquisition of self-reliance and self-employment among its graduates, Kenya has continued to grapple with the problem of production of graduates and school leavers who lack the basic capacity to be self-reliant and live their lives independently. There is growing economic dependency among the youth of Kenya. Self-reliance in the post-colonial education sense in Kenya was narrowly conceived as the possession of vocational skills which would make graduates of schools and colleges engage in self-employment in the areas that required vocational skills such as carpentry, masonry, wielding, etc. This explains the reason why the government of Kenya has over the years concentrated its effort on the development of TVET colleges and institutes as a solution to unemployment and development of self-reliance among the youth.

This study sought to deconstruct the Kenyan education system with regard to its role in inculcating self-reliance among students. Based on the gaps identified in the literature review, the researcher situated this study in the Anti-colonial theoretical framework in order to fill the gaps. Education in the African indigenous dimension trained all members of society through its curriculum, pedagogical approach, learning environment and evaluation to be self-reliant. However, colonization and introduction of a Eurocentric type of education had long lasting effects on education for Africans. This study sought to explore ways in which the indigenous education in Africa may be integrated into contemporary Kenyan education in order to inculcate knowledge, skills and the spirit of self-reliance among learners. The researcher is an Educational sociologist who is interested in the symbiotic relationship between education and society. Education as one of the primary agents of socialization performs roles which society has given it. Any failure by education to perform such roles has direct

consequences for society in general. Education is considered by the researcher as the key agent for inculcation of self-reliance among young members of society.

1.2 Statement of the Problem

Kenya, like many developing nations is facing the challenge of producing large numbers of school leavers and graduates of the school system with an economy that cannot sustainably create new jobs to cater for the new entrants into the job market. With a bloated labour force and a shrinking job market, the country has been taking measures aimed at preparing youth to be self-reliant in order to seek alternative means of living that do not necessarily depend on wage employment. Since independence, the Government of Kenya has focused on producing self-reliant individuals through various education policies, including the introduction of the 8-4-4 system of education and development of Technical and Vocational Education and training. However, the World Bank, UNESCO and various researchers have questioned the extent to which the education system inculcates self-reliance among students. Not much attention has been given to the colonial experience in education and the subsequent introduction of Eurocentric curriculum, pedagogical methods, learning environment and colonial evaluation procedures to the Kenyan education system. This study sought to establish the influence of decolonizing the Kenyan education system on self-reliance among students.

1.3 Purpose of the Study

This study sought to establish the influence of decolonizing the Kenyan education system on self-reliance among students.

1.4 Objectives of the Study

The following objectives guided the study

 i. To determine the extent to which decolonizing curriculum promotes self-reliance among students in the Kenyan education system.
 ii. To establish the influence of decolonizing pedagogical approaches on self-reliance among students in the Kenyan education system.
 iii. To determine the extent to which decolonizing school environment promotes self-reliance among students in the Kenyan education system.

iv.   To determine the extent to which decolonizing evaluation promotes self-reliance among students in the Kenyan education system.

1.5 Research Hypotheses

The study was guided by the following hypotheses which are based on the research objectives:

$H_{01:}$ There is no statistically significant relationship between decolonizing curriculum and self-reliance among students in the Kenyan education system.

$H_{02:}$ There is no statistically significant relationship between decolonizing pedagogical approaches and self-reliance among students in the Kenyan education system.

$H_{03:}$ There is no statistically significant relationship between decolonizing school environment and self-reliance among students in the Kenyan education system.

$H_{04:}$ There is no statistically significant relationship between decolonizing evaluation and self-reliance among students in the Kenyan education system.

1.6 Significance of the Study

This study is expected to contribute to the already existing body of knowledge on education and self- reliance. Examination of the interrelationships between education and self-reliance within an anti-colonial framework is expected to make contribution to knowledge about the growing decolonizing efforts in Africa and the diaspora. It is hoped that this study will shed more light on the ways through which the curriculum, pedagogical methods, evaluation and school environment can be decolonized by integrating aspects of indigenous education into the contemporary education system in order to promote self-reliance among learners.

This study is expected to contribute significantly to policy and practice, curriculum implementation and to university lecturing and research. There is growing concern about the growing levels of unemployment, underemployment as well as dependency among graduates from all levels of education in Kenya. By seeking to examine the declining levels of self-reliance among the educated citizens from the point of view of the colonial experience, it is hoped that this study will rekindle interest in afrocentricity as an inexhaustible fountain of knowledge for academicians.

It is hoped that the findings and recommendations of this study will be useful to educational planners, policy makers and administrators in planning and making decisions regarding education and self-reliance. The study will hopefully shed light on factors attributable to colonization that continue to impact on students' attainment of self- reliance and help planners to make early interventions with regard to self-reliance in education. It is expected that the findings will serve as an eye opener to students and academic faculty in higher education institutions on the prevailing labour market conditions and job opportunities in Kenya's fast-growing economy. It is also anticipated that the findings of this study will also enlighten the youth, parents and educators on the importance self-reliance.

1.7 Scope of the Study

The study focused on the role played by the content of the curriculum and the pedagogical approaches used to deliver the curriculum and their roles in inculcating self-reliance among learners. The study also investigated the role played by school environments and evaluation in promoting self-reliance. The study sought to determine the influence of decolonizing the curriculum, pedagogical approaches, school environment and evaluation on self-reliance among students in Kenya. The study was conducted in universities in Kenya. Academic staff in the faculties or schools of education, students and graduates from these institutions participated in the study.

1.8 Limitations of the Study

Colonial influences and effects are difficult to measure in objective terms due to the emotional effect that colonization has on colonized groups. The researcher depended on respondents' perception of self-reliance which may have been subjective. Triangulation was used to minimize the effect of the respondent's subjective perception on the findings of this study. The researcher used different instruments to collect data from respondents and also collected data from students, graduates, and academic staff in universities in order to validate the information collected from the different groups of respondents.

1.9 Assumptions of the Study

The study was based on the following assumptions:

i.   That the colonial experience has long-lasting influence on the thinking, choice making and opinions of the colonized people even after the attainment of political independence.

ii.   That all respondents were familiar with the content of Africa Indigenous Education

iii.   That respondents are conversant with policy regarding education in Kenya.

iv.   That education influences individual's life outcomes.

v.   That educators are interested with their students' career outcomes and choices.

1.10 Operational Definition of Terms

The definitions given below have been operationalized to fit the study;

African Indigenous Education Curriculum, teaching or learning environment, methods of instruction, and evaluation procedures used in African societies before the onset of colonization and introduction of a Euro-centric education.

Colonialism It is a system of rule in which European imperialists assumed the rights to impose their will upon Africans, leading to a situation of dominance, dependency and subordination in the educational, social, economic and cultural life of the governed group.

Colonial Education Eurocentric education imposed by European Christian missionaries and colonial government agents on African nations mainly during the first half of the 20$^{\text{th}}$ century.

Decolonization A social and intellectual resistance to dominant and colonizing knowledges and processes in order to transform African educational systems and institutions and making them relevant to the needs and aspirations of our people. Decolonization is essentially reversing the pervasive thinking, practices, attitudes, tendencies, and models that were shaped by colonialism.

Decolonizing the process of integrating African indigenous content of education, pedagogies, evaluation and learning environments into contemporary education.

Decolonizing Education Education that is in an ongoing, continuous but incomplete change process through integration of aspects of African Indigenous education into contemporary education.

Eurocentric Education Education with foreign curriculum, pedagogy, school environments and evaluation introduced to Africans by early Christian missionaries and colonial governments from Europe.

Indigeneity having qualities that may be attributed to African traditional societies

Kenyan Education System Education as practiced in the contemporary Kenyan society, including its curriculum, pedagogical approaches, evaluation procedures and school environment at all levels from early childhood education to university education.

Self-Reliance the capacity to depend on oneself rather than others characterized by autonomy, self-determination, responsibility, commitment, trust in oneself, creativity and trust in own capabilities. Having knowledge and skills to rely on oneself by engaging in self-employment for survival and having capacity to provide employment for others.

CHAPTER TWO

LITERATURE REVIEW

2.1 The Concept of Self-reliance

The notion of "self-reliance" is perceived differently by different users depending on the circumstances within which it is used. According to Ambaa (2015), self-reliance means the ability to depend squarely on oneself in an independent society that takes care of their affairs, a society where each person works and is exploited by none. Schoyck (2018) perceives self- reliance as the capacity of an individual to stand up for what they believe in, knowing that it may not be well received, may be dismissed and outrightly rejected by others. Webster (1989) defines a self-reliant person as one who is confident in their abilities and able to do things for themselves not needing help from other people.

The term "self-reliance" was coined by an American transcendentalist and philosopher, Ralph Waldo Emerson (1803-1882) in a similarly titled essay published in 1841. The essay emphasized trust in one's present thoughts, skills, originality, belief in own capabilities and genius and living from within (Uwem, 2016). Some quotes from this essay that illustrate Waldo's thoughts about self-reliance include: "To be yourself in a world that is constantly trying to make you something else is the greatest achievement"; "The only person you are destined to be is the person you decide to be" ;"There is a time that envy is ignorance, and a time that imitation is suicide"; "A foolish consistency is the hobgoblin of little minds, adored by little statesmen and philosophers and divines"(Uwem, 2016). Emerson's essay *Self-Reliance* of 1841 advocates ten main values directly related to the concept of individuality: trust, responsibility, self-esteem, self-determination, commitment, independence, creativity, autonomy, self-evaluation, and individual talent. Some of them are explicit while others need to be induced. In this study, these values are organized into five broader categories: Trust in own potentialities; Creativity and exploiting of talents; independence and autonomy; responsibility and commitment; and Self-esteem.

2.1.1 Attitude

Self-reliance is a product of an attitude of trust in an individual's own potentialities as well as strong self-esteem. In an article titled "Understanding Emerson's Self-Reliance in Terms of Education with a Focus on Language Didactics", Kouassi (2015) observes that an individual who trusts himself is more likely to use his potentialities to achieve in any context than one who chooses to trust others. Associating the human situation to countries, Kouassi observes that Japan and China, two countries which, some years ago, were referred to as developing countries have succeeded in changing their status thanks to their trust in their potentialities. Trust is at the heart of the success of most, if not all, human endeavours (Kouassi, 2015).

A similar observation is made by O'Dwyer, (2012) in her essay titled "Emerson's Argument for Self-reliance as a Significant Factor in a Flourishing Life". According to O'dwyer (2012), Emerson's message is to 'trust thyself', to dare to see the world in one's own eyes, to experience life from one's own heart and to trust one's own instincts and intuitions, an attitude towards life which Emerson posits may be observed in infants and small children, before they have been 'clapped into jail by consciousness'. Kouassi (2015) further posits that the manifestation of self-reliance is partly dependent on the ability of all individual members of society to trust themselves. Trusting oneself is a social virtue. However, for the improvement of social life, one should not put trusting others in the background. For, as Emersion himself explains, the non-conformism that he advocates is not synonymous with rejection (Emerson, 1841). Acknowledging that independence may seem at odds with attachment to others, Schoyck (2018) adds that self-reliance does not mean that individuals dismiss everyone else and listen only to themselves.

Self-esteem refers to a person's perception of their own value as individuals, particularly with regard to the work they do, their status, achievements, purpose in life, their perceived place in the social order, strengths and weaknesses, how they relate to others and their ability to stand on their own feet (Schoyck, 2018). Self-esteem and self-determination allow an individual to make his/her way through life without expecting others to decide for them what their life should be. This, in turn, calls for his ability to evaluate himself, so that he will improve his ways on the

grounds of his revealed limitations. having high self-esteem gives individuals the confidence, strength, and resilience to face and overcome obstacles and challenges hence making them self-reliant.

Self-reliance is therefore conceived in terms of individual members of society possessing the capacity and attitude to rely on themselves rather than others. To be self-reliant, individuals need to trust in their own capabilities. Self-reliant individuals act responsibly in society, show commitment to society and have high self-esteem. Self-reliance also implies the manifestation of autonomy and creativity. It requires individuals to trust their own potentialities. However, as Schoyck (2018) observes, human beings are born dependent on their parents, meaning that self-reliance and independence must be deliberately taught. This role to a large extent is played by the institution of education. Self-reliance was central to the aims, content and instructional methods of African indigenous education, an education that served the peoples of Kenya before the advent of colonialism and the introduction of the Eurocentric type of education that served to subjugate African indigenous knowledge and methods of knowing.

2.1.2 Responsibility

Self-reliance supposes a manifestation of responsibility. Being a responsible member of society entails rejecting envy and imitation, and making decisions and assuming their consequences (Kouassi, 2015). Life is a struggle and all individual members of society must make the right decision by providing energy and effort to earn their living. Responsibility is an important factor in every aspect of life. No development can be achieved in society unless individuals act as responsible citizens who make important decisions for their own good and the good of their fellow citizens (O'dwyer, 2012). This means that self-reliant individuals must display a sense of responsibility and act responsibly in the roles they play in society. To be self-reliant individuals must assume total responsibility for their own life and circumstances without depending on others.

2.1.3 Creativity

Self-reliance is likely to be achieved when individuals exploit their creative energy to solve problems in their own circumstances and for society. Creativity supposes that an individual uses his potentialities to do things for himself and for society (Kouassi, 2015). Emerson's commitment to the primacy of the individual is closely allied to his understanding of the essential uniqueness of each living being. He urges a celebration of this uniqueness, arguing that it is a testimony to the absolute necessity of every person. Each individual has a purpose and a talent which is not available to anyone else: 'Each man has his own vocation. Individuals need to be aware of the fact that they own a personal talent which only needs to be exploited for their good and the good of society (O'dwyer, 2012). Isa (2014) advocates that Self-reliance is the need for people to unfold and realise their creative potentials which will enable them to improve their material condition of living using local initiatives and resources available to them. Individual talents and potentialities need to be developed fully and creatively exploited if self-reliance is to be attained.

2.1.4 Autonomy

Autonomy implies the ability to achieve independently of external assistance. The concept of self-reliance refers more significantly to the commitment to intelligent and imaginative independence and freedom whereby one has the courage and enthusiasm to think and to express one's own thoughts, ideas, and dreams rather than a fearful or careful reiteration of popular opinion or traditional 'truth' (O'dwyer, 2012). It emerges from a belief that one is capable of self-guidance and self-determination. Self-Reliance entails consideration of oneself as being a person endowed with potentialities, someone who relies on his mind to determine his life in the society where he lives (Kouassi, 2015).

2.2 African Indigenous Education

African indigenous education aimed at training all members of society for self-reliance through its content, methods of instruction, aims and philosophy. According to Bogonko (1992), African indigenous education prepared the young to take up their place in society, a society in which religion; politics, economics and social relationships were inextricably interwoven. Literacy and formal schooling as they are

known today did not exist in pre-colonial black Africa. However, African peoples had developed their own coherent systems of education through which children were prepared to live effectively in their environment (Sifuna *et al.*, 2006).

Because there were no permanent school walls in traditional African education systems, as in the case of the western countries, some European writers on African education tended to be blinded by their own cultural paradigms and viewed the traditional African educational process as mainly informal (Marah, 2006). However, Africans had a native, locally developed lifelong process of learning, with well-defined goals, structures, content and methods, through which cultural values, skills, norms, and heritage were transmitted by the older and more experienced members of society from one generation to another to help individuals be integrated into the society (Kanu, 2016). At the end of such an education, it is true that graduands never wrote final year exams or were not awarded certificates; however, they graduated ceremoniously and were considered graduates by the society, not because they had papers to show, but because they are able to do what they have graduated in. The aims and content of education in indigenous African society is directed towards self-reliance.

2.2.1 Content of African Indigenous Education

African children were trained for the purpose of equipping them with a particular skill for the fulfillment of their particular roles in the family or society. Knowledge and skills conferred to the learner were always for a particular purpose or for an awaited responsibility. According to Sifuna *et al.* (2006), boys were trained for the purpose of fulfilling male roles in society. They were trained to be hunters, farmers, carvers, canoe makers, tinsmiths, palm wine tappers, pot makers, clay workers, fishermen, warriors, blacksmiths, butchers, leaders, dancers, etc. Girls, on the other hand, were equipped with skills for feminine roles like cooking, wives, home-keeping, sieving, cloth making, grinding, pounding, dancing, caring for children, and other sex-appropriate skills. Because of this particular orientation, boys and girls were trained to be self-reliant, responsible and obliged to the community. Marah (2006) noted that boys and girls were socialized to different skills depending on how a particular ethnic group, clan or family derived its livelihood.

The educational practices of each society were influenced by the physical environment and were meant to prepare the learner to live and work in and from the given environment (Adeyemi & Adeyinka, 2003). The content or subject matter of traditional Education systems emanated from the physical, social and spiritual situations of pre-colonial African societies. The physical environment influenced the subject matter of the curriculum since what was taught was meant to enable the child to adjust and adapt to the environment in order to exploit it effectively and derive benefit from it (Sifuna *et al.*, 2006). If the habitat was dominated by mountain, plain, river or tropical forest, the child had to learn to combat its dangers and to also use its fertility (Castle, 1966). To live successfully in his/her physical environment, the growing child learned about landscape, the weather, and also about both plant and animal life. The physical situation further influenced what practical skills the child learned in order to prepare him or her for future responsibilities. Kelly, (1991) observed that children developed a sense of obligation towards the community and grew to appreciate its history, language, customs, and values. This is perhaps one of the greatest attributes of indigenous education as opposed to Western education which tended to alienate young Africans from their cultural heritage.

The physical environment that African children were being brought up in demanded close-knit societies under a strong form of government to foster a strong communal sense (Sifuna *et al.*, 2006). Individualistic tendencies were allowed to grow only under the umbrella of society. An individual was to live and serve other people in accordance with accepted manners, customs, laws, avoidance taboos and a rigorous code of morality. Africans were forced to band themselves together to withstand the harsh environmental conditions of the time. According to Wafula (2003), harsh environmental conditions, endless forests, marauding wild animals, heavy rains, mountainous terrains, etc., decreases an individual's ability to survive alone.

African indigenous education placed great emphasis on the learning of practical skills and the acquisition of knowledge which was useful to the individual and the society as a whole (Sifuna *et al.*, 2006). Individuals could only fit well in the life of their community if they had skills and knowledge about farming, hunting, fishing or herding depending on the environment they lived in (Bogonko, 1992). In most

African traditional societies, education provided little or no room for specialisation but equipped both boys and girls to undertake many different occupations that required related skills (Ocitti, 1973). The wholistic nature of customary education enabled young people to acquire a variety of skills which made them productive in many ways. An individual in most traditional African communities could, therefore, embark on a variety of occupations without difficulty. He could work as a builder, farmer or fisherman, while a woman was a gardener, housewife, and cook, besides being a nurse to her children.

2.2.2 African Indigenous Methods of Instruction

Indigenous African education is passed from one generation to another by learning through various modes, which include language, music, dance, oral tradition, proverbs, myths, stories, culture, religion and elders (Sifuna *et al*., 2006). Others include learning through specialists, specific names, the holistic approach, integrating theory and practice and traditional African science and technology. African traditional education is practical and participatory in nature. Pupils were expected to learn through working with or observing the master. Bogonko (1992) observes that through attachment to a master craftsperson, young individuals who were deliberately chosen could be trained in a given skill. In Farming communities, young men learned the art of farming by following their fathers to the farm and learning how the land is tilled, the crops planted, the land weeded and crops harvested. As they learn they begin to participate in these activities.

Kanu (2016) observes that when a boy wants to be a medicine man and he is admitted, he learns by going with the master into the bush to get the herbs needed, to fetch water for him, to clean up the shrine, to grind the medicine, he watches him call upon the gods, he listens to him invoke the gods, he learns the words, the gestures etc. as the master does it, he follows in his step. In this way, the student becomes fully integrated into the occupation even before he graduates. Even before he graduates, he has begun to practice. Education, therefore, is always practical, not in a vacuum, but with a practical concrete context. In this way, the learner was productive as he/she learned and was smoothly integrated into the community: the gap which today exists between study and the world of work was absent in pre-colonial society.

Traditional education is not compartmentalised into disciplines but highly integrated (Omolewa, 2007). Every occasion and happening may be used to teach one lesson or another. The holistic approach to traditional African education preaches the doctrine of multiple learning (Omolewa, 2017). Odora (1994) illustrates this vividly with what happens amongst the Acholi of Uganda, where ''in teaching a child how to build a house, the child would simultaneously learn about the selection, strategic location, soil types, grass types, wood types including their resistance to ants. The girl learning to cook would learn simultaneously serving, vegetable types, preparatory procedures, the general welfare system, fuelwood types.'' The holistic approach as a strategy for teaching and learning in the indigenous African societies liberates the learner from the authoritarianism of the teacher, the curriculum and the institution (Omolewa, 2007). The learner, through this approach, is free to develop self-discipline, engage in self-directed learning and self-fulfillment, all of which are important elements of self-reliance.

2.3 Kenyan Education System

A review of why and how self-reliance has come to be talked of as an aim in the Kenyan educational context is necessary. At independence in 1963, the Kenyan Government and the private sector were critically short of manpower. Edalia (1990) posits that since education was seen as the only conduit through which such manpower could be trained, the over-riding aim of the entire educational system came to be an economic one. The Ominde Report (1964) put the issue quite clearly, thus;

> *"Of all these reflections, perhaps the most urgent in our minds was the need to see education in the context of our national economic development, for upon the adequate fulfillment of this objective, our ability to reach all other national goals including those in education, depends"(24).*

The rapid educational expansion that followed the economic concerns at independence had by the mid-seventies precipitated a serious problem of unemployment. The Gachathi Commission (1976) observed that one of the largest problems confronting the country at the time was that of unemployment. The number of unemployed school leavers was growing rapidly following the rapid expansion of

the education system in the years after independence. The commission further noted that school leavers came out of the school system oriented to white-collar jobs and more poorly equipped towards playing an effective role in the social and economic development of Kenya. Based on these observations, the Gachathi Report (1976) recommended a modification of the education system so as to cater for the majority of students who terminate their studies at any level. This recommendation was taken over by the Mackay Report (1981) in a more concrete way when it recommended the removal of the 'A' level segment and suggested the 8-4-4 system of education.

In 1982, the Working Party on Government Expenditure observed that Kenyans were becoming too dependent on Government and turning to Government for assistance on matters which they themselves could manage. The working party suggested that:

> *Self-reliance through both individual and collective efforts should be encouraged as one of the great African strengths and traditions. The Government must stimulate by both direct and indirect means all Kenyans to rely more extensively on their own resources, abilities, and energies. This principle applies to efforts by individuals to better themselves and their families to the promotion of private enterprise activities and the mobilization of community, health care, water supplies, and rural access roads" (1982, 21)*

The Report of the Presidential Working Party on Education and Manpower Training for the Next Decade and Beyond of 1988 (Kamunge Report) also emphasized the importance of self-reliance by recommending that Education and training should develop skills that promote self-reliance and self-employment. The observations by the Gachathi, Mackay, and Kamunge commission reports of 1976, 1981 and 1988 respectively point to the Government's inability to provide the essential services it used to in the first decade of independence, especially that of employment. In their various recommendations, the Commissions suggest that this situation could be remedied through encouraging self-reliance. It is against this background that self-reliance has emerged as an aim in the Kenyan educational context.

The 8-4-4 education system emanated from the assumption that it would equip pupils with employable skills thereby enabling school dropouts at all levels to be either self-employed or secure employment in the informal sector (Eshiwani, 1993). As King and McGrath (2002) observe, the new system intended to orient youths towards self-employment. The new policy would improve the student's employment potential and thus make them self-reliant (Amutabi, 2003). Edalia (1990) observed that while self-reliance may not be clearly written down in educational documents as an aim (like, say, national unity), it remains an aim implied by the various educational policy developments since independence.

2.3.1 The 8-4-4 Curriculum

The proponents of the 8-4-4 systems argued that it was relevant for the needs of the nation or it would meet the national demands for self-employment and self-reliance (Ambaa, 2015). The school curriculum adopted for 8-4-4 included learning opportunities which were meant to enable pupils to acquire a suitable basic foundation for the world of work in the context of economic and manpower needs of the nation and to appreciate and respect the dignity of labor (Eshiwani, 1993). To achieve the stated objectives, three subjects were emphasized as being of special importance: Art and Craft, Agriculture and Home Science. Art and Craft education featured content areas such as collage and mosaic, drawings, paintings, graphic design, clay and pottery, leatherwork, modeling, and carving; fabric design, puppetry, woodwork and metalwork. Learners in these courses were expected to produce functional and aesthetically appealing articles (Ambaa, 2015). Ideally, pupils were supposed to use the acquired knowledge and skills in order to design, implement and control small scale projects that would provide opportunities for self-reliance for both the learner and other members of the community (Eshiwani, 1993).

Other subjects introduced through 8-4-4 with the aim of training pupils for self-reliance were Agriculture and Home science. In Agriculture the learner was expected to acquire practical skills such as the growing of vegetables, learning about domestic animals; poultry and beekeeping, making farm tools and caring for the soil and the environment (Eshiwani, 1993). Home science, which the syllabus defines as the study of home and family living within the environment, was designed to develop and apply

knowledge, skills, principles, and attitudes which would help the learner to relate better to the social and economic realities of the community and the country (Ambaa, 2015). Its specific objectives were to give pupils basic knowledge useful in promoting the welfare of the home and family and setting standards for community living. The subject comprised three areas of learning namely, home management, clothing and textiles, and food and nutrition while business education was meant to equip learners with entrepreneurship skills. However, these subjects were eventually given less prominence in the primary school curriculum remaining only as non-examinable subjects at this level (Karanja, 2008).

Secondary school education was also aimed at preparing the learner for self-reliance. To achieve this, the secondary school curriculum was to cover pre-vocational subjects apart from the usual academic subjects. These included industrial and agricultural education under which fall subjects such as woodwork, metalwork and electrical technology. Business education included accounts, commerce, typing, and office practice, and home science (Eshiwani, 1993).

Various studies have been carried out examining the 8-4-4 education system with regard to its goal of producing self-reliant individuals for the Kenyan society. Ambaa (2015) observed that while the 8-4-4 system curriculum allowed for more options in technical and vocational subjects, it experienced serious shortages or lack of essential resources and facilities and the local communities could not be mobilized to provide the facilities required. This is also emphasized by Amutabi (2003) who noted that that 8-4-4 encountered numerous challenges such as lack of involvement of relevant stakeholders, infrastructures such as classrooms, workshops, curriculum, trained personnel, literature, and pedagogy. This indicates that the goal of training graduates for self-reliance through the introduction of a vocationally oriented curriculum was bound to fail since the new curriculum required many facilities for practical subjects such as art and craft, agriculture, music, and home science which were not available. The success of an educational activity also depends on the availability of suitably trained and qualified facilitators in the form of teachers to handle the subjects in the curriculum. The 8-4-4 system of education saw the introduction of several new subjects that had not been previously taught in the majority of Kenyan schools. These

included Art and Craft, Music, Home Science and Business Education at the primary level. Simiyu (2001) noted that there were no trained technical and vocational subjects teachers and local craftsmen could not be used. Gikungu, Karanja and Thinguri (2014) also argue that by the time technical and vocational education was introduced within the 8-4-4 policy, there was a serious shortage of qualified teachers for these subjects and that most of them were untrained. Without sufficient and suitably qualified teaching personnel, 8-4-4 was doomed to fail from its conception in terms of preparing learners for self-reliance.

Suitably selected curriculum content was also necessary for the success of 8-4-4 for it to achieve the goal of preparing self-reliant individuals for society. However, as Ambaa (2015) reported, vocational subjects and activities were seen as an extra burden both in practical daily activities in schools and in the national examination. According to King and McGrath (2002), the 8-4-4 system curriculum for primary school was also claimed to be overcrowded or overstretched. Therefore it was an obstacle to effective learning because the pupils worked under great pressure. Abagi (1997) noted that to cover an extended curriculum in the same period increased pressure on students and staff and thus reduced student performance (lower test scores). The pressure negatively affected the children's motivation to learn resulting in the rise in dropouts (Owino, 1997). Due to the challenges of implementation of this curriculum as a result of factors like lack of teaching and learning facilities and the problem of overloaded curriculum, adjustments were made on the content (Ambaa, 2015). The major amendment was the reduction of the number of subjects to be sat for from ten to eight. Most of the subjects were integrated while others were eliminated. This shows that the curriculum content that had been designed to prepare students for self-reliance was gradually adjusted due to implementation challenges.

A curriculum for self-reliance requires pedagogical approaches and assessment procedures that enhance the acquisition of skills for this goal. However, according to Amutabi (2003), the new system was theoretically oriented due to lack of infrastructure. Besides, at the schools level, standard examination in agriculture, art and craft, Music and Home Science consisted of a multiple-choice type of questions (Ambaa, 2015). Although this type of examination has the advantage of objectivity

and easy marking, its validity to predict the school leavers' ability in a higher level of education training and self-employment was doubtful (Owino, 1997).

The 1999 Report of the inquiry into the education system of Kenya (Koech report) was believed to be a panacea to the challenges facing the 8-4-4 education system. It was termed as the Totally Integrated Quality Education and Training chaired by David Koech. The commission noted that the quality of education at primary and secondary school level had rapidly deteriorated, attributing this to overloaded curriculum, inadequate physical facilities, equipment and teachers (Ambaa, 2015). The various amendments made on the content of the 8-4-4 curriculum greatly impacted on the capacity of the system to produce self-reliant individuals as had been envisaged in its formulation. In addition, the concept of self-reliance had been narrowly conceived in that policymakers assumed that self-reliant individuals would be produced by just introducing vocational and practical subjects into the school curriculum.

2.3.2 The 2-6-6-3 System of Education

Kenya started the process of overhauling its education system for the first time in 32 years in January 2018. The 8-4-4 system of education that the country has been operating on and whose guiding philosophy was education for self-reliance will gradually be replaced by the competency-based 2-6-6-3 curriculum. Part of the reasons behind this huge overhaul is the realisation that Kenya isn't doing enough to produce school-leavers who are ready for the world of work (Sifuna, 2016). The government's own assessments have shown that the current system isn't flexible. It struggles to respond to individual pupils' strengths and weaknesses. The Kenya Institute of Education produced an evaluation report about the 8-4-4 system in 2008 which identified several weaknesses with the system of education: It found that the system was very academic and examination-oriented; the curriculum was overloaded; most schools were not able to equip their pupils with practical skills and many teachers also weren't sufficiently trained (Sifuna, 2016). In this sense, the 8-4-4 system could be said to have failed in its core aim of preparing all learners to be self-reliant.

Drawing from the institute's evaluation and a 2012 report by the Ministry of Education, the government of Kenya developed a plan to reform education and training. Some of the plan's aims include: developing learners' individual potential in a holistic, integrated manner while producing intellectually, emotionally and physically balanced citizens; introducing a competency-based curriculum that focuses on teaching and learning concrete skills rather than taking an abstract approach; establishing a national assessment system that caters for the continuous evaluation of learners; putting in place structures to identify and nurture children's talents from an early age; and, introducing national values, cohesion and integration into the curriculum (Sifuna, 2016). The proposed new system will try to develop vocational and technical skills in a bid to meet Kenya's demand for skilled labour and its push for greater industrialisation.

From the literature reviewed on the 8-4-4 system of education, it is apparent that the core aim of the system from its inception was to prepare learners to be self-reliant individuals. The content of the curriculum was arranged to impart the vocational type of skills to learners, with the hope of preparing them to be self-reliant. However, it is observed that the 8-4-4 was hurriedly implemented, without adequate consultation and involvement of stakeholders, provision of adequate facilities and infrastructure and training of teachers for implementing the new curriculum (Sifuna, 2016; Ambaa, 2015, Simiyu, 2001; Amutabi, 2003; Eshiwani, 1993; Kamunge, 1988). Parallels have been drawn between the manner in which the 8-4-4 education system was introduced and the way the 2-6-6-3 system was introduced at the beginning of 2018. Sifuna (2016) raised concerns over the cost of the new curriculum and the extent to which teachers and other implementers of the curriculum were prepared for the new curriculum approach. Kenya continues to produce graduates at all levels of education who lack knowledge, skills, and attitude to rely on themselves and dependency levels continue to be a major challenge to the economy of this country. Not much attention has been paid to the role played by colonialism and the legacy of colonial education as well as the adoption of a Eurocentric type of education after independence.

2.4 Colonial Education in Kenya

Formal education was introduced to the people of Kenya by Christian missionaries even before the country became a British colony. The missionaries dominated the provision and administration of education throughout the colonial period (Eshiwani, 1990). Education in Kenya was organized on racial lines. It was argued that the different races in the country; Africans, Asians, Arabs, and Europeans had attained different levels of social, political and economic development and that each needed the kind of education that would preserve its culture and prepare its people for their "appropriate" role in the society (Eshiwani, 1990). The main objective of missionary education was to bring Africans to the membership of their churches (Sifuna *et al*., 2006). It was guided by the belief that Africans were degenerated in culture and traditional belief systems. Sifuna *et al*. (2006) noted that the perception that Africans were an inferior race as advocated by pseudo-scientific racism led missionaries to put emphasis on industrial education in their programmes.

Although the colonial administration generally provided grants to missionaries to run education for Africans, its main concentration was on European and Asian education to which it provided grants which were disproportionate to their contribution in taxes (Sifuna *et al*., 2006). The settlers wanted education that would produce enlightened workers who would be capable of taking instructions so as to be useful in the farms. However, they were opposed to any attempts to make Africans aspire to equality with the white man or provide an education that would make Africans self-sufficient in their rural areas, as this would threaten the supply of cheap labor for settler farms (Eshiwani, 1990). Segregation of the races by the Colonial Government resulted in severe neglect of African education. This has been evidenced by the fact that more resources and facilities were devoted to the education of non-Africans, who represented 3 percent of the population, than were used to educate Africans, who represented 97 percent (Eshiwani, 1993).

It was during the colonial period that Kenya began a pattern of establishing expert commissions to review her education system. The first commission, headed by Professor Nelson Fraser, from Bombay, was commissioned to recommend the system of education in the East African Protectorate in 1909. In his report, Fraser emphasized

an academic curriculum for white and Asian children. For Africans, he recommended an industrial training curriculum with dual goals: service under a white employer and work in his own community to help the protectorate prosper (Lelei & Weidman, 2012). Sifuna *et al*. (2006) observe that the industrial type of education recommended by Fraser was also meant to make an assault on those undesirable qualities like self-conceit and insolence that were assumed to follow from giving Africans, literary education.

The African educational system provided by mission schools was criticized as being too literary and impractical for the realities of peasant-based African societies by the 1924 Phelps-Stokes Commission Report. The commission highlighted the need for agricultural and vocational education suitable for the natives and was opposed to academic education for Africans (Sheffield, 1973). Other commissions of experts were formed during the colonial period with the aim of proposing an education system that was considered good for the African population. With time, Africans started questioning the education that the missionaries and the colonial government were giving them.

The Beecher Commission on Education was established in 1948 to make recommendations for the implementation of a 10-year plan to revamp the educational system. The commission was set up at a time when Africans were beginning to take some control over their own education especially through the independent schools' movement. The Beecher Commission Report concluded that primary education lacked significant financing or adequate control and that an increasing number of educational facilities were of generally inadequate quality (Lelei &Weidman, 2012). To mitigate the situation, the commission suggested stricter control over primary schools through greater centralization, an opinion the Africans interpreted as an attempt to exercise control over their schools. Africans had established independent schools to provide education for their children because the education offered by missionaries and government was inadequate (Sifuna & Otiende, 1994). In 1952, the government closed down independent schools because they were seen as major threats to colonial sovereignty (Sheffield, 1973).

The treatment of "African education" as a separate and inferior entity during the period of colonisation is of crucial interest to this study especially because it led to certain historical consequences that are still a problem in the present system of education in Kenya. While Kenyan Africans had practiced a vocational and practical type of education that made all society members self-reliant for centuries, the manner in which this type of education was reintroduced during the colonial era resulted in a very negative attitude and even rejection for an education that had served the indigenous communities effectively for generations. This gives impetus to this study.

2.4.1 Effects of Colonial Education and Knowledge

Kapoor (2007) argues that colonialism or colonisation was not just the political occupation of one nation or territory by another; it could be understood as a formation of discourse that involved the interpolation of a people by incorporating them in a system of representation. This far-ranging system might be ideological, cultural, educational, formal or informal, amongst others. Colonisation provides specific ways of seeing or representing things that leave the people confined to particular worldviews. Kapoor (2007) adds that the attempt to reshape the structures of knowledge and the active subjugation and devaluation of local knowledges meant that several branches of learning were touched by the colonial experience. According to Shizha (2013), colonial education in Sub-Saharan Africa was based on subjugating and silencing African voices. Colonial education sought to alienate Africans from their culture, fragment their communities, create dissonance among them, and disconnect them from their belief systems (Shizha, 2013).

The western Christian missionaries and the colonial governments viewed African ways of knowing, their cosmology, their spirituality, and their ontological existence as "barbaric," "backward," traditional and "unscientific"(Shizha, 2013). African indigenous knowledge and methods of learning were portrayed as invalid hence the colonized people were forced to assimilate a hegemonic foreign culture. According to Shizha (2005), definitions of what counted as valid knowledge and how it was produced and distributed was intentionally towards establishing hegemonic social, economic, and political interests and relations. African learners were exposed to fragmented and compartmentalized knowledge contrary to holistic learning which

they were used to in their villages and communities and which had served them well for generations (Shizha, 2013). Indigenous knowledge production was holistic and integrated all activities including rituals and skills required to sustain cultural practices, the life of the family and community (Owuor, 2007). Holistic learning aimed to prepare individuals for communal responsibility and interpersonal relationships as key components of the learning process. On the other hand, the colonial knowledge and learning styles promoted individualism and competition, which were antithetical and anathema to African communal living (Shizha, 2013). Colonial education hence sought to subjugate Africans by disconnecting them from their holistic type of education that connected the body, mind, and soul.

Colonial education also sought to alienate Africans from their cultures. The colonial school curriculum constituted the voice of the dominant European cultures, which defined status, privilege, power, and control in terms of racial differences (Shizha, 2005). Indigenous Africans were defined as inferior to Europeans and were erroneously taught to accept and internalise the racial stereotypes of the coloniser (Mazrui, 1993). This way, colonial schooling led to the loss of indigenous voices, self-identities, and self-confidence (Shizha, 2013). Through colonial schooling via Eurocentric knowledge, the missionaries and colonial governments were able to entrench imported cultural, economic and political hegemony. Hegemony was coined by Antonio Gramsci to refer to the way the ruling class controls the institutions that control or influence our thought (Boothman, 2008). This definition provides us with a way of thinking that is critical to colonial political relations in colonial Africa and to view the relations in a historical context so as to understand the aims of colonial education and its attendant knowledge system.

Due to their subjugation, Africans negated their voices and became "willing" accomplices and co-constructors of Western cultural imperialism. Colonial schools were the vehicles through which European "Enlightenment" and "civilization" were forced on to Africa where colonization and exploitation were rationalized (Shizha, 2013). Schools became institutions created and privileged sites for the reproduction of hegemonic knowledge. Describing the British imposed colonial education in India, Macualay (1994, 430) observed that the ultimate aim of colonial education was to

"form a class of interpreters; a class of persons, Indian in blood and colour, but English in taste, in opinions, in morals, and intellect". Shizha (2013) agrees with Macualay that racist colonial education aimed to leave those who were colonized with no identity and a limited sense of their past.

The form of education offered by colonialists was a cultural bomb, which was unleashed to annihilate indigenous voices as European culture was used as an extreme form of standardization, requiring blind conformity and masked rationalization (Shizha, 2005). African peoples were explicitly denied the status of rational and historical beings in colonial Africa (Outlaw, 1987). European invasion served to validate the colonial characterization of the European invention of Africa and Africans. Cultural imperialism and domination dispossessed the Africans of their tools of self-definition (wa Thiong'o, 1986). Colonial education did more than corrupt the thinking and sensibilities of the Africans; it filled their minds with abnormal complexes, which de-Africanized and alienated them from their socio-cultural milieu. wa Thiong'o (1986) observes that the lack of congruency between colonial education and African reality created people abstracted from their reality. It is suggested in this study that by alienating Africans from their cultures through interfering with the African ways of knowing, and with their indigenous knowledge and practices, the colonialists may have interfered with Africans spirit and sense of self-reliance. To achieve the goal of preparing children for self-reliance and to produce self-reliant societies, the Kenyan education system may require decolonization.

2.5 Decolonizing Education

The Colonial experience in education left lasting effects on the curriculum, pedagogical approaches, school environment, and evaluation in Kenya and other formerly colonized societies. Any decolonizing attempt must therefore address each of these aspects of education.

2.5.1 Decolonizing Curriculum

Mgqwashu (2016) argues that decolonizing education is about knowledge and how knowledge or the curriculum in Africa and other formerly colonized societies is constructed, who constitutes the knower and how what is known is known.

Knowledge in this context is perceived as colonised, especially because knowledge from colonial centres is treated as powerful (Fomunyam, 2017). Knowledge from colonial centres is powerful in that it accrues privilege to the powerful, which is then used to dominate, often subtly and silently. Netswera and Mathabe (2006) argue that decolonisation is about agency and the reshaping of an individual's education path and this can only happen when those in the education sector take responsibility and refuse to occupy the position of violence-absorbing passive victims. Decolonising education means dismantling of Eurocentric institutions, systems, symbolism, and standards within the education system (Higgs, 2012). This view implies empowering of marginalised bodies through teaching and learning methods, curriculum content, evaluation or assessment procedures, school environment, and learning resources.

Kapoor (2007) acknowledges that attempts by crusaders of decolonization to reshape the structures of knowledge and the active subjugation and devaluation of local knowledges mean that several branches of learning were touched by the colonial experience. This means that although nations gained independence and now rule themselves, certain aspects of the society might still be colonised. Tamburro (2013) argues that decolonisation helps to create awareness on the effects of colonisation and create non-oppressive approaches to dealing with societal issues. Tamburro adds that any approach to education that includes the perspectives of indigenous, non-western people and their worldviews will help articulate local experiences and decolonise the process of knowing.

Smith (2012) argues that decolonisation involves deconstructing western scholarship, which goes beyond foregrounding indigenous experiences to teaching and learning, enacting teaching and learning in ways that directly benefit indigenous peoples, rather than subject them to different levels of epistemic violence. Ngugi (2004) calls this "a quest for relevance" that can only be established if African education systems succeed in decolonising the mind through teaching and learning. Mbembe (2016) points out that, decolonisation is not simply about eradicating European worldviews and introducing African worldviews, but about making Africa the centre in African education systems

2.5.2 Pedagogical Approaches

Pedagogy is the art and science of how teaching and learning is practiced, or how it unfolds, and how students learn what is taught (Fomunyam, 2013). Pedagogical practices include the manner in which teaching and learning take place, the teaching and learning approach, the diverse ways through which content is taught and what students take home from the teaching and learning process (Fomunyam, 2017). Teaching and learning are what a teacher or lecturer should know, and the skills the lecturer has to command to make and justify the numerous different kinds of decisions that constitute teaching and learning (Cogill, 2008). Decolonising the pedagogical approaches would be one way of ensuring that the Kenyan education system is decolonised.

Heleta (2016) argues that decolonisation is about the incorporation of African perspectives, experiences, and epistemologies as the central tenets of the curriculum, teaching, learning, and research in the education systems. Going back to African epistemological and ontological practices to develop the pedagogical approaches used in communicating knowledge would be one way of ensuring that African perspectives and experiences reach the forefront in education in general. The pedagogical approaches used before the advent of colonisation need to be revisited and developed to ensure the decolonisation of teaching and learning (Fomunyam, 2017).

McGregor (2012) argues that decolonising pedagogy is all about developing and using approaches that would help students come to the understanding that structures of colonisation still exist and be able to navigate or dismantle such structures. Decolonising pedagogy is also about developing and employing strategies and approaches which disrupt those structures at an individual and collective level, resulting in the re-centering of indigenous or African ways of knowing or teaching and learning, being and doing an1d facilitate engagement with possibilities for making change using the learning experienced (Fomunyam, 2017). Pedagogical approaches, therefore, are key in the decolonisation of education and until this is done, decolonisation would still be a foreign term in education.

2.5.3 School Environment

Benjamin and Orodho (2014) define teaching and learning resources as any support material required or available for use by the instructor in the classroom in enhancing the teaching and learning experience. According to Fomunyam (2017), these resources could range from wall pictures, blackboards, audio-visual aids, globes, maps, atlases, concrete objects, computers, and the classroom environment. Teaching and learning resources are a spectrum of educational materials that teachers use in the classroom to support specific learning objectives (Yara & Otieno, 2010). The resources used by an instructor are defined by his or her learning objectives, availability or how he or she wants to drive the learning situation. According to Fomunyan (2017), one way of decolonising teaching and learning in an education system would be through the teaching and learning resources used in the classrooms and lecture halls. The materials brought to class by the teacher or lecturer to facilitate teaching and learning, as well as the fittings and fixtures within the classroom can either aid the decolonising effort or not. McGregor (2012) argues that engaging teaching and learning resources that speak to the African people and showcase who they are and their heritage is one way of decolonising education.

Yoshida (2017) argues that facilitating teaching and learning is about making learning effective and bringing out the inner values, beliefs, and feelings possessed by students. According to Fomunyan (2017), the facilitator provides an educational atmosphere where students have the opportunity to fulfill their potential for intellectual, emotional, physical and psychological growth. Cathcart, Greer, and Neale, (2014), observe that facilitating learning involves coaching, mentoring and training. Mentoring entails that facilitators engage students one-on-one. Mentoring is all about teaching what you have been doing successfully. Training, on the other hand, requires experts who would train students to masters certain skills. Coaching is typically a one-on-one relationship where the coach helps the student to focus on and achieve their objectives faster than if they worked alone. A coach is an adept facilitator who is goal-oriented and produces results. Every facilitator of teaching and learning must, therefore, ensure that he or she is a mentor, a coach and a trainer (Cathcart, Greer, & Neale, 2014).

Yoshida (2017) argues that facilitating teaching and learning is not simply about transmitting knowledge in the classroom but taking a personal interest in the person of students and mentoring and well as training them to acquire relevant skills which they would otherwise not be predisposed to. Decolonising teaching and learning, therefore, is about ensuring that people who facilitate it, have both the contextual understanding as well as the experience and willingness to not only see students as objects who must be taught but as people who must be nurtured to develop and fulfil their potentials (Fomunyam, 2017). The teacher's role might have to change from being a transmitter of knowledge to a mediator and facilitator of learning (Omolewa, 2017). The expectation for the student would need to change from a passive receiver of knowledge to an autonomous learner, reflective thinker, and problem solver, who is actively involved in his/her own learning and construction of knowledge. This is how African indigenous educators viewed their learners.

2.5.4 Evaluation

Fomunyam and Mnisi (2017) argue that assessment is a process which educational facilitators use to generate data, using a variety of tools and strategies to ascertain what students know are able to do, and identify gaps in understanding so as to plan future teaching and learning to address the gaps. This belief means that assessment goes beyond simply determining competence to understand individual gaps and differences to ensure that these gaps can be engaged with in the future. Pinchok and Brandt (2009) argue that assessment is the process of ensuring that the learning program or syllabus has been understood so grades and certificates can be conferred. According to Fomunyam (2017), students need to be assessed using mechanisms that ensure that their abilities are accurately tested and this should be premised on the fact that all of them were provided with equal opportunities so that assessment can be fair.

Fomunyam (2017), notes that assessment should not be organized so as to privilege a few as well as to empower certain students while ensuring that others remain underdeveloped. This means that all learners should be given an opportunity to develop. Munroe *et al*. (2013), adds that decolonising education and assessment practices and approaches can enable indigenous peoples and all peoples to be educated in a way that honours identity and culture as we become responsible and

productive citizens guided by such values as love, respect, honesty, humility, courage, wisdom, and compassion in order to live in harmony. Decolonising education, therefore, is also about engaging assessment practices that move beyond stringent testing to engaging empathy and the development of the individual.

From the literature reviewed in this chapter, it is observed that Kenya has endeavored to train members of society to become self-reliant persons where everyone depends on himself/herself in a self-reliant society. The introduction of the 8-4-4 system of education in 1985 following the recommendations of the Mackay commission of 1982 is the most significant step towards training individuals for self-reliance. Studies by Eshiwani (1993), Amutabi (2003), King and McGrath (2002) suggest that subjects such as agriculture, art and craft, home science, music, and business education were introduced to the 8-4-4 system in the belief that learning these subjects would make learner self-reliant. However, other studies indicate that the 8-4-4 system of education was hurriedly implemented and was faced by challenges such as shortage of trained teachers to handle the new subjects, inadequate facilities, equipment, and infrastructure. Self-reliance is conceived in this study as possession of qualities such as trust in one's own potentialities, being creative, responsible, having strong self-esteem and being independent. Training learners to acquire such qualities requires much more than the introduction of vocational subjects into the curriculum. The objectives of this study have been developed in an attempt to fill the gaps identified in the literature reviewed.

2.6 Theoretical Framework

This study will be guided by the Self-reliance theory and the Anticolonial theory.

2.6.1 Self-reliance Theory

This study is grounded on self-reliance as a theory. According to this theory, education should aim to make individuals self-reliant. To attain this, education ought to be a subjective process through which one learns to be a self-reliant person in society in all facets of life (Njoroge & Bennaars, 1986). Self-reliance is the concept that negates dependency and fosters independence. The theory is relevant to this study in that it gives room for assessing curriculum, pedagogical approaches, school

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environment and evaluation that leads to self-reliance where individuals depend squarely on themselves in independent societies that take care of their own affairs. A society where each person works and is subjugated by none (Hingen & Hundesdorfer, 1979)

The two main proponents of the self-reliance theory are Ralph Waldo Emerson an American philosopher and the founding president of the Republic of Tanzania Mwalimu Julius Kambarage Nyerere. According to Kouassi (2015), Emerson proposes the following assumptions in his theory of self-reliance: That the rights of the individual include independence of thought, which is an absolute and inalienable right; That this independence of thought is a prerequisite of genuine freedom, since it is required for actions to be truly autonomous; That independence of thought must be protected from autocratic control by any social organizations, systems, and structures. These ideas by Emerson directly speak to this study because colonial and post-colonial structures and systems are seen by the researcher as possible impediments to the independence of thought that is necessary for self-reliance to be achieved in the education system in Kenya. Autonomy, a basic element of self-reliance can only be acquired through an education system whose content, pedagogical approaches, evaluation, as well as teaching and learning resources promote the development of independence among learners.

Situating the self-reliance theory to the education system in Tanzania, Mwalimu Julius Kambarage Nyerere proposed the Education for self-reliance (ESR) system. ESR as conceived by Nyerere aimed at developing in each citizen an inquiring open mind; ability to learn from others; basic confidence in one's own position and ability to learn and contribute to the society (Kassam, 1994). To achieve the aims he set out for ESR, Nyerere made the following recommendations for educational reforms: education should be of relevance to the Society; the educated individual must serve the society, education must be problem-solving and education must be work-oriented. The ideas proposed by Nyerere are of interest to this study since the researcher seeks to examine how the Kenyan education system prepares learners for self-reliance by examining the extent to which its content is relevant to society, and how it helps them

acquire problem-solving skills. It also seeks to investigate the extent to which the education system prepares learners to serve society and become work-oriented.

2.6.2 The Anti-colonial Theory

The Anti-colonial theory is rooted in the revolutionary ideas of Franz Fanon, Mohandas Gandhi, Mao-Tse Tung, Albert Memmi, Aime Cesaire, Kwame Nkrumah, and Che Guavara among others. Besides the scramble for markets, labour, and other resources, colonialism also meant that Africa and other colonies had to be unequally inscribed into the orbit of European discourse (Ahluwalia, 2001; Olaniyan, 2005). To the colonialist, everything 'African' was represented as negative while that which was European was represented as positive. According to Mudimbe (1988), there was a deliberate scheme to reform the natives' minds by socializing the Africans to despise their history, culture and themselves, in their very blackness. Black people were dehumanized and represented as a race not fit to be members of the civilized world (Cesaire, 1972). The proponents of the ant-colonial theory seek to create new and powerful identities to challenge colonialism not just from a political or intellectual dimension but also from an emotional level (Loomba, 2005). The most prominent among these efforts are found in the work of Léopold Senghor, Aimé Césaire and Frantz Fanon.

Frantz Fanon's name is perhaps most associated with theorizing about anti-colonial resistance because of his direct affiliation with the Algerian struggle for liberation (Young, 2001). Fanon suggested that the first level of resistance for subjugated peoples is a subjective understanding of oppression and its effects. This was important because dominant regimes of representation had the power to make the colonized view and experience themselves as the "other" and to internalize inferiority (Nkomo, 2011). In his writings, Senghor was able to transform the negative traits the colonizers had ascribed to Africans such as sensuality, rhythm, earthiness, mysticism, communalism and transformed them into positive attributes (Young, 2001). Senghor portrayed African culture as unique and valuable. Aime Césaire's contributions to the anti-colonial efforts were mainly about unpacking European colonialism and debunking all claims and forms of logic the colonizer offered as evidence of the naturalness of the imperialist colonization of Africa (Ahluwalia, 2001). For example,

he argued the pseudo-humanism of the West expressed as bringing civilization to Africa, was nothing more than a means to dehumanize and objectify the 'Other'.

Anti-colonial theories offer new philosophical insights to challenge Eurocentric discourses, in order to pave the way for indigenous intellectual and political emancipation. For colonized peoples, decolonization involves the reclamation of the past, previously excluded in the history of the colonial and colonized nations (Dei, 2000). One of the most important tasks of critical anti-colonial theory is to capture and critique the continuities and discontinuities of the colonial and neocolonial in order to make sense of our currently colonized life and worlds (Rabaka, 2003). Before colonization, the indigenous peoples of Kenya had their own system of education that had worked for them for generations. Indigenous African education as practiced by the various traditional societies in Kenya successfully prepared all children for their expected adult roles. The content, methods and sheer spirit of indigenous education were meant to prepare all children to be self-reliant. Colonial education however distorted Africans' belief in the "goodness" of their own education system which had been portrayed by the colonialist as backward, retrogressive and of doubtful value. This study seeks to challenge this discourse with an aim of reclaiming our African indigenous knowledge, pedagogical approach as well attitude so as to transform the contemporary education in Kenya.

2.7 Conceptual Framework

The conceptual framework explains the relationship between the independent, dependent and intervening variables. The conceptual framework for the study is presented in Figure 1.
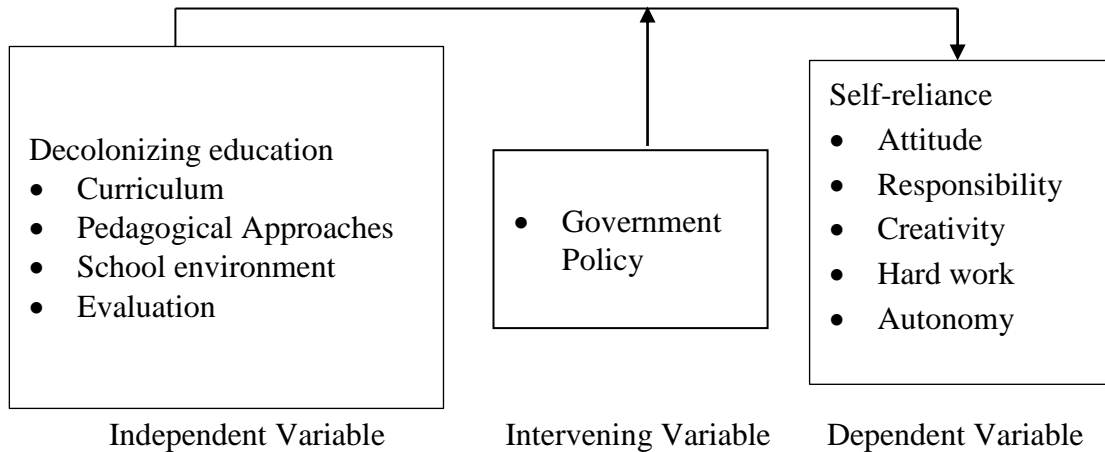
Figure 1: Kenyan Education for Self-Reliance

This framework shows the decolonizing education system as the independent variable which may manipulate the dependent variable, in this case acquisition of self-reliance. The indicators of a decolonizing Kenyan education system include: curriculum, pedagogical approaches, school environment and evaluation. The researcher has also conceptualized other factors such as government policy and politics as capable of contributing to acquisition of self-reliance hence the intervening variable. Indicators of self-reliance include: attitude, responsibility, creativity, hard work and autonomy. A detailed description of the measures of each of the indicators of decolonizing Kenyan education and self-reliance are presented on Table 5.

CHAPTER THREE
METHODOLOGY

3.1 Location of the Study

The study was carried out in Universities in Kenya. Students who are graduates of universities and have been out for at least two years also participated in the study. An ideal reason for the setting of any study should be the existence of a problem that the study hopes to generate solutions for (Singleton, 1993). Kenya was chosen as an ideal location for the study since the country is grappling with unemployment with a bulging youthful population that is not able to live independently. Universities were chosen since students with their own experience of the education system were expected to provide rational insights into the issues under investigation in this study.

3.2 Research Design

This study utilized the descriptive survey design and the correlational research design. The choice of these two research designs was informed by the fact that descriptive and inferential data analysis was required in this study. Shield and Rangarjan (2013) indicate that descriptive survey is used to describe characteristics of a population or a phenomenon being studied. Creswell (2012) indicates that correlational research design is the measurement of two or more factors to determine or estimate the extent to which the values for the factors are related or change in an identifiable pattern. Since in this study both the causal effects of relationships as well as the extent to which the combination of independent variables influence the outcome of the dependent variable was desired, then both descriptive research design and correlational research design was the most suitable for the study. While descriptive survey helped the researcher to describe phenomena, correlational research design enabled the researcher to identify predictive relationships by using correlations and regression modelling.

3.3 Target Population

The target population for this study was 537,211 subjects made up of 520,893 students, and 16,318 Academic staff members in chartered public and private universities in Kenya (KNBS, 2018). Constituent colleges of chartered universities as

well as universities that have not existed for at least five years with a charter did not form part of the population for this study.

3.4 Sampling Procedure and Sample Size

Kathuri and Pals (1993) recommend a sample of 384 for a population exceeding 100,000 (Appendix I). To achieve this sample size, purposive sampling was used to select two universities from each of the six zones as distributed by the Kenya University Sports Association. Universities offering Bachelor of education degrees were selected while care was taken to select a proportionate sample of public and private universities. Information in Table 1 represents the distribution of the sampled universities.

Table 1: Distribution of Universities in Kenya

Zone	Number of universities	Sampled Universities
Nairobi	7	2
Nairobi South	7	2
Central Kenya	10	2
Western Kenya	8	2
Rift Valley	4	2
Coast	3	2
Total	39	12

Source: Kenya University Sports Association (2018)

Members of the academic staff and fourth year students in the faculties or schools of education in the sampled universities were selected to participate in the study. Five members of the academic staff in each of the selected universities were randomly selected to participate in the study. Members of the academic staff in the faculties of education were considered because they have expert opinion and experience on issues under scrutiny in this study. Simple random sampling was used to select at least 27 fourth year bachelor of education students in each of the selected universities to participate in this study. Fourth year students in the faculties of education were selected since they were expected to possess sufficient information regarding the education system in Kenya with regard to self-reliance and also about the colonial education and African indigenous education. A sample size of 384 respondents made up of 60 members of academic staff and 324 fourth year bachelor of education students was selected to participate in the study. For further exploration of issues

under study, in depth interviews were carried out with deans of faculties of education in selected university as well as with individuals who have recently graduated from universities. Snowball sampling was used to select 15 graduates who have graduated in the last two years from universities to participate in the study. Graduates were selected since they are expected to have information on both the education system in Kenya and the world of work especially with regard to employment, underemployment, dependency, self-employment and self-reliance. Table 2 is a summary of participants and the sampling procedure that was used.

Table 2: Sampling Matrix

Category of population	Target Population	Sampling Procedure	Sample Size
Students	520,893	Random	324
Academic Staff	16,318	Random	60
Total	537,211		384

Source: Kenya National Bureau of Statistics (2018)

3.5 Research Instruments

The research instrument used for data collection included questionnaires and interview schedules.

3.5.1 Questionnaire

This study used a questionnaire for data collection from Students and academic staff in universities. The questionnaire was preferred because as Kombo and Tromp (2006) point out, questionnaires are less expensive, do not consume a lot of time in their administration and allow the respondents freedom to bring out their views and feelings independently and hence there is no opportunity for interviewer bias. Questionnaires were therefore found to be appropriate for this study based on the above strengths. The questionnaire had both closed-ended and open-ended questions. The closed-ended questions enabled collection of quantitative data for statistical analysis while open-ended questions were expected to elicit qualitative responses about the respondents' views on the issue under study.

The questionnaire (Appendix II and III) consisted of four sections, A, B, C and D. Section A sought to collect demographic data on the respondents. Section B sought to collect information regarding decolonizing of the curriculum in the Kenyan education

system, while section C sought information regarding decolonizing of pedagogical approaches in the Kenyan education system. Section D sought information regarding decolonizing of the school environment in the Kenyan education system while section E sought respondent's opinion on decolonizing evaluation procedures in the Kenyan education system.

3.5.2 Interview Schedule

Peil (1995) maintains that interviews can provide reliable, valid and theoretically satisfactory results than a questionnaire from unknown source, especially in societies where interaction is highly personalized and that interviews get better cooperation and fuller answers than questionnaires. An interview schedule (Appendix IV) was used to collect information from the Deans of faculties or schools of education in the sampled public and private universities in Kenya. An in-depth interview was also carried out with individuals who have graduated from universities in the last two years. A list of issues to be discussed was prepared in advance. In the interview the researcher sought to collect information regarding the extent to which the curriculum, pedagogical approaches, evaluation and school environments in the Kenyan education system promotes self-reliance among students in Kenya. Information was also sought about the extent to which decolonizing the curriculum, pedagogical approaches, school environment and evaluation in the Kenyan education system could promote self-reliance among students.

3.6 Piloting of Instruments

Two universities were randomly selected for piloting purposes. Universities selected for piloting purposes did not participate in the actual study. A total of 40 respondents made up of 34 students and 6 members of academic staff participated in the Pilot study. According to Mugenda and Mugenda (2013) 10% of the study sample size is adequate for piloting purposes. The instruments were administered to the pilot subjects with the intention of establishing whether the instruments would work in the main study. Mugenda (2011) argues that piloting of research instruments is necessary in order to ensure that items are clearly presented so that respondents understand and interpret the questions or items in the same way. He further notes that piloting helps the researcher to assess the average time that is required to administer the instrument.

The objective of research is to establish truthful and accurate findings, yet the results of any study can only be as good as its measures and therefore it is important to evaluate the goodness of measures (Sekaran, 2009). Particular attention was paid to validity and reliability. These two factors ensure the scientific value of the research by asserting that findings are useful and appropriate. The data collection instruments are the tools used to collect information as part of a survey. Proper design of data collection instruments is essential for reaching reliable and valid conclusions. Information must be obtained on a comparable basis across individuals if the intention is to make aggregate or general statements on the basis of survey information. This is especially true when the intention is to make quantified generalized statements about a larger population.

3.6.1 Validity of Instruments

Kombo and Tromp (2006) observe that validity is the degree to which a test measures what it purports to measure. Dempsey and Dempsey (1986) Contended that content validity is judgmental and depends on subjective and professional judgement. The instruments were subjected to an examination by the faculty at Chuka University, Faculty of Education and Resource Development and also benefitted from the scrutiny by the researcher's supervisors. In this respect, validity of instruments in this study was determined through a careful definition of the topic of concern, the themes and the scales to be used, ensuring that the instruments contained a representative

sample of the population on the subject matter of interest. In established criterion related validity, efforts were made to ensure that the criterion was relevant, free from bias, reliable and the information specified by the criterion is available. Based on the information gathered from the pilot study and recommendations of the experts, the final formats of questionnaires and interview schedules were developed.

3.6.2 Reliability of Instruments

Reliability refers to the consistency of scores or answers from one administration of an instrument to another and from one set of items to another (Fraenkel & Wallen, 2003). Mugenda (2011) observed that reliability in research is influenced by random error. As random error in the data increases, reliability of the data decreases. Random error is the deviation from a true measurement due to factors that have not effectively been addressed by the researcher. To test for reliability questionnaires were distributed to the respondents by the researcher and trained research assistants and picked after they were completed. Internal consistencies were computed during the pilot study using Cronbach's Alpha co-efficient. This technique requires only a single administration and provides a unique, quantitative estimate of the internal consistency of a scale. This was done by generating an inter-item correlation matrix first and then sum up all the correlation to estimate the mean correlation. A high coefficient implies that items in the scale correlates highly among themselves and consistently measure the construct of interest. According to the rule of the thumb provided by George and Mallery (2003) coefficients greater than $\alpha = 0.7$ are acceptable and an indication of reliability of research instruments.

3.7 Data Collection Procedure

After the validity and reliability of the instruments was ascertained, the researcher obtained a clearance letter from the ethics review committee of Chuka University (Appendix V) which facilitated issuance of a permit (Appendix VII) by the National Council for Science, Technology and Innovation (NACOSTI). The researcher then sought further permission from the relevant authorities in the selected universities to carry out research in their institutions. The researcher personally administered the instruments to all the respondents. Questionnaires were collected after a few days as it was agreed upon by the researcher and the respondents. Interviews were held with

members of academic staff in the faculties of education in the selected universities and with students and graduates on dates that were set after consultations with the various respondents. The researcher personally conducted the interviews. The researcher, with the help of trained research assistants from the selected universities administered questionnaires to students, academic faculty and graduates from the faculties of education in the selected universities.

3.8 Data Analysis

The study generated both quantitative and qualitative data. Questionnaires generated mainly quantitative data. Interviews generated qualitative data to further explain and supplement the quantitative data. Data cleaning was done after collecting the instruments from the respondents to check any anomalies and to eliminate any outliers as well as incomplete questionnaires. Data coding was then done to classify the responses into meaningful categories so as to bring out their essential pattern. Data was the entered using the Statistical Package for Social Sciences (SPSS) version 25 for the purpose of analysis. Descriptive statistics were used for measures of central tendencies including mean, standard deviation and coefficient of variation. Inferential statistics through correlation analysis using the Pearson's product moment coefficient of correlation were applied to measure the degree of association between each independent variable (Decolonizing curriculum, Decolonizing pedagogical approaches, Decolonizing school environment and Decolonizing evaluation) and the dependent variable which is self-reliance.

To test hypothesis, simple linear and multiple regression models were used to test significance between independent and dependent variable using t-statistic at 95% confidence level. Coefficient of determination was used to assess how much of variation in self-reliance is due to its relationship with the decolonizing Kenyan education system. Analysis of variance (F-statistic) was conducted to assess the robustness and overall significance of the regression model at 5% significance level. In analysis of qualitative data generated through open ended questions in the questionnaire, the Framework Based Approach proposed by Ritchie *et al* (2003) was used. This involves classifying and organizing data into a thematic framework based on key themes, concepts and categories.

3.8.1 Data Transformation

Questionnaires for this study were based on a Five-point Likert scale of 1-5 where 1 = strongly Disagree, 2 = Disagree, 3= Neutral, 4 = Agree, and 5 = Strongly Agree. This follows a nominal measurement scale and therefore it was necessary to establish a clear perception of the findings by transforming the study data. This transformation was guided by the formula stated below:

$$Mean = \frac{\Sigma fW}{\Sigma f} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(1)$$

Where:

f = frequency of responses associated with Strongly Disagree to Strongly Agree

W = Weight (W =1, 2, 3, 4, 5)

The mean is expected to be a value between 1 and 5. In this case the transformed variable data follows an interval scales since the data is continuous hence ideal for analysis and modelling purpose.

For instance if an item had the following results:

Opinion	SD	D	N	A	SA
Frequency (f)	74	122	69	95	24

The mean is computed as follows:

$$Mean = \frac{1(74) + 2(122) + 3(69) + 4(95) + 5(25)}{74 + 122 + 69 + 95 + 25} = \frac{1030}{384} = 2.68$$

Researchers assume that Likert-type data is equidistant so that parametric methods can be used for data analysis (Lantz, 2013). According to Carifio and Racco (2007) when using a five point Likert scale, the following scoring applies; To a very Large extent (VLE) 4.2<VLE<5.0; To a large extent (LE) 3.4<LE<4.2; To a moderate extent (ME) 2.6<ME<3.4; To a Small extent (SE) 1.8<SE<2.6 and To a very little extent (VLE) 1.0<VLE<1.8. In case of an alternative scale the following scoring applies; Strongly Agree (SA) 4.2<SA<5.0; Agree (A) 3.4<A<4.2; Neutral (N) 2.6<N<3.4; Disagree (D) 1.8<D<2.6 and Strongly Disagree (SD) 1.0<SD<1.8. The scoring employs an equidistant interval of 0.8. This weighting criterion was utilized in

the analysis of Likert-type of data in this study and for the purpose of modelling using parametric methods.

3.8.2 Regression Analysis Model

The study adopted the following model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e \quad \text{...} \quad (2)$$

Where Y = Self-reliance

X_1 = Decolonizing Curriculum

X_2 = Decolonizing pedagogical approaches

X_3 = Decolonizing school environment

X_4 = Decolonizing evaluation

β_0 = Constant (Y intercept when X is 0)

β_i = Regression coefficient of ith independent variable ($i = 1,2,3,4$)

e = Error term (iid =identically and independently normally distributed with a mean of 0 and variance of 1)

Table 4 represents a summary table of the variables of this study as well as the data analysis techniques that will used to analyze the data collected in order to answer the research questions.

Table 3: Analytical Methods and Data Interpretation Methods

Objectives	Hypothesis	Analytical method	Interpretation of output of the analytic method
Objective 1 To determine the extent to which decolonizing curriculum promotes self-reliance among students in the Kenyan education system.	Ho_1 :There is no statistically significant relationship between decolonizing curriculum and self-reliance among students in the Kenyan education system.	Regression Model $Y = \beta_{01} + \beta_1 X_1 + e$ Where: $Y=$ Self-reliance; $X_1 =$Decolonizing Curriculum $\beta_{01} =$ constant; $\beta_1 =$ Regression coefficient of X_1 $e =$ Error term	Coefficient of determination (R^2) t-test Correlation Analysis F statistic (ANOVA)
Objective 2 To establish the influence of decolonizing pedagogical approaches on self-reliance among students in the Kenyan education system.	Ho_2 : There is no statistically significant relationship between decolonizing pedagogical approaches and self-reliance among students in the Kenyan education system.	Regression Model $Y = \beta_{01} + \beta_2 X_2 + e$ Where: $Y=$ Self-reliance $X_2 =$Decolonizing pedagogical approaches; $\beta_{02} =$ Constant $\beta_2 =$ Regression coefficient of X_2 $e =$ Error term	Coefficient of determination (R^2) t-test Correlation Analysis F statistic (ANOVA)
Objective 3 To determine the extent to which decolonizing school environment promotes self-reliance among students in the Kenyan education system.	Ho_4: There is no statistically significant relationship between decolonizing school environment and self-reliance among students in the Kenyan education system.	Regression Model $Y = \beta_0 + \beta_3 X_3 + e$ Where: $Y=$ Self-reliance $X_3 =$Decolonizing school environment $\beta_{03} =$ Constant $\beta_3 =$ Regression coefficient of X_3 $e =$ Error term	Coefficient of determination (R^2) t-test Correlation Analysis F statistic (ANOVA)
Objective 4 To determine the extent to which decolonizing evaluation promote self-reliance among students in the Kenyan education system.	Ho_5 :There is no statistically significant relationship between decolonizing evaluation and self-reliance among students in the Kenyan education system	Regression Model $Y = \beta_0 + \beta_4 X_4 + e$ Where: $Y=$ Self-reliance $X_4 =$Decolonizing evaluation $\beta_{04} =$ Constant $\beta_4 =$ Regression coefficient of X_4 $e =$ Error term	Coefficient of determination (R^2) t-test Correlation Analysis F statistic (ANOVA)

3.8.3 Operationalization of Study Variables

Table 4 indicates the operational definition of variables which includes their respective nature, indicators, measurement, and scale.

Table 4: Operationalization of Study Variables

Variable	Nature	Indicator	Measure	Scale	Question
Decolonizing curriculum	Independent	• Variety of subjects taught • Content of subjects taught • Choice of subjects by learner • Source/origin of content	Five-point Likert-type scale 1-Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5-Strongly Agree	Interval	Section B
Decolonizing Pedagogical approaches	Independent	• Teachers role • Learners role • Content delivery method • Teacher/learner relation • Choice of method of instruction	Five-point Likert-type scale 1-Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5-Strongly Agree	Interval	Section C
Decolonizing school environment	Independent	• Physical facilities • Teaching/learning resources • School routine • Social environment	Five-point Likert-type scale 1-Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5-Strongly Agree	Interval	Section D
Decolonizing evaluation	Independent	• Theoretical/Practical approach • Frequency of evaluation • Evaluator • Length of Evaluation • Skills/knowledge measured	Five-point Likert-type scale 1-Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5-Strongly Agree	Interval	Section E
Self-reliance	Dependent	• Attitude • Creativity • Responsibility • Autonomy • Hardwork • Confidence in capabilities • self-esteem	Five-point Likert-type scale 1-Strongly Disagree 2-Disagree 3-Neutral 4-Agree 5-Strongly Agree	Interval	Section F

3.9 Ethical Issues

The study ensured that ethical considerations were observed by getting voluntary informed consent from all the respondents. This was done by making telephone calls in advance to the sampled institutions to inform them about the purpose of the study. The researcher respected privacy and ensured confidentiality of the respondents by maintaining anonymity of the respondents. Individual identity was not disclosed and the researcher and his assistants ensured maintenance of respect of human dignity. Data was collected by the competent researcher and research assistants. All segments of society were given the opportunity to participate in the research if they so wished and if they were considered to be appropriate participants for the study. The research findings are to be used only for scholarly purposes.

CHAPTER FOUR

RESULTS AND DISCUSSIONS OF THE STUDY

4.1 Response Rate

This study targeted a population of 537,211 subjects made up of 520,893 students, and 16,318 Academic staff members in chartered public and private universities in Kenya (KNBS, 2018). Academic staff and students were purposively sampled in Twelve (12) universities to participate in the study. The distribution of respondents in the study is shown in Table 5

Table 5: Response Rate

Category of Respondent	Target population	Sample Size	Achieved Response
Students	520,893	324	100%
Academic Staff	16,318	60	100%
Total	537,211	384	100%

The information on Table 5 indicates that 384 subjects comprising of 324 students and 60 members of the academic staff participated in the study. A response rate of 100% was recorded across all the categories of the respondents. The high response rate was possible since the researcher engaged teaching faculty in the selected universities as research assistants. In addition, the researcher adopted a drop and pick approach in all the participating institutions.

4.2 Reliability

The Cronbach's alpha coefficient was computed in regard to each of the study variables to establish the reliability of the instruments of the study. The results are summarized in Table 6

Table 6: Cronbach's Alpha Reliability Coefficients

Variable	Types	No of items	Crobach's alpha coefficient	Remarks
Curriculum	Contemporary Curriculum	14	0.812	Reliable
	Decolonizing Curriculum	9	0.870	Reliable
Pedagogical approaches	Contemporary approaches	12	0.832	Reliable
	Decolonizing Approaches	9	0.889	Reliable
School Environment	Contemporary school Environment	10	0.861	Reliable
	Decolonizing School environment	7	0.830	Reliable
Evaluation	Contemporary Evaluation	12	0.887	Reliable
	Decolonizing Evaluation	8	0.904	Reliable
Self-reliance		14	0.926	Reliable

Results on Table 6 indicate that contemporary curriculum had the lowest Cronbach's Alpha Coefficient at 0.812 while Self-reliance had the highest Cronbach's Alpha coefficient at 0.926. The average Cronbach's Alpha coefficient was 0.862. This indicates that the research instruments were reliable.

4.3 Model Diagnostic Tests and Analysis of Likert-type Data

The collected data was tested to confirm the major assumptions for parametric data analysis. This was done by test for normality, multi-collinearity and homoscedasticity (homogeneity of variance)

4.3.1 Normality

Normality was tested using Kolmogrov-Smirnov (K-S) one-sample test, a non-parametric goodness of fit test. KS- test belongs to the class of cumulative distribution function statistics and this class of statistics is based on the largest vertical difference between the hypothesized and empirical distribution (Rizali & Wah, 2011). This is meant to test if data follows or does not follow a specified distribution. While testing for normality, the null hypothesis was that the sample data was normally distributed. The results of the test for normality are presented on Table 7

Table 7: Normality Test: one-Sample Kolmogorov-Smirnov Test

		Curriculum	Pedagogical Approaches	School Environment	Evaluation	Self-Reliance
N		384	384	384	384	384
Normal Parameters[a,b]	Mean	3.2541	3.1121	2.9746	3.1948	2.9467
	S. D	0.57426	0.59337	0.58859	0.62252	0.84666
Most Extreme Differences	Absolute	0.041	0.049	0.078	0.043	0.040
	Positive	0.041	0.049	0.078	0.043	0.037
	Negative	-0.030	-0.045	-0.070	-0.035	-0.040
Test Statistic		0.041	0.049	0.078	0.043	0.040
Asymp. Sig. (2-tailed)		.200	.064	.000	.200	.200

a. Test distribution is Normal.

b. Calculated from data.

The results of the K-S tests for decolonizing curriculum, pedagogical approaches, evaluation and self-reliance as presented on Table 7 shows that $p > 0.05$. The null hypothesis was accepted and it was concluded that the sample was picked from a normal population

4.3.2 Multi-collinearity

The researcher tested for Multicollinearity in the current study using Variance Inflation Factor (VIF). This was calculated using the SPSS regression procedure and by examination of correlation coefficient among variables. Multicollinearity refers to the linear correlation among the variables of the study. The results for the test for multi-collinearity are presented on Table 8.

Table 8: Multi-collinearity Test

Variable	Collinearity Statistics		Remarks
	Tolerance	VIF	
Decolonizing Curriculum	0.611	1.636 < 3	Absence of MC
Decolonizing Pedagogical Approaches	0.644	1.552< 3	Absence of MC
Decolonizing School Environment	0.753	1.328< 3	Absence of MC
Decolonizing Evaluation	0.729	1.372< 3	Absence of MC

MC=Multi-collinearity

Results presented on Table 8 indicate that the VIF for all independent variables (Decolonizing Curriculum, Decolonising pedagogical approaches, Decolonizing school environment and Decolonizing evaluation) as well as the dependent variable (self-reliance) were found to be less than 3 (VIF≤3) indicating that there is no problem of multicollinearity. This implied that Independent variables were not highly correlated while independent and dependent variables correlated highly.

4.3.3 Homoscedasticity

Homoscedasticity (homogeneity of variance) is based on the assumption that the dependent variable exhibits similar amounts of variance across the range of values for an independent variable (Hair *et al.*, 1998). To test for homoscedasticity, a Levene test for equality of variance recommended by Levene (1960) was computed using one-way Anova procedure. The results of the levene test carried out for this study are presented on Table 9.

Table 9: Homogeneity of Variance

Variable	Levene Statistic	df1	df2	Sig.	Remarks
Curriculum	1.930	51	320	0.000	< 0.05
Pedagogical Approaches	1.587	51	324	0.018	< 0.05
Environment	1.410	42	331	0.054	≥ 0.05
Evaluation	1.856	55	316	0.010	< 0.05
Dependent Variable: Self-reliance					

Results on Table 9 indicate that the Levene values for three variables tested against the dependent variable (self-reliance) were statistically significant [decolonizing curriculum (sig. =0.000); decolonizing pedagogical approaches (sig. =0.018) decolonizing evaluation (sig. =0.010)]. The levene value for decolonizing school environment (sig. =0.054) was marginally significant. This implies that there was homogeneity in the variance of the variables under study.

4.4 Demographic Information

This section gives the background of the respondents according to gender of respondents, category of university, rank of academic staff, teaching experience of academic staff, area of specialization of academic staff, student's area of specialization, and type of secondary school attended by students

4.4.1 Gender of Respondents

The researcher sought information on the gender of the respondents. This information is presented on Table 10

Table 10: Gender of Respondents

	Students		Teaching Staff		Total	
Gender	N	%	N	%	N	%
Male	174	53.7	23	38.3	197	51.3
Female	150	46.3	37	61.7	187	48.7
Total	324	100.0	60	100.0	384	100

Information on Table 10 shows that the majority of the respondents for this study (51.3%) were male while female respondents accounted for 48.7%. Among students Males were the majority at (53.7%) while among the academic staff females were the majority at (61.7%). The distribution of respondents by gender indicates that there was a nearly equal number of males and females participating in the study. This implies that 30% Gender representation as required by the constitution of Kenya was achieved.

4.4.2 Category of University

An item was included in the instruments that sought information on the category of university respondents studied/taught in. Respondents were required to indicate whether they study or taught in a public or private university. The results are presented on Table 11

Table 11**:** Category of University

University	Students		Teaching Staff	
	N	%	N	%
Private	54	16.7	13	21.7
Public	270	83.3	47	78.3
Total	324	100.0	60	100.0

Information on Table 11 indicates that 78.3 % of all the respondents in this study were students or academic staff from public universities while 21.7% were from private universities. This means that there was proportionate representation of respondents from both categories of universities.

4.4.3 Rank of Academic Staff

The study sought information on the academic rank of academic staff who participated in the study. The responses to this item are presented in Table 12

Table 12: Rank of Academic Staff

Rank	Frequency	Percent
Full Professor	1	1.7
Associate Professor	5	8.3
Senior Lecturer	10	16.7
Lecturer	30	50.0
Assistant Lecturer	14	23.3
Total	60	100.0

Information in Table 12 indicates that 50% of the academic staff who participated in the study were in the rank of Lecturer while 23.3% were Assistant lecturers. 16.7 % of the respondents were Senior Lecturers while 8.3 % were Associate Professors. That 76.7 % of respondents were in the academic rank of lecturer and above implies that the academic staff interviewed had the requisite experience and academic qualification to tackle the topic under investigation in this study.

4.4.4 Teaching Experience of Academic Staff

An item on the instruments for academic staff required the respondents to indicate the length of their teaching experience at all levels of the education system. The results are presented on Table 13.

Table 13: Teaching Experience of Academic Staff

Experience	Frequency	Percent
Below 5 years	5	8.3
6-10 years	10	16.7
11-15 Years	9	15.0
16-20 Years	14	23.3
Over 21 Years	22	36.7
Total	60	100.0

Information in Table 13 shows that 36.7% of the respondents who participated in the study have a teaching experience of over 21 years while 23.3 % have an experience of between 16 and 20 years. Only 8.3 % of the academic staff who participated in the study had a teaching experience of less than 5 years. This shows that 75% of the respondents of this study had over ten years of teaching experience, implying that they were experienced enough to handle the matter under investigation in this study.

4.4.5 Area of Specialization of Academic Staff

The questionnaire for the academic staff required respondents to indicate their area of specialization in the field of Education. The responses are presented in Table 14

Table 14: Area of Specialization of Academic Staff

Area	Frequency	Percent
Educational Foundations	14	23.3
Curriculum Development	14	23.3
Education Management, Planning, Economics	7	11.7
Educational Psychology	15	25.0
Educational Technology	10	16.7
Total	60	100.0

Information in Table 14 shows that Majority of the respondents (25%) were in the area of Educational psychology. The areas of Educational Foundations and Curriculum Development had an equal (23.3%) number of respondents participating in the study. 11.7% of the respondents were in Education Management, Planning and Economics. This shows that the respondents selected to participate in this study were fairly distributed across all areas of specialization in education. This implies that the respondents were likely to have a balanced opinion about the issues under investigation in this study.

4.4.6 Student's Area of Specialization

An item was included on the student's questionnaire that required respondents to indicate their area of subject specialization. The trainee teachers were asked to specify the general subject areas they were being trained to teach. The responses are presented on Table 15.

Table 15: Student's Area of Specialization

Area	Frequency	Percent
Arts subjects	137	42.3
Science subjects	94	29.0
Agriculture/Aged	59	18.2
Technical subjects	4	1.2
Early Childhood Education	28	8.6
Special Needs Education	2	0.6
Total	324	100.0

From the information on Table 15, the majority of the respondents (42.3%) are enrolled in Arts subjects while 29% are enrolled in Science based subjects. 18.2% of the respondents are enrolled in Agriculture related subjects while 1.2 % are in Technical subjects. This shows that respondents majoring in all areas of subject specialization in education participated in the study implying that their varying opinions on the variables under investigation were considered in this study.

4.4.7 Type of Secondary School Attended by Students

An item on the student's questionnaire required respondents to indicate the type of secondary school they attended. Information on Table 16 shows the student's responses.

Table 16: Type of Secondary School Attended by Students

	Frequency	Percent
National School	30	9.3
Extra County	115	35.5
County School	95	29.3
Day School	73	22.5
Private School	11	3.4
Total	324	100.0

Information in Table 16 indicates that majority of the respondents (35.5%) attended Extra county schools while 29.3 % attended County schools. 22.5% of the respondents attended day schools while 9.3% went to National schools. Students who had attended private schools made of 3.4% of the respondents. This shows that students representing all categories of secondary schools in Kenya participated in the study. This implies that opinions from students who attended the various categories of secondary schools in Kenya were considered in this study.

4.5 Self-reliance

The dependent variable for this study was self-reliance. Self-reliance among graduates and school leavers from the education system was conceived in this study in terms of the extent to which they exhibited an attitude of self-reliance and showed attributes of self-reliance such as creativity, responsibility, autonomy, hard work, confidence in their own capabilities and self-esteem. Respondents were asked to indicate the extent to which they agreed with selected statements about graduates of the Kenyan education system. Selected statements captured aspects which according to literature reviewed were indicators of self-reliance. They were given fifteen items rated on a five-point Likert scale ranging from: of **SD** – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree from which to choose. The findings are presented in Table 17

Table 17: Frequency Distribution for Self-reliance

Statement	SD	D	N	A	SA
Learners leave the education system capable of living independently	93 (24.2%)	128 (33.3%)	72 (18.8%)	70 (18.2%)	21 (5.5%)
Most graduates can survive without wage employment	91 (23.7%)	136 (35.4%)	64 (16.7%)	61 (15.9%)	32 (8.3%)
Graduates of the education system are highly creative and versatile enough to perform many different tasks.	67 (17.4%)	115 (29.9%)	83 (21.6%)	86 (22.4%)	33 (8.6%)
Graduates have great confidence in their own capabilities	35 (9.1%)	114 (29.7%)	88 (22.9%)	106 (27.6)	41 (10.7%)
Graduates of education system can work independently without supervision	46 (12.0%)	110 (28.6%)	85 (22.1%)	102 (26.6%)	41 (10.7%)
Graduates would rather create jobs for themselves rather than go out seeking for jobs ("tarmacking")	65 (16.9%)	105 (27.3%)	69 (18.0%)	92 (24.0%)	53 (13.8%)
Graduates can live without relying on other people	45 (11.7%)	120 (31.3%)	98 (25.5%)	84 (21.9%)	37 (9.6%)
Most graduates prefer self-employment to wage employment	72 (18.8%)	129 (33.6%)	60 (15.6)	80 (20.8%)	43 (11.2%)
Graduates have enough skills to survive in a world that faces shrinking job opportunities	64 (16.7%)	127 (33.1%)	74 (19.3%)	88 (22.9%)	31 (8.1%)
Graduates do not continue receiving support from Parents and guardians after graduation	55 (14.3%)	109 (28.4%)	91 (23.7%)	90 (23.4%)	39 (10.2%)
Graduates have skills needed in the community	38 (9.9%)	105 (27.3%)	80 (20.8%)	128 (33.3%)	33 (8.6%)
Graduates of the school system have high self-esteem	39 (10.2%)	89 (23.2%)	90 (23.4%)	126 (32.8%)	40 (10.4%)
Educational institutions identify and develop learners' potentialities	54 (14.1%)	105 (27.3%)	79 (20.6%)	106 (27.6%)	40 (10.4%)
Graduates of Educational institutions can survive in any environment	46 (12.0%)	116 (30.2%)	84 (21.9%)	94 (24.5%)	44 (11.5%)
Graduates have sufficient knowledge and skills to go into self-employment.	55 (14.3%)	95 (24.7%)	80 (20.8%)	104 (27.1%)	49 (12.8%)
Average Score	15.0%	29.6%	20.8%	24.6%	10.0%

Analysis of the results of the respondent's opinion on self-reliance as presented on Table 17 indicate that the majority of the respondents (33.3%) indicated that they

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disagreed with the statement that learners leave the education system capable of living independently. 35.5% of the respondents disagreed that most graduates can survive without wage employment. The majority of the respondents also disagreed with the statements that graduates of the education system are highly creative and versatile enough to perform many different tasks (29.9%) and that graduates have great confidence in their own capabilities (29.7%). Other statements with which majority of the respondents disagreed include; graduates of education system can work independently without supervision (28.6%), graduates would rather create jobs for themselves rather than go out seeking for jobs ("tarmacking") (27.3%), graduates can live without relying on other people (31.3%) and Most graduates prefer self-employment to wage employment (33.6%). Majority of the respondents also disagreed with the statements that graduates have enough skills to survive in a world that faces shrinking job opportunities (33.1%) and that graduates do not continue receiving support from Parents and guardians after graduation (28.4%). On the statement that graduates of Educational institutions can survive in any environment, majority (30.2%) of the respondents disagreed.

Majority of the respondents (33.3%) agreed with the statement that graduates have skills needed in the community. There was agreement with the statement that graduates of the school system have high self-esteem with majority of the respondents (32.8%). Other statements with majority of the respondents disagreed include "Educational institutions identify and develop learners' potentialities" (27.6%) and "Graduates have sufficient knowledge and skills to go into self-employment" (27.1%). From the results presented in Table 17, it is revealed that majority of respondents disagreed with most of the selected statements on self-reliance indicating that they do not view graduates of the Kenyan education system as self-reliant. Graduates have been revealed to be incapable of living independently and that many of them continue receiving support from parents and guardians after graduation. This generally means that the Kenyan education system is not adequately preparing students for self-reliance. Further tabulation of the results for self-reliance is presented using Means and Standard Deviations on Table 18

Table 18: Descriptive statistics on Self-reliance

Statement	N	Mean	S.D	C.V
Learners leave the education system capable of living independently	384	2.47	1.20	48.34
Most graduates can survive without wage employment	384	2.50	1.24	49.78
Graduates of the education system are highly creative and versatile enough to perform many different tasks.	384	2.75	1.23	44.66
Graduates have great confidence in their own capabilities	384	3.01	1.17	38.85
Graduates of education system can work independently without supervision	384	2.95	1.21	40.92
Graduates would rather create jobs for themselves rather than go out seeking for jobs ("tarmacking")	384	2.90	1.32	45.40
Graduates can live without relying on other people	384	2.86	1.17	40.87
Most graduates prefer self-employment to wage employment	384	2.72	1.29	47.47
Graduates have enough skills to survive in a world that faces shrinking job opportunities	384	2.73	1.22	44.60
Graduates do not continue receiving support from Parents and guardians after graduation	384	2.87	1.22	42.48
Graduates have skills needed in the community	384	3.03	1.16	38.28
Graduates of the school system have high self-esteem	384	3.10	1.17	37.82
Educational institutions identify and develop learners' potentialities	384	2.93	1.24	42.19
Graduates of Educational institutions can survive in any environment	384	2.93	1.22	41.54
Graduates have sufficient knowledge and skills to go into self-employment.	383	2.99	1.27	42.40
Overall Mean Score	384	2.85	1.22	43.04

Research findings on Table 18 indicate that the mean score for the fifteen selected indicators of self-reliance was 2.85 with a standard deviation of 1.22. This shows that respondents rated the extent to which graduates of the Kenyan education system show characteristics of self-reliance moderately. Respondents disagreed that Learners leave the education system capable of living independently (M=2.47, S.D= 1.20). Respondents also disagreed that most graduates can survive without wage employment with a mean of 2.50 and a standard deviation of 1.24. On the suggestion that most graduates prefer self-employment to wage employment, respondents were of a neutral opinion (M=2.72, S.D= 1.29). They were neutral (M=2.73, S.D= 1.22) on the suggestion that graduates have enough skills to survive in a world that faces shrinking job opportunities. Respondents were neutral (M=2.75, S.D= 1.23) about the suggestion that graduates of the education system are highly creative and versatile

enough to perform many different tasks. A neutral opinion was also observed for the statements that graduates can live without relying on other people (M=2.86, S.D= 1.17) and that graduates do not continue receiving support from Parents and guardians after graduation (M=2.87, S.D= 1.22). Other statements to which respondents were neutral include "Graduates would rather create jobs for themselves rather than go out seeking for jobs (tarmacking)" (M=2.90, S.D= 1.32), "Graduates of Educational institutions can survive in any environment" (M=2.93, S.D= 1.22), "Educational institutions identify and develop learners potentialities" (M=2.93, S.D= 1.24), "Graduates of education system can work independently without supervision (M=2.95, S.D= 1.21), and "Graduates have sufficient knowledge and skills to go into self-employment" (M=2.99, S.D= 1.27).

Respondents were neutral to the statement that graduates have great confidence in their own capabilities (M=3.01, S.D= 1.17). They were also neutral on the statement that graduates have skills needed in the community (M=3.03, S.D= 1.16). On the statement that graduates of the school system have high self-esteem, respondents were neutral with a mean of 3.10 and a standard deviation of 1.17. The results on Table 14 indicate that majority of the respondents rated graduates of the Kenyan education system moderately with regard to self-reliance.

Further scrutiny of the respondents' opinion on self-reliance as shown on Appendix VIII (Table A1 and Table A2) indicates that there was significant difference in the views of students and those of the academic staff. The mean score for academic staff was 2.33 while the mean score for students was 2.95. This shows that that the academic staff views graduates of the Kenyan education system as lacking in self-reliance while the students had a moderate opinion. In addition, the academic staff disagreed with all the statements measuring self-reliance among graduates of the education system. The suggestion that most graduates prefer self-employment to wage employment was rated lowest by academic staff (Mean=2.03, S.D=0.956). This shows that the respondents considered graduates as more likely to go out looking for jobs rather than survive through self-employment. Academic staff also rated lowly the suggestion that graduates of the education system are highly creative and versatile enough to perform many different tasks.

Interviews were carried out with Deans of schools of education in selected Universities and selected graduates from the universities. Their opinion on the level of self-reliance exhibited by graduates of the education system in Kenya was sought. During the interviews, it was observed that the majority of participants considered graduates of the education system in Kenya as lacking in self-reliance. Participants observed that graduates did not possess adequate skills for a life of self-employment, job creation and independence. Instead, the education system prepared its graduates for employment with the knowledge and skills imparted focusing on white collar jobs. For this reason, it was observed that the focus of education in Kenya was mainly on acquisition of certificates with the aim of enhancing student's chances for recruitment into formal employment.

Participants observed that there was a great mismatch between the skills acquired in the education system and the requirements for both the white-collar job market and self-employment. Many students were channeled into courses that were too theoretical in nature that they limited the graduate's ability to survive in a world that demands more of practical vocational skills as well as entrepreneurial skills for the individuals to thrive. It was noted that this lack of skills left majority of graduates as full time job seekers in a flooded job market and this forced many into depression and desperation. Graduates observed that they had been socialized by their parents and teachers to pursue a good education for white collar jobs and that nobody prepared them for the possibility of joblessness as well as the need to survive through alternative ways.

In the interviews it was observed that the graduates of the education system lacked the spirit of thinking and working independently. Participants noted that even those graduates who were lucky to find employment in the formal sector lacked the attitude and capacity to work independently and make independent decision without supervision. It was noted that teachers and parents had subjected students in the Kenyan education system to too much supervision that many lacked the capacity to function properly without directions and assistance from others. This negatively influenced their capacity to exhibit self-reliance at the personal level and even at their places of work. Participant suggested that the spirit of thinking and working

independently needs to be embraced and developed in children not only through the education system but also at the family level if self-reliance is to be achieved.

Participants in the interviews observed that many graduates of the school system continued depending on their parents and guardians even after graduating from the various institutions. Many parents continued paying rent while others continued to house their adult children after graduation. It was observed that many graduates even leave the responsibility of searching for employment opportunities to their parents. Graduates admitted that it was challenging for them to adjust to the new world of work and independence since they had not been adequately prepared for it though the school system. Most of their time in and out of school had been spent in academic work with teacher-controlled routines that left learners with little time to think and function independently. This, they observed left them with little time for acquisition of skills for self-reliance.

There was agreement in the opinion of the interviewees and the respondents in the survey that most graduates were not able to survive without wage employment. There was also consonance in the views of the participants that many graduates continued to seek financial and material assistance from their parents and other members of society long after graduation. Participants opined that many parents continued to pay rent and upkeep for their graduate children who were engaged in job seeking as many lacked the attitude and skills to employ themselves in the informal sector. These findings are in harmony with other studies on self-reliance in the Kenyan education system. Shiundu and Amulando (1992) writing on Kenya's 8-4-4 system of education argued that its graduates are half baked academics and skillful dependants who cannot be effective in terms of satisfying either demands of market place or the expectations of those being educated. Sifuna (2016) observed that the system of education in Kenya was very academic and examination oriented, the curriculum was overloaded and that most schools were not able to equip their pupils with practical skills for self-reliance. Ambaa (2015) posited that products of the Kenyan education system are dependent, incompetent, lack creative skills and are unemployable or unable to initiate self-employment, aspects which demonstrate a critical deficiency in the current system of education in Kenya with respect to the aim of education for self-reliance.

4.6 Decolonizing Curriculum and Self-Reliance

The first objective of this study was to determine the extent to which decolonizing curriculum promotes self-reliance among students in the Kenyan education system. A decolonizing curriculum was conceived in terms of integrating aspects of African indigenous curriculum into the contemporary Kenyan curriculum. Two sets of items were included in the questionnaire to measure the variety of subjects taught, content of subjects taught, and choice of subjects by the learner as well as the source/origin of content taught in both the contemporary Kenyan education system and in the indigenous African education system.

4.6.1 Descriptive Statistics on Contemporary Curriculum

The respondents were requested to indicate the extent to which they agreed with selected statements about the Kenyan education system. Selected statements capture indicators of a curriculum which according to literature reviewed would be associated with self-reliance. They were given fourteen items rated on a five-point Likert scale ranging from: **SD** – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree from which to choose. The findings are presented in Table 19

Table 19: Frequency Distribution on Contemporary Curriculum

Statement	SD	D	N	A	SA
Curriculum focuses on community-centred knowledge and skills	74 (19.3%)	122 (31.8%)	69 (18%)	95 (24.7%)	24 (6.25%)
Music and drama are highly encouraged in educational institutions	65 (16.9%)	100 (26.0%)	69 (18.0%)	102 (26.6%)	48 (12.5%)
Students have ample time to participate in communal programmes	72 (18.8%)	155 (40.4%)	78 (20.3%)	58 (15.1%)	21 (5.5%)
Technical subjects feature prominently in the education system	73 (19.0%)	112 (29.2%)	57 (14.8%)	89 (23.2%)	53 (13.8%)
Subjects in the education system enable learners to explore their creativity	55 (14.3%)	98 (25.5%)	64 (16.7%)	111 (28.9%)	56 (14.6%)
Content of curriculum enables students to develop their potential and talents.	55 (14.3%)	96 (25.0%)	71 (18.5%)	105 (27.3%)	57 (14.8%)
There's a wide variety of subjects provided in the education system	29 (7.6%)	55 (14.3%)	42 (10.9%)	151 (39.3%)	107 (27.9%)
Students are exposed to a work-oriented curriculum	68 (17.7%)	111 (28.9%)	65 (16.9%)	88 (22.9%)	52 (13.5%)
Subjects taught in the education system enable students develop strong self-esteem	36 (9.4%)	95 (24.7%)	89 (23.2%)	104 (27.1%)	60 (15.1%)
Content of curriculum nurtures spirit of independence	40 (10.4%)	110 (28.6%)	82 (21.4%)	115 (29.9%)	37 (9.6%)
Choice of subjects to study is not entirely made by learners	55 (14.3%)	71 (18.5%)	61 (15.9%)	122 (31.8%)	75 (19.8%)
Content of subjects taught in educational institutions is derived from the immediate/local environment	90 (23.4%)	125 (32.6%)	73 (19.0%)	68 (17.7%)	28 (7.3%)
Kenyan curriculum exposes learners to the world of work	63 (16.4%)	92 (24.0%)	81 (21.1%)	102 (26.6%)	46 (12.0%)
Students are presented with a challenging curriculum designed to develop independent thinking.	65 (16.9%)	91 (23.7%)	70 (18.2%)	89 (23.2%)	69 (18.0%)
Average Score	60 (15.6%	102.3 (26.5%)	69.3 (18.1%)	100 (26.0%)	52.4 (13.6%)

Analysis of the results in Table 19 on the contemporary curriculum, reveal that majority of the respondents disagree that in the Kenyan education system, the curriculum focuses on community-centred knowledge and skills(31.8%), students have ample time to participate in communal programmes (40.4%), technical subjects feature prominently in the education system (29.2%), students are exposed to a work-

oriented curriculum (28.9%), content of subjects taught in educational institutions is derived from the immediate environment(32.6%) and that students are presented with a challenging curriculum designed to develop independent thinking (23.7%).

A majority of respondents agreed that music and drama are highly encouraged in education institutions (26.6%), there is a wide variety of subjects provided in the education system according to the majority of respondents (39.3%), that subjects in the education system enable learners to explore their creativity (28.9%), content curriculum enables students to develop their potential talents (27.3%) content of curriculum nurtures the spirit of independence (29.9%), Subjects taught in the education system enable students develop strong self-esteem (27.1%) and that Kenyan curriculum exposes learners to the world of work (26.6%). Further tabulation of the respondents' opinion on the contemporary Kenyan curriculum is presented on Table 20 using Means

Table 20: Means on Contemporary Kenyan Curriculum

Statement	N	Mean	S.D	C.V
Curriculum focuses on community-centred knowledge and skills	383	2.67	1.22	45.59
Music and drama are highly encouraged in educational institutions	384	2.92	1.30	44.71
Students have ample time to participate in communal programmes	384	2.48	1.12	45.20
Technical subjects feature prominently in the education system	384	2.84	1.35	47.49
Subjects in the education system enable learners to explore their creativity	384	3.04	1.31	42.95
Content of curriculum enables students to develop their potential and talents.	384	3.03	1.30	42.89
There's a wide variety of subjects provided in the education system	384	3.66	1.24	33.79
Students are exposed to a work-oriented curriculum	384	2.86	1.32	46.34
Subjects taught in the education system enable students develop strong self-esteem	384	3.15	1.22	38.90
Content of curriculum nurtures spirit of independence	384	3.00	1.18	39.36
Choice of subjects to study is not entirely made by learners	384	3.24	1.34	41.51
Content of subjects taught in educational institutions is derived from the immediate/local environment	384	2.53	1.23	48.65
Kenyan curriculum exposes learners to the world of work	384	2.94	1.28	43.61
Students are presented with a challenging curriculum designed to develop independent thinking.	384	3.02	1.37	45.34
Overall Mean score		2.95	1.27	43.00

Research findings on Table 20 indicate that the mean score for the fourteen selected indicators of a curriculum for self-reliance was 2.95 with a Standard deviation of 1.27. This shows that the respondents were neutral about the extent to which a curriculum for self-reliance is present in the Kenyan education system. Respondents agreed (mean 3.66, SD 1.24) that there's a wide variety of subjects provided in the education system. They were Neutral (mean 3.24, S.D 1.34) on the suggestion that choice of subjects to study is not entirely made by learners. Respondents were Neutral on the statement that subjects taught in the education system enable students develop strong self-esteem with a mean of 3.15 and a S.D of 1.22. Respondents were neutral about the statement that subjects in the education system enable learners to explore their creativity (M=3.04, S.D=1.31) as well as the statement that content of curriculum enables students to develop their potential and talents (M=3.03, S.D=1.30). Other statements to which respondents were neutral include "Kenyan curriculum exposes learners to the world of work" (M=3.02, S.D=1.37) and "Content of curriculum nurtures spirit of independence" (M=3.00, S.D=1.18).

Respondents were neutral to the statement that "students are presented with a challenging curriculum designed to develop independent thinking" (M=2.95, S.D=1.27), that "Music and drama are highly encouraged in educational institutions" (M=2.92, S.D=1.30) and that "Students are exposed to a work-oriented curriculum" (M=2.86, S.D=1.32). They were also neutral to the statement that "Technical subjects feature prominently in the education system" (M=2.84, S.D=1.35) and that "Curriculum focuses on community-centred knowledge and skills" (M=2.67, S.D=1.22). Respondents disagreed with the statement that "Content of subjects taught in educational institutions is derived from the immediate/local environment (M=2.53, S.D=1.23) and that "Students have ample time to participate in communal programmes" (M=2.48, S.D=1.35).

Information on Table 20 indicates that respondents rated the majority of the statements measuring the extent to which the curriculum features aspects that would promote self-reliance with an average mean score that was moderate with means ranging from 2.44 to 3.66. This shows that the contemporary curriculum is only capable of promoting self-reliance among students in the Kenyan education system

only to a moderate extent. Respondents indicated that the curriculum does not adequately focus on community-centred knowledge and skills, and that the content taught is not derived from the learners' immediate local environment. The frequencies presented on Table 19 show that the majority of the respondents disagreed about the presence of curriculum aspects that would promote self-reliance among students in the Kenyan education system. From the findings above, it was observed that the contemporary curriculum in the Kenyan education system only promotes self-reliance among students to a moderate extent.

To further determine the extent to which the contemporary curriculum promotes self-reliance, the researcher sought additional information on the variables under study through interviews with university graduates of the Kenyan education system and with Deans of faculty/school of education in the selected universities. Graduates of the education system were selected because it was believed by the researcher that they would have important information about education and self-reliance from their own experience of education, the job market, and employment or in self-employment. Deans in the schools/faculties of education were selected because they were expected to have expert opinion with regards to education in Kenya from their own experience as educators, managers and researchers in the field of education.

During the interviews with graduates and Deans, participant's opinion on the content of the curriculum in Kenya in terms of the subjects taught in schools and their role in imparting self-reliance among leaners was sought. It was observed that while the Kenyan curriculum was quite rigorous, it was very theoretical in nature with little opportunities for acquisition of practical skills. The participant noted that subjects taught and examined in primary school (English, Kiswahili, Science, Math and Social studies) did not provide learners with adequate opportunities to acquire skills relevant for a life of self-reliance. The participant further observed that majority of secondary schools in Kenya did not offer subjects beyond the basic and compulsory examinable subjects (English, Kiswahili, Math, Chemistry, Physics, Biology, History, CRE, and Geography). It was noted that while the curriculum provided for subjects that are technical and vocational in nature, most schools concentrated on the more theoretical types of subjects to meet the minimum requirement of subjects choices. This, they

observed was a major hindrance in preparing learners for self-reliance from an early age. They cited Agriculture, Business Education, Entrepreneurship, Art, Craft, Computer Studies, Music and Marketing as subjects that would help learners acquire useful skills and an attitude for self-reliance.

The interviews with graduates also revealed that universities, polytechnics, colleges and institutes of technology had a fairly good variety of courses that were well crafted for imparting skills for self-reliance. However, drawing from their own experiences, the participants observed that they had been forced to choose courses that were likely to lead them to employment. This they attributed to a societal attitude that frowned on "*jua kali*" industry, a term used to refer to occupations in the informal sector. Participants also observed that many educational institutions offered the technical and vocational type of courses without adequate facilities and equipment and without properly trained tutors to handle the subjects. This means that even the students who enrolled into such courses still left the institutions without adequate skills for self-employment and job creation.

During the interviews with Deans of faculties of education in the selected universities, participants indicated that currently most of the young people do not have an opportunity through the education system to acquire skills necessary for self-reliance. Drawing from their own school experience, a participant observed that the 8-4-4 system as was implemented in its initial years provided learners with plenty of opportunities to develop their creative skills and exposed them to experiences that were relevant to a life of self-reliance. The participant observed that practical Art and craft, home science, Music and agriculture activities were crucial in imparting learners with relevant skills to live successfully in their communities. He further observed that participation in agricultural activities in school helped impart a positive attitude towards agriculture, which has been the mainstay of the Kenyan economy since independence. The dean noted however, that most of the more practical oriented subjects had lost significance through the various curriculum reviews that took place since the 8-4-4 system of education started. These findings are in agreement with the opinions expressed by the respondents to the questionnaires who observed that technical subjects are not prominent in the contemporary Kenyan curriculum

During the interviews with the deans, it was observed that curriculum in the Kenyan education system was still largely influenced by foreign ideas, some of which have survived the various reviews since independence. Participants noted that the continued prominence of English both as a subject of study in the curriculum and as a medium of instruction continued to alienate learners from their cultures. It was observed that decolonizing the curriculum should include deliberately providing more prominence to indigenous languages, an aspect which would make learners better grounded in their respective communities and be confident about themselves and their own cultures. This would reduce the "white-collar" attitude that leads to rural-urban migration in search of employment. The rural setting according to the participants provides more opportunities for a life of self-reliance for the majority of the learners.

It was further observed that the fields of agriculture and the technical and vocational fields provided great opportunities for self-reliance for school leavers and graduates of the education system in Kenya. The deans however, noted that there was a general negative attitude towards agriculture and vocational occupations among Kenyans regardless of the fact that these were core sectors of the country's economy. This negative attitude was attributed to a post-colonial approach that elevated white collar occupations at the expense of hands-on jobs and self-employment. It was observed during the interview with Deans that the negative attitude towards agriculture and vocational occupations is exacerbated by the fact that agriculture, Music, Art and Craft, Home Science and Business education are no longer examinable in the primary school curriculum in Kenya. It was therefore expressed that for the Kenyan youth to perceive agriculture and vocational skills as a potential sector for individual and community development, these subjects need to be part and parcel of the school curriculum. For self-reliance to be attained there is need to deconstruct the negative attitude induced by colonialism towards practical subjects like agriculture.

The findings in this study are supported by other studies on curriculum in Kenya which found that although the 8-4-4 system of education was designed to prepare learners for a life of self-reliance through inculcating in them skills that would lead to self-employment; the implementation of this curriculum has been largely ineffective. Simiyu (2001) found that although the 8-4-4 system curriculum provided for more

options in technical and vocational subjects, training in these areas did not bear the expected results since there were no trained technical and vocational subjects teachers and local craftsmen could not be used. Amutabi (2003) found that the Kenyan education system was theoretically oriented due to lack of infrastructure and therefore did not adequately provide learners with adequate skills for self-reliance. According to Owino (1997) vocational subjects and activities introduced in the 8-4-4 curriculum to provide students with skills for self-reliance were viewed by teachers and students as an extra burden both in practical daily activities in schools and in national examination.

4.6.2 Descriptive Statistics on African Indigenous Curriculum

Decolonizing the curriculum involves integration of African indigenous curriculum elements into the contemporary Kenyan curriculum. Respondents were requested to rate the extent to which integrating of selected elements of the indigenous African curriculum could enhance the Kenyan education system using a scale of **NE** – To no extent ;**SE** – To a small extent; **N** – Neutral; **LE** – To a large extent; and **VLE** – To a very large extent; The findings are presented on Table 21

Table 21: Frequency Distribution on African Indigenous curriculum

Statement	NE	SE	N	LE	VLE
Aligning content to immediate needs of society	22 (5.7%)	57 (14.8%)	57 (14.8%)	142 (37.0%)	106 (27.6%)
Teaching subjects that develop practical skills	17 (4.4%)	43 (11.2%)	49 (12.8%)	122 (31.8%)	153 (39.8%)
Teaching subjects that emphasize hands-on experiences	18 (4.7%)	38 (9.9%)	60 (15.6%)	131 (34.1%)	137 (35.7%)
Emphasizing on individual talents in the choice of subjects	29 (7.6%)	50 (13.0%)	39 (10.2%)	103 (26.8%)	162 (42.2%)
Teaching subjects that promote creativity among learners	16 (4.2%)	45 (11.7%)	47 (12.2%)	124 (32.3%)	152 (39.6%)
Presenting learners with a curriculum that instills skills to exploit their immediate environment	20 (5.2%)	47 (12.2%)	48 (12.5%)	123 (32.0%)	146 (38.0%)
Focusing on the local environment as the main source of content for the curriculum	42 (10.9%)	65 (16.9%)	47 (12.2%)	118 (30.7%)	112 (29.2%)
Integrating objectives of African indigenous education in the curriculum	32 (8.3%)	81 (21.1%)	66 (17.2%)	116 (30.2%)	89 (23.2%)
Involvement of local communities in curriculum development	39 (10.2%)	66 (17.2%)	58 (15.1%)	109 (28.4%)	112 (29.2%)
Average Score	26.1 (6.7%)	54.7 (14.2%)	52.3 (13.6%)	120.9 (31.5%)	129.8 (33.8%)

Analysis of results in Table 21 indicates that "teaching subjects that develop practical skills" was rated as useful to a very large extent by majority of the respondents (39.8%). Other elements of the indigenous African curriculum rated by the majority of respondents as useful to a very large extent include: teaching subjects that emphasize hands-on experiences (35.7%), Emphasizing of individual talents in the choice of subjects (42.2%), Teaching subjects that promote creativity among learners (39.6%), presenting learners with a curriculum that instills skills to exploit their immediate environment (38.0%) and involvement of local communities in curriculum development (29.2%). African indigenous curriculum elements rated as useful to a large extent by majority of the respondents include: aligning content to immediate needs of society (37.0%), integrating objectives if of African indigenous education in the curriculum (30.2 %) and focusing on the local environment as the main source of content for the curriculum (30.7%). Further analysis of the respondents' opinion on African Indigenous curriculum is presented on Table 22 using Means.

Table 22: Means on African Indigenous Curriculum

	N	Mean	S.D	C.V
Aligning content to immediate needs of society	384	3.66	1.19	32.58
Teaching subjects that develop practical skills	384	3.91	1.17	29.89
Teaching subjects that emphasize hands-on experiences	384	3.86	1.15	29.69
Emphasizing on individual talents in the choice of subjects	383	3.83	1.31	34.07
Teaching subjects that promote creativity among learners	384	3.91	1.17	29.77
Presenting learners with a curriculum that instills skills to exploit their immediate environment	384	3.85	1.20	31.20
Focusing on the local environment as the main source of content for the curriculum	384	3.50	1.35	38.65
Integrating objectives of African indigenous education in the curriculum	384	3.39	1.28	37.65
Involvement of local communities in curriculum development	384	3.49	1.34	38.32
Overall Mean score	384	3.71	1.24	33.54

Information on Table 22 indicates that the average mean score for the usefulness of integrating nine selected elements of the indigenous African curriculum into the Kenyan curricula was 3.71 with a S.D of 1.24. This shows that respondents rated the selected elements as capable of improving the Kenyan curriculum to a large extent. To a large extent (Mean=3.91, S.D=1.17) teaching subjects that emphasize hands-on

experiences would improve the curriculum. "Teaching subjects that promote creativity among learners" and "Teaching subjects that emphasize hands-on experiences" were both rated as useful to a large extent at (Mean=3.91, SD=1.17) and (Mean=3.86, S.D=1.15) respectively.

Respondents rated "Presenting learners with a curriculum that instills skills to exploit their immediate environment" (Mean=3.85, S.D=1.20) and "Emphasizing on individual talents in the choice of subjects" (Mean=3.83, S.D=1.31) as useful to a large extent in improving the Kenyan curriculum. Other African ways of improving the Kenyan curriculum rated by respondents as useful to a large extent include "Aligning content to immediate needs of society" (Mean=3.66, S.D=1.19", "Focusing on the local environment as the main source of content for the curriculum" (Mean=3.50, S.D=1.35) and "Involvement of local communities in curriculum development" (Mean=3.49, S.D= 1.34). Respondents were neutral on the extent to which Integrating objectives of African indigenous education in the curriculum would improve the Kenyan curriculum (Mean=3.39, S.D=1.28). These findings indicate that respondents considered decolonizing curriculum through integration of aspects of Indigenous African curriculum into contemporary education as capable of promoting self-reliance among students to a large extent.

Further exploration of the issues under study was conducted through interviews with graduates and Deans of faculty/school of education in the selected universities. Participant's views on ways of decolonizing the curriculum in order to achieve self-reliance were sought. The interviews with Deans revealed that a decolonizing curriculum could be developed with the immediate/local environment in mind, in the same way as the African indigenous curriculum was derived from the immediate surroundings. The participants however noted that a curriculum purely drawn from the immediate environment would be shallow in nature and would eventually limit the students in the modern world. It was suggested that the best way to decolonize was to integrate the most important aspects of life in the local environment into the system of education. The participants argued that it would for example be beneficial for children in a nomadic community to learn a little more about nomadic pastoralism and about

the weather and vegetation in his/her local surroundings rather than pump them with information about agriculture in the highlands.

Borrowing from the principle of learning from known to unknown, participants suggested that there is need to create more room for IKs in the Kenyan classrooms so as to prepare learners for new knowledges. It was suggested that learners need to be presented with the indigenous understanding of various concepts and theories under study in the contemporary curriculum, where they are given the opportunity to compare, critique, test and generally make sense of both dimensions of the information presented so them so as to develop an open and practical understanding of concepts and their application in day today life. Participants suggested that a good understanding of the use of herbal medicine for example, would be a good starting point of making sense of science. This is crucial especially to the extent that it makes learning meaningful since new knowledge fits into what the learner already knows. Participants suggested that providing learners with the opportunity to experience the practical and local application of knowledge is important for self-reliance as it gives learners confidence to apply acquired knowledge and skills in their day today lives.

Participants observed that through decolonizing curriculum, the wealth of indigenous knowledge that is ordinarily left out of the current Eurocentric curriculum taught in Kenyan schools may have a chance to be availed to learners. A case in point was animal husbandry related knowledge and skills possessed by nomadic communities like the Maasai, Samburu, Turkana or the Pokot of Kenya among others, who hold a lot of unexplored knowledge on animal and human diseases and their respective herbal cures that may not be documented in the books used in the curriculum. A participant observed that the Maasai of Kenya and Tanzania for example have a diet that consists of mainly animal products in the form of meat, fats, milk and blood. Modern health experts would place the Maasai as very susceptible to lifestyle diseases borne out of excessive consumption of cholesterol. It was noted however, that the Maasais show unusually low levels of cholesterol in their blood and hardly suffer lifestyle diseases. Besides living very active lives from a physical point of view, the Maasai are known to have a wide knowledge of herbs that they use with meat and which it is believed have the ability to break down cholesterol in their systems.

It was suggested that a good point to start decolonization of the curriculum would be to fully acknowledge the presence of the wealth of indigenous knowledges present in the many different Kenyan communities and to document them for utilization in the education system. Participants acknowledged that IKs come in very unique and distinctive forms with the individual indigenous Kenyan communities holding onto their own heritage of knowledge that suits their local environments and situations. These knowledges have been developed and tested over centuries through interaction with the local environments and although they may not be documented in books, they are still available with local experts and elders and are still relevant in solving contemporary challenges, among them the emergent lack of self-reliance by children and adults. Educators need to acknowledge IKs as important, useful, applicable and pragmatic and use them as starting points for developing new knowledge. This, it was observed, would make education more meaningful to the learners and would produce graduates at all levels, who had the right attitude and skills for living in their own communities

It was further revealed that a relevant curriculum for Kenya today should be one that prepares learners for a life that isn't dependent on white collar jobs since the rate at which jobs were being created in the economy could not measure up to the rate at which new individuals entered the job market. They further clarified that the country needed a curriculum that enabled learners to live independently through utilizing their talents effectively and efficiently. The participants recommended a curriculum that is work-oriented, community-centred and that involved children in productive work. Participants however observed that there was need for government, publishers and research institutions to do more in terms of research and documentation of indigenous knowledges so as to make it readily available to teachers and students across the country.

Participants in the interviews pointed out that although there were efforts to "Africanise" the curriculum in Kenya since independence, these efforts were often inadequate for decolonizing education since they were often not carefully thought out. Participants noted that a major contributor to this situation was the fact that reform in education has mainly been sponsored by foreign donors, citing an example of the

USAID sponsored "Tusome" project that has been adopted to help aid early literacy among primary school pupils in Kenya. Dependence on foreign aid for education reform, it was observed, results in a situation where foreigners dictate the content and methods to be included in the curriculum and this has often resulted in a curriculum that alienates the users from their own local situations, culture and indigenous knowledges. Participants suggested that Kenya needs to embrace more local solutions to educational problems including self-reliance and that integrating Indigenous knowledges into the contemporary system would be a good starting point since indigenous communities have provided an education that had worked for them for centuries.

There was convergence in the opinions of both the respondents to the questionnaires and the participants in the interview on the issue of integration of indigenous African education aspects into the contemporary Kenyan curriculum. Participants in the interviews were generally in agreement that integrating IKs into the contemporary education would be beneficial to the learners as they would help in grounding them within their cultures and the ways of knowing found in their local environment. Participants opined that integration would be useful in helping students acquire confidence and a positive attitude towards work, aspects that are core to self-reliance. Respondents to the questionnaires similarly rated most of the selected African indigenous education aspects suggested by the researcher for integration as useful for improving the Kenyan education system.

These findings are supported by Keith (2015) in a study on the classroom implementation of indigenous knowledge in the science curriculum in South Africa. Keith showed that the atmosphere in the classrooms of those teachers, who started their lessons with IK, changed dramatically through the inclusion of the IK that the learners brought to the classroom and served as a catalyst in stimulating participation in teaching and learning of sciences. In addition, studies on cultural beliefs and science in Africa conclude that teaching and learning of science in school is not successful because the subject as taught in classes is not adequately related to everyday life experiences and the language of instruction alienates students (Clarke & Ramahlape, 1999; Dzama & Osborne, 1999; Shumba, 1999). Other studies

(Allen & Crawley, 1998; Kawagley *et al.*, 1998) have shown that if a curriculum is not sensitive to the learners' cultural background, it is likely to produce passive learners. Owuor (2009) found that dependence on foreign assistance to support Kenyan education reforms has led to education policies being influenced by external agents, forcing the government to focus on meeting the goals of globalization above the local needs and interests. Asimeng-Boahene (2004) also observed that over reliance on external assistance has over time presented challenges for curriculum planners and classroom teachers in Africa as it has resulted in internalization of approaches and procedures that validate information that effectively propagate dependency.

Hamilton-Ekeke and Dorgu (2015) concluded that significant contributions to global knowledge have originated from indigenous people, the rational nature and sophistication of rural people's knowledge and believe that knowledge can be blended with or incorporated into formal scientific knowledge systems. Le Grange (2016) argues for the decolonization of university curriculum by observing that all South African universities adopted Western models of academic organisation which largely excluded and decimated the knowledges of colonised people. Omolewa (2007) suggested that Indigenous knowledge which is increasingly disappearing with the death of older people who are the bearers of such knowledge needs to be collected, documented and made readily available for teachers.

The findings in this study also confirm the assertion by Omolewa (2015) that following the indigenous African model of teaching, it is wise to start with the knowledge about the local area, which students are familiar with, and then gradually move to the knowledge about regional, national and global environments. Omolewa further observed that indigenous people have developed enormous volumes of knowledge over the centuries about different subject matters especially in the areas of informal and vocational training, where each person in the community is practically trained and prepared for his/her role in society. Ambaa (2015) also reported that teaching in learning institutions in Kenya should be related to one's interest and

experience and as a result, the inherent abilities that individuals possess will be developed which may be vital in realizing self-reliance as an aim of education. Mawere (2015) observed that since indigenous knowledge is knowledge that arises directly out of the children's real-life experiences, its integration into the school curriculum can stimulate and strengthen the intellectual fortunes and interests of the learners as students feel that acknowledgment is given to what they already do, know, and say in their own communities.

4.6.3 Correlation of Curriculum and Self-reliance

The Pearson's Product Moment technique was used to carry out Correlational analysis to determine the relationship between indicators of contemporary Kenyan curriculum, indigenous African curriculum, decolonized (integrated) curriculum and self-reliance. It was meant to identify the strength and direction of the association between the indicators of these variables. Values of correlation coefficient range from -1 and +1. A correlation coefficient of +1 indicates that the two variables are perfectly and positively related in a linear sense, while -1 shows that the two variables are perfectly related but in a negative linear sense. Hair *et al* (2006) observe that correlation coefficient (r) ranging from 0.81 to 1.0 is very strong; from 0.61 to 0.80 is strong; from 0.41 to 0.60 is moderate; from 0.21 to 0.40 is weak; and from 0.00 to 0.20 indicates no relationship. The results are presented on Table 23.

Table 23: Correlation of Curriculum and Self-reliance

		Contemporary Curriculum	Decolonizing Curriculum	Self-reliance
Contemporary Curriculum	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	384		
Decolonizing Curriculum	Pearson Correlation	.869[**]	1	
	Sig. (2-tailed)	0.000		
	N	384	384	
Self-reliance	Pearson Correlation	.786[**]	.736[**]	1
	Sig. (2-tailed)	0.000	0.000	
	N	384	384	384

**. *Correlation is significant at the 0.01 level (2-tailed).*

Results of this study presented on Table 23 indicate that there is a strong positive and statistically significant correlation between the indicators of the contemporary

curriculum and self-reliance (r = 0.786, p-value = 0.000<0.01). There is also a strong positive and statistically significant correlation between the decolonizing curriculum (integrated curriculum) and self-reliance (r = 0.736, p-value = 0.000<0.01). This shows that increase in both the contemporary and decolonizing curriculum would lead to increase in self-reliance among students in Kenya.

4.6.4 Regression Analysis and Hypothesis Testing

The first objective of the study was to determine the extent to which decolonizing curriculum promotes self-reliance among students in the Kenyan education system. A decolonizing curriculum was conceived in terms of integrating elements of African indigenous curriculum into the contemporary Kenyan curriculum. The measures of the curriculum comprised the variety of subjects taught, content of subjects taught, and choice of subjects by the learner as well as the source/origin of content taught in both the contemporary education system and in the indigenous African education systems. Respondents had been asked to indicate the extent to which the Kenyan education system focused on the selected curriculum dimensions. Respondents were also asked to rate the usefulness of integrating the curriculum dimensions conceived from an African indigenous perspective into the Kenyan education system. Self-reliance measures were composed of attitude, creativity, responsibility, autonomy, hard work, confidence in own capabilities and self-esteem. To determine the relationship between decolonizing curriculum and self-reliance, the following hypothesis was tested.

$H_{01:}$ There is no statistically significant relationship between decolonizing curriculum and self-reliance among students in the Kenyan education system.

The regression results are presented on Table 24.

Table 24: Regression Analysis of Curriculum and Self-reliance

a). Goodness of Fit

Model	R	R^2	Adjusted. R^2	S.E.E
Contemporary	.786[a]	0.617	0.616	0.40308
Decolonizing	.736[a]	0.542	0.541	0.44091

b). The Overall Significance of the Model

Model		S.S	df	M.S	F	Sig.
Contemporary	Regression	100.113	1	100.113	616.185	.000[b]
	Residual	62.065	382	0.162		
	Total	162.178	383			
Decolonizing	Regression	87.918	1	87.918	452.256	.000[b]
	Residual	74.260	382	0.194		
	Total	162.178	383			

c). The Individual Significance of the Model

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
Contemporary	(Constant)	0.506	0.117		4.340	0.000
	Curriculum	0.827	0.033	0.786	24.823	0.000
Decolonizing	(Constant)	-0.050	0.162		-0.312	0.755
	Curriculum	0.936	0.044	0.736	21.266	0.000

a. Dependent Variable: Self-Reliance

The results in Table 24 show that decolonizing curriculum had a statistically significant relationship with self-reliance. The coefficient of determination is 0.617 for the contemporary curriculum and 0.542 for the Decolonized curriculum. This suggests that 61.7% of variation in Self-reliance is explained by the contemporary curriculum in the model. In addition, Decolonizing curriculum explained 54.2% of variation in self-reliance. On the basis of this result the study revealed that Decolonizing curriculum has marginal significance towards self-reliance.

Results on Table 24 (b) further reveal that the contemporary curriculum significantly influenced self-reliance with F-Statistic = 616.185 with a P-value of 0.000<0.05. This implies that the relationship between contemporary curriculum and self-reliance is statistically significant at 5% significance level. Similarly, the decolonized curriculum, with an F-statistic = 452.256 and a P-value of 0.000<0.05 was also shown

as having significant relationship with self-reliance. This implies that the model is statistically significant at 5% level of significance.

The results on Table 24 (c) reveal that the contemporary curriculum was considered statistically significant with a regression coefficient of 0.827, a t-value of 24.823 and a P-value of 0.000<0.05. This suggests that for one unit change in the contemporary curriculum, self-reliance increases by a factor of 0.827. The regression model for the prediction of self –reliance can be stated as follows:

$Y = 0.506 + 0.827X_{11}$ …………………………………………………………………………..(3)

Where:

Y = Self-reliance

X_{11} = Contemporary Curriculum

0.506 = y-intercept (constant). Estimate of expected value of self-reliance when contemporary curriculum is Zero.

0.827 = an estimate of the expected increase in Self-reliance in response to a unit increase in contemporary curriculum

In general, contemporary curriculum contributes significantly towards promotion of self-reliance among students in Kenya.

Further, the study reveals that there exists a significant relationship between decolonizing curriculum and self-reliance at 5% level of significance (regression coefficient = 0.936, P-value = 0.000<0.05). This implies that for one unit change in decolonizing curriculum, there is an increase in self-reliance by a factor of 0.936. The regression model for the prediction of self –reliance can be stated as follows:

$Y = 0.936X_1$ …………………………………………………………………………………..(4)

Where:

X_1 = Decolonizing Curriculum

Y = Self-reliance

0.936 = an estimate of the expected increase in Self-reliance in response to a unit increase in Decolonizing curriculum.

In conclusion the study revealed that the contemporary curriculum and the decolonizing curriculum contributed significantly towards self-reliance. The Null hypothesis that there is no significant relationship between decolonizing curriculum

and self-reliance is not supported in the current study. It was further revealed in this study that the decolonizing curriculum model (with a regression coefficient =0.936) is superior to the contemporary curriculum model (regression coefficient= 0.827) in promoting self-reliance among students in the Kenyan education system. This means that decolonizing curriculum would improve self-reliance among students in the Kenyan education system.

Although studies on decolonizing curriculum for self-reliance are difficult to find, many studies have been carried out on integration of Indigenous knowledges to contemporary education systems. Since integrating of indigenous knowledges into contemporary curriculums is part of the efforts to decolonize education, reference can be made on these studies. The results of this study support Hamilton-Ekeke and Dorgu (2015) who posited that since indigenous knowledge was generated from the local wisdom and culture, it fits to the local situation natively and that this knowledge could contribute to solve existing problems and achieving the intended objectives. The findings also supports Omolewa (2007) who observed that integration of traditional education into school curriculum enables schools to act as agencies for transferring the culture of the society from one generation to the next and links the learning process more closely to learners' everyday experience in order to help them to make better sense of what they learn

Respondents were requested to suggest other strategies that may be used to improve the curriculum in the Kenyan education system. Their suggestions are presented on Table 25

Table 25: <u>Suggestions for Improving the Kenyan Curriculum</u>

Suggestion	Staff
Having a community-centred curriculum	6.4%
Having content derived from the immediate environment	5.1%
Curriculum should be aimed at development of talents, interests of learners and nurture creativity from an early age	30.8%
Embracing IT	2.6%
Discouraging exam-oriented curriculum	6.4%
Focusing on job market/manpower needs for curriculum development	2.6%
Having a skills/practical oriented curriculum	10.3%
Having curriculum that emphasizes communal work, community service, vocational and technical subjects/work-oriented curriculum	17.9%
Involving industry players, teachers and students in curriculum development	14.1%
Targeting on indigenous African beliefs, skills and objectives for integration	2.6%
Incorporate apprenticeship	1.3%

Information on Table 25 shows that majority of the respondents suggested that the Curriculum should be aimed at development of talents, embrace interests of learners and nurture creativity from an early age (30.8%). Having curriculum that emphasizes communal work, community service, vocational and technical subjects/work-oriented curriculum was suggested by 17.9% of the respondents. 14.1% of respondents suggested Involving industry players, teachers and students in curriculum development as useful in improving the Kenyan curriculum while 10.3% of the respondents suggested having a skills/practical oriented curriculum. Other strategies suggested by respondents include Discouraging exam-oriented curriculum (6.4%), having a community-centred curriculum (6.4%), having content derived from the immediate environment (5.1%), Embracing IT (2.6%), and focusing on job market/manpower needs for curriculum development (2.6%). Targeting on indigenous African beliefs, skills and objectives for integration was proposed by 2.6% of respondents while incorporating apprenticeship was suggested by 1.3% of the respondents.

The respondent's suggestions on improving the curriculum for self-reliance are supported by Eshiwani (1993) who observed that primary school curriculum should include learning opportunities which enable pupils to 'acquire a suitable basic foundation for the world of work in the context of economic and manpower needs of the nation", and to "appreciate and respect the dignity of labor". Oyebamiji (2011) in

a study on the need for a pragmatic approach in the Nigerian education system observed that learning by doing does not only lead to acquisition of skills, but also leads to the development of self-reliance among leaners. Ambaa (2015) in an analysis of the 8-4-4 system of education in Kenya in relation to its aim of self-reliance suggested that the system should be balanced in terms of academic and practical life, learning and doing so as to produce individuals who are self-reliant.

4.7 Decolonizing Pedagogical Approaches and Self-reliance

The second objective of this study was to establish the influence of decolonizing pedagogical approaches on self-reliance among students in the Kenyan education system. Decolonizing pedagogical approaches involves integrating aspects of African indigenous methods of instruction into the contemporary instructional (pedagogical) approaches in Kenya. Two sets of items were included in the questionnaire to measure the teacher's role, learner's role, content delivery method, teacher/learner relation, and choice of method of instruction in both the contemporary Kenyan education system and in the indigenous African education system.

4.7.1 Descriptive Statistics on Contemporary Pedagogical Approaches

Thirteen items were developed to measure the extent to which the Kenyan education system uses pedagogical approaches which theoretical and empirical literature indicates as important in promoting self-reliance. Respondents were required to rate the extent to which they agreed with the selected statements describing pedagogical approaches in the contemporary Kenyan education system. The findings are presented in Table 26

Table 26: Frequency Distribution for Contemporary Pedagogical Approaches

Statement	SD	D	N	A	SA
Teachers use group discussions effectively	58 (15.1%)	114 (29.7%)	76 (19.8%)	100 (26.0%)	36 (9.4%)
The lecture method of teaching is not common in our school classrooms	104 (27.1%)	127 (33.1%)	53 (13.8%)	71 (18.5%)	28 (7.3%)
There is extensive use of experimentation in Kenyan school classrooms	83 (21.6%)	147 (38.3%)	77 (20.1%)	61 (15.9%)	16 (4.2%)
There is effective use of field study in the Kenyan education system	86 (22.4%)	142 (37.0%)	69 (18.0%)	62 (16.1%)	25 (6.5%)
Resource persons are often used in classrooms	101 (26.3)	144 (37.5%)	57 (14.8%)	57 (14.8%)	25 (6.5%)
Teachers allow learners to learn through discovery	70 (18.2%)	134 (34.9%)	80 (20.8%)	75 (19.5%)	25 (6.5%)
Teachers assign projects to learners	42 (10.9%)	90 (23.4%)	85 (22.1%)	120 (31.3%)	47 (12.2%)
"Role play" is often used to explain concepts in classrooms	50 (13.0%)	104 (27.1%)	95 (24.7%)	105 (27.3%)	30 (7.8%)
Teachers encourage problem solving skills rather than memorizing of facts by learners.	71 (18.5%)	109 (28.4%)	61 (15.9%)	88 (22.9%)	55 (14.3%)
Learners choose what to learn and how to learn it.	153 (39.8%)	120 (31.3%)	40 (10.4%)	39 (10.2%)	32 (8.3%)
Teachers focus on acquisition of competence, not coverage of syllabus	116 (30.2%)	125 (32.6%)	53 (13.8%)	56 (14.6%)	34 (8.9%)
Teachers spend more time on practical lessons than on theory.	133 (34.6%)	139 (36.2%)	40 (10.4%)	37 (9.6%)	35 (9.1%)
Average Score	88.9 (23.2%)	124.6 (32.2%)	65.5 (17.1%)	72.6 (18.9%)	32.3 (8.4%)

Information on Table 26 indicates that majority of the respondents disagreed that teachers use group discussions effectively (29.7%). There was also disagreement that the lecture method of teaching is not common in our school classrooms (33.1%). This indicates that the lecture method is commonly used in school classrooms. Majority of respondents (38.3%) disagreed that there is extensive use of experimentation in Kenyan school classrooms. Other statements with which respondents disagreed include "There is effective use of field study in the Kenyan education system (37.0%), "resource persons are often used in classrooms (37.5%) and "teachers allow learners to learn through discovery" (34.9%). Majority of respondents agreed that teachers assign projects to learners (31.3%) and that "role play" is often used to explain concepts in classrooms (27.3%). There was disagreement by the majority of

respondents that teachers encourage problem solving skills rather than memorizing of facts by learners (28.4%), that teachers focus on acquisition of competence, not coverage of syllabus (32.6%) and that teachers spend more time on practical lessons than on theory (36.2%). Majority of the respondents (39.8%) strongly disagreed that learners choose what to learn and how to learn it.

Further tabulation of the respondent's opinion on contemporary pedagogical approaches is presented using means on Table 27

Table 27: Means on Contemporary Pedagogical Approaches

Statement	N	Mean	S.D	C.V
Teachers use group discussions effectively	384	2.85	1.23	43.24
The lecture method of teaching is not common in our school classrooms	383	2.46	1.27	51.56
There is extensive use of experimentation in Kenyan school classrooms	384	2.43	1.12	46.03
There is effective use of field study in the Kenyan education system	384	2.47	1.19	48.07
Resource persons are often used in classrooms	384	2.38	1.21	50.69
Teachers allow learners to learn through discovery	384	2.61	1.18	45.09
Teachers assign projects to learners	384	3.10	1.21	39.02
"Role play" is often used to explain concepts in classrooms	384	2.90	1.17	40.40
Teachers encourage problem solving skills rather than memorizing of facts by learners.	384	2.86	1.35	47.02
Learners choose what to learn and how to learn it.	384	2.16	1.28	59.28
Teachers focus on acquisition of competence, not coverage of syllabus	384	2.39	1.29	54.00
Teachers spend more time on practical lessons than on theory.	384	2.22	1.27	57.06
Overall Mean Score	384	2.57	1.23	48.45

Findings of this study (Table 27) indicate that the overall mean for the Items measuring the contemporary Kenyan pedagogical approaches was 2.57 with a standard deviation of 1.23. This shows that respondents disagreed with most of the statements describing the presence of selected pedagogical approaches in the contemporary Kenyan education.

Respondents' opinion on the extent to which they agreed with the statement that teachers use group discussions effectively was sought. The mean score for the item

was 2.85 with a standard deviation of 1.23. This shows that the majority of the respondents were neutral about the effectiveness with which teachers used group discussions. It was suggested to the respondents that the lecture method of teaching is not common in our school classrooms. The mean score for the item was 2.46 with a standard deviation of 1.27. This implies that the majority of the respondents disagreed with the statement, meaning that the lecture method is seen as commonly used in the Kenyan classrooms. It was proposed to the respondents that there is extensive use of experimentation in Kenyan school classrooms. The mean score for this item was 2.43 with a standard deviation of 1.12. This reveals that majority of respondents disagreed with this proposition, meaning that experimentation is not extensively used in Kenyan classrooms.

It was suggested to the respondents that there is effective use of field study in the Kenyan education system. The mean score for this item was 2.47 with a standard deviation of 1.19. This shows that majority of the respondents disagreed with this suggestion, implying that field study is not effectively used in the Kenyan education system. Respondents' opinion on the suggestion that resource persons are often used in classrooms was sought. The mean score for this item was 2.38 with a standard deviation of 1.21. This means that majority of the respondents disagreed with the statement, meaning that resource persons are not often used in the Kenyan education system. It was suggested to the respondents that teachers allow learners to learn through discovery. The mean score for this item was 2.61 with a standard deviation of 1.18 meaning that majority of the respondents were neutral on whether or not teachers allow learners to learn through discovery.

Respondents' opinion on the statement that teachers assign projects to learners was also sought. The suggestion had a mean score of 3.10 and a standard deviation of 1.21. This implies that respondents were neutral on whether teachers assigned projects to learners or not. Majority of the respondents were also neutral on the suggestions that "Role play" is often used to explain concepts in classroom and that teachers encourage problem solving skills rather than memorizing of facts by learners at M=2.90, S.D=1.17 and M=2.86 S.D=1.35 respectively. It was proposed that Learners choose what to learn and how to learn it. The mean score for this item was

2.16 with a standard deviation of 1.28. This reveals that majority of the respondents disagreed with the proposition, meaning that learners do not choose what to learn and how to learn it in the Kenyan education system.

An item on the questionnaire suggested that teachers focus on acquisition of competence, not coverage of syllabus. The mean score for the item was 2.39 with a standard deviation of 1.29. This means that majority of the respondents disagreed with the suggestion, implying that teachers do not necessarily focus on competence, but on coverage of syllabus. It was suggested to the respondents that teachers spend more time on practical lessons than on theory. The mean score for this item was 2.22 with a standard deviation of 1.27. This result shows that majority of the respondents disagreed with the statement that teachers spend more time on practical lessons than on theory , which suggests that lessons in Kenyan classrooms are more theoretical than practical-oriented in nature.

Further analysis of the respondents' opinion on the contemporary pedagogical approaches as presented on appendix VIII (Table A7 and Table A8) reveals that the academic staff rated the selected approaches lower than the students. The academic staff had an overall mean of 2.40 while the students had a mean of 2.58. However, for both categories of respondents, the statement that "learners choose what to learn and how to learn it" was rated lowest with a mean of 1.83 and 2.22 for academic staff and students respectively. This shows that both students and academic staff were in agreement that students do not necessarily choose what to learn in school or how to learn it.

From the frequency distribution tables and means presented on Table 26 and Table 27, it is clear that the contemporary education system in Kenya does not adequately employ pedagogical approaches that could promote self-reliance. Pedagogical approaches that develop learners' creativity, confidence and innovativeness such as field study, experimentation, discovery method, practical lessons, projects and use of resource persons are not adequately utilized in the classrooms. This means that the pedagogical approaches used in the Kenyan education system are not adequate for preparing students for a life of self-reliance. To further probe the respondents'

opinions on the issues under study, interviews were carried out with Deans of faculty/school of education and graduates from the selected universities.

Interviews with University graduates and Deans of schools of education in the selected universities revealed that pedagogical approaches used in the Kenyan education system at all levels were a major hindrance to inculcation of skills for self-reliance. According to participants the system maintains the teacher-centred model of instruction where the teacher remains the focus of the teaching/learning sessions. Students at all levels of education are socialized and accustomed to depend almost entirely on the teacher for information, direction and learning. The most common method of instruction in Kenyan classrooms and lecture halls is the lecture method, where instructors often dictate notes to students leaving learners as passive participants in the learning situation. Participants observed that this method of instruction leaves learners lacking in skills for exploration, experimentation and discovery of knowledge on their own which are basic to a life of self-reliance. Students are also not exposed to skills of independence in thinking and acting when teachers take centre stage in the teaching/learning process.

It was observed that the Kenyan society that includes parents, teachers and other education stakeholders have over the years placed a lot of premium on performance in national examinations for both individual students and for schools. Schools are rated according to their performance in national examinations while teacher's individual promotions are also pegged on student' performance in the subjects they teach. This, according to the participants led to the culture of an exam-oriented teaching and learning. Teaching time is spent in drilling and coaching students to pass examinations. Students also spend most of their time memorizing facts for the purpose of passing in the examinations leaving little or no time for acquiring crucial competencies for self-reliance. Participants noted that a good amount of school time is also spent on various tests that include opener exams, done at the beginning of each term, Random Assessment Tests (RATs), Continuous Assessment Tests (CATs), Mock exams as well as end of term examinations. This leaves little time for study and exploration of knowledge.

Drawing from their varied experiences, participants noted that learners spend most of their time in school memorizing theoretical facts, completing assignments and revising for numerous exams. However, there weren't enough opportunities to acquire hands on skills which were very necessary for life after school. It was observed that the overdependence on teacher-centred methods of instruction was a result of pressure from school management as well as by parents to cover the syllabus early enough so as to allow students sufficient time to revise for examinations. Participants observed that there were incidences where schools covered the syllabus planned by the KICD for the whole academic year by the middle of the year, leaving the other half of the year to revision and drilling of students for the purpose of passing exams at the expense of acquisition of relevant competencies. The participants suggested that an education designed to prepare learners to become self-reliant citizens should be one where instructors focus mainly on acquisition of competencies in the various subjects taught instead of concentrating on coverage of syllabus and passing exams as many schools do. It was also suggested that instructors need to assign projects that challenge the learners intellectually and direct students and pupils towards learning through discovery and problem solving.

Studies in other Countries have recorded similar findings. Vavrus (2009) in a study carried out in Tanzania reported that teaching was generally characterized by didactic and teacher-centered approaches that used rote memorization as the primary approach. In another study in Tanzania, Ahmad (2014) found that at all levels of education, efforts were geared towards knowledge acquisition and the memorization of facts (rote learning) in order to pass examinations with good grades and qualify for the next level or, alternatively, to enter the labour market as unskilled workers. This was viewed as being contrary to the spirit of learning for self-reliance and the new reality of preparing pupils for jobs that demand marketable skills (Ahmad, 2014). Arenas, Reyes and Wayman (2009) observed that modern schools nurture mostly indoor, decontextualized, and academic learning whereby children spend about 1,000 hours a year at school, encircled by four walls for the vast majority of this time. Learners are exposed to the world second hand, through lectures, books, and electronic audiovisual materials, and their knowledge is divorced from the earth, plants, and animals that surround the school (Berry, 1990; Smith, 1992; Sobel, 2004). Children

end up learning the deceptive message that the actual experience of the phenomenon is pointless and intellectual discernment is the main reputable avenue for knowing. Mackatiani (2017) found that teachers in Kenyan schools concentrate on the impartation of knowledge through traditional approaches that concentrate on theoretical skills and rote learning approaches to enable pupils pass national examinations. Makatiani further concluded that pupils are enslaved through reliance on teachers who provide knowledge by use of teacher centered approaches.

4.7.2 Descriptive Statistics on African Indigenous Pedagogical Approaches

Decolonizing pedagogical approaches involves integration of elements of indigenous African pedagogy into the Kenyan education system. Nine items describing aspects of indigenous African pedagogical approaches were included in the questionnaires for this study. Respondents were asked to rate the extent to which each of the aspects would enhance the Kenyan education system. The results are presented on Table 28 and Table 28

Table 28: Frequency Distribution on African Indigenous Pedagogical approaches

Statement	NE	SE	N	LE	VLE
Learning practical skills from experts	31 (8.1%)	62 (16.1%)	46 (12.%)	129 (33.6%)	116 (30.2%)
Having teachers who take a close personal interest in the learner	27 (7.0%)	48 (12.5%)	40 (10.4%)	147 (38.3%)	122 (31.8%)
Teachers seeing students as people who must be nurtured	17 (4.4%)	36 (9.4%)	58 (15.1%)	132 (34.4%)	141 (36.7%)
Changing role of student from passive receiver of knowledge to a reflective thinker and problem solver	17 (4.4%)	37 (9.6%)	43 (11.2%)	99 (25.8%)	188 (49.0%)
Making student actively involved in his/her own learning	19 (4.9%)	40 (10.4%)	55 (14.3%)	120 (31.3%)	150 (39.1%)
Having teachers who are not transmitters of knowledge but facilitators of learning	22 (5.7%)	42 (10.9%)	59 (28.6%)	110 (28.6%)	151 (39.3%)
Embracing parents, members of community and various experts as potential teachers for students	28 (7.3%)	49 (12.8%)	66 (17.2%)	129 (33.6%)	112 (29.2%)
Insisting more on demonstration rather than explanation	21 (5.5%)	45 (11.7%)	44 (11.5%)	126 (32.8%)	148 (38.5%)
Laying more emphasis on practical rather than theoretical learning	29 (7.6%)	35 (9.1%)	37 (9.6%)	101 (26.3%)	182 (47.4%)
Average Score	23.4 (6.4%)	43.8 (11.4%)	37.3 (9.7%)	121.4 (31.6%)	145 (37.9%)

Information on Table 28 reveals that majority of the respondents rated learning practical skills from experts (33.6%) and having teachers who take a close personal interest in the learner (38.3%) as useful to a large extent. Teachers seeing students as people who must be nurtured was rated as useful to a very large extent by the majority of the respondents (36.7%). Other African indigenous pedagogical approaches rated as useful to a very large extent by respondents include changing role of student from passive receiver of knowledge to a reflective thinker and problem solver(49.0%), Making students actively involved in his/her own learning(39.1%), having teachers who are not transmitters of knowledge but facilitators of learning(39.3%), insisting more on demonstration rather than explanation (38.5%) and Laying more emphasis on practical rather than theoretical learning (47.4%). Majority of respondents (33.6%) rated embracing parents, members of community and various experts as potential teachers for students as useful to a large extent.

Further analysis of the respondents' opinion on indigenous pedagogical approaches is presented using means on Table 29.

Table 29: <u>Means on African Indigenous Pedagogical Approaches</u>

Statement	N	Mean	S.D	C.V
Learning practical skills from experts	384	3.62	1.29	35.53
Having teachers who take a close personal interest in the learner	384	3.75	1.22	32.61
Teachers seeing students as people who must be nurtured	384	3.90	1.13	29.09
Changing role of student from passive receiver of knowledge to a reflective thinker and problem solver	384	4.05	1.18	29.06
Making student actively involved in his/her own learning	384	3.89	1.18	30.28
Having teachers who are not transmitters of knowledge but facilitators of learning	384	3.85	1.22	31.62
Embracing parents, members of community and various experts as potential teachers for students	384	3.65	1.23	33.69
Insisting more on demonstration rather than explanation	384	3.87	1.20	31.08
Laying more emphasis on practical rather than theoretical learning	384	3.97	1.27	32.05
Overall Mean Score	384	3.84	1.21	31.67

According to information on Table 29, the overall mean for the African pedagogical approaches was 3.84 with a standard deviation of 1.21. This implies that respondents rated the selected elements of the African indigenous curriculum as useful to a large extent in improving the Kenyan education system. Respondents' opinion on the usefulness of learning practical skills from experts was sought. The mean score was 3.62 with a standard deviation of 1.29. This shows that learning practical skills from experts was considered as useful to a large extent. Respondents' opinion on the usefulness of having teachers who take a close personal interest in the learner was sought. This was rated as useful to a large extent with a mean score of 3.75 and standard deviation of 1.22.

To a large extent (M=3.90, S.D=1.13) teachers seeing students as people who must be nurtured was rated as useful. Respondents also rated as useful to a large extent "changing role of students from passive receiver of knowledge to a reflective thinker and problem solver' (M=4.05, S.D=1.18), "making student actively involvement in his/her own learning (M=3.89, S.D=1.18) and "having teachers who are not transmitters of knowledge but facilitators of learning (M=3.85, S.D=1.22). Embracing parents, members of community and various experts as potential teachers for students was also rated as useful to a large extent (M=3.65, S.D=1.23). An item sought the respondents' opinion on the usefulness of insisting more on demonstration rather than on explanation. The mean score was 3.87, with a standard deviation of 1.20. This reveals that respondents considered demonstration as useful to a large extent. Laying more emphasis on practical rather than theoretical learning was rated as useful to a large extent with a mean score of 3.97 and S.D=1.27.

From the results presented in Table 28 and Table 29, respondents rated as useful to a large extent, the integration of elements of African indigenous pedagogical approaches into the contemporary Kenyan education as a way of improving it. The overall mean for the academic staff as presented on Appendix VIII (Table 9) was 4.08 while that for the students (Appendix VIII, Table 10) was 3.79. Having teachers who are not transmitters of knowledge but facilitators of learning was rated highest by the academic staff with a mean of 4.27 meaning they considered the suggestion as useful to a very large extent in improving education in Kenya. Among students, "Changing

role of student from passive receiver of knowledge to a reflective thinker and problem solver" was rated highest with a mean of 4.08 meaning that the respondents considered the suggestion as useful to a large extent. All the other suggested pedagogical approaches were rated as useful to a large extent by both students and academic staff. This means that decolonizing pedagogical approaches through integration of aspects of indigenous African pedagogy was considered by respondents as useful to a large extent in promoting self-reliance among students in Kenyan education system. This opinion was further confirmed during interviews with Deans of faculty/school of education and graduates from selected universities.

Participants suggested that a more heuristic approach to classroom instruction would be favourable for self-reliance. The focus of teaching and learning should be the learner. Learners should be taught how to solve problems mainly on their own with little or no intervention of the teachers from the very early stages of education. It was suggested that teachers need to create more time for learners to work and learn independently through discovery and exploration of their immediate environment. This would be a good starting point for young people to acquire the attitude of independence and confidence in their own skills, knowledge and abilities which are core attributes of a self-reliant individual in society.

Participants in the interviews were of the view that the responsibility for the process of learning among many Kenyan communities had gradually been entirely transferred to the teacher. It was noted that the complex role of bringing up the child in a holistic way typical of all indigenous African societies was now left to school teachers. However, participants observed that the teachers lacked the dedication, and skills to replace the many actors that ordinarily facilitated this process in the indigenous communities. An African child learned from parents, peers, grandparents, community in general and through direct interaction with the natural environment. Children also interacted with various experts like medicine-men, blacksmiths and other craftsmen when there was need to acquire specialized skills. This method, it was noted helped to inculcate a variety of competencies that the child needed to live a life of self-reliance. Participants suggested that there was need to embrace a more communal approach to

the teaching and learning process where parents, elders and experts in the local communities take up roles in supplementing the teacher's efforts.

A decolonizing pedagogical approach according to the participants needs to include identification and involvement of experts in different areas of academic interest and industry in the immediate environments of learning institutions. Experts in the various fields may be utilized in classrooms as resource persons. According to the participants, decolonization of pedagogical approaches would also entail a more individualized approach to instruction that pays attention to the learner's latent talents and interests as was the norm in precolonial black Africa. While it was not lost to the participants that teaching of learners as individuals was no longer practical given the current populations of students in classrooms, it was suggested that acknowledging the differences in the abilities and interests of learners and providing for these differences would go a long way in improving the current situation.

Participants further suggested that the learning process in Kenyan schools should include opportunities for apprenticeship where learners at one level are attached to experts in industry, institutions and in the community so that they could learn directly from them. It was suggested that students in secondary school could be exposed to apprenticeship programs that are community based in such places as hotels, shops, workshops, and in farms for short stints during school holidays. This, it was argued, would expose them to the world of work in their own communities, and give them opportunities to work with experts in these fields from whom they would acquire skills that are necessary for survival.

These findings are in agreement with Sithole (2012), who found that continued use of traditional methods of teaching by teachers in Botswana was as a result of limitations in time, the need to cover a wide syllabus within limited time and lack of in-service training to improve on the teaching skills for practicing teachers. Arenas, Reyes & Wayman (2009) found that in order to maintain a professional persona, teachers had to distance themselves from students and as a result classroom have become plain and emotionless settings where the main relationship between teachers and students is cordial but distant, and may limit learning. The results are also supported by Kimotho

(2016) who reported that due to the insufficient time allocated for the teaching of Business Education, lack of resources and wide syllabus, teachers used teacher centered methods such as lecture, teacher led discussion, and question and answer methods.

Biggs (1999) observed that the teacher-centred approach is common in some countries as it is considered relatively efficient since it allows educators to teach many students within a rather short period of time. Unfortunately, Biggs adds, that in most situations such conditions may promote a ''surface'' rather than ''deep'' level of understanding and orient students towards performing only at the minimal level required to obtain a good grade in the course. Other researchers have concluded that teacher-centred techniques hampered the goal of preparing the learners for the world of work and that entrepreneurship and business skills cannot be achieved by use of traditional teaching methods such as lectures and recitation in the classroom (Fuller & Snyder, 1991; Dube & Moffat, 2009; Sithole, 2012). Studies have also shown that a major challenge for acquisition of functional skills in science is that it is usually presented in the 'traditional' manner, which focuses on scientific concepts and skills without much attention for application in the learners' daily lives (Van Driel *et al.*, 2007).

Katola (2014) observed that the education system in Kenya tends to promote rote learning whereby the main goal for most students and their teachers is not an education for professional competence but passing the examination. Katola further argued that Africa had become a credential society where employers use degrees and diplomas to determine who is eligible for a job. In his research Gachanga (2007) found that genuine learning, creativity and imagination receive minimal attention in many African curricula as more attention is paid to passing in examinations. Ahmad (2014) reported that in practice, passing examinations is more highly valued in the learning process in Tanzania than developing knowledge, skills, and attitudes for and towards life a situation which demonstrates the paradoxical nature of the Tanzanian education system, which theoretically aspires to prepare learners for self-reliance but in practice, is a screening institution.

Other studies have supported the integration of African indigenous pedagogy into contemporary education. Owuor (2007) noted that methods used in indigenous education are aimed at integrating character building, intellectual training, manual activities, and physical education. This holistic approach to learning is favoured in this study since self-reliance requires multiple skills and competencies. In supporting the involvement of local experts in education, Owuor (2007) posited that Indigenous education involves the expertise of multiple teachers given the multiple natures of roles and responsibilities in life through which the youths need to be mentored and guided. Keith (2015) also showed that Innovative instructional activities should be used such as inviting IK experts into class or taking the learners to them to learn firsthand how these IK experts work; learners need to argue, discuss and express themselves freely without feeling intimidated; and learners involved in problem-solving activities.

Katola (2014), while arguing for integration of IKs in contemporary education observed that in the traditional African society, everyone had an opportunity to work but credentialing that was introduced in the colonial education has closed doors of opportunity for many. In order to overcome the problem, holistic education in the African indigenous sense should be given where by the youth are well prepared to contribute to the society both intellectually and practically (Katola, 2014). Katola (2014) further argues that the most important aspect of the African traditional education was to ensure that the values taught produced self-reliant people.

4.7.3 Correlation of Pedagogical Approaches and Self-reliance

The Pearson's Product Moment technique was used to carry out Correlational analysis to determine the relationship between indicators of contemporary Kenyan pedagogical approaches, decolonized (integrated) pedagogical approaches and self-reliance. It was meant to identify the strength and direction of the association between the indicators of these variables. The results are presented on Table 30

Table 30: Correlation of Pedagogical Approaches and Self-reliance

		Contemporary Pedagogical Approaches	Decolonizing Pedagogical	Self-reliance
Contemporary Pedagogical Approaches	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	384		
Decolonizing Pedagogical	Pearson Correlation	.807**	1	
	Sig. (2-tailed)	0.000		
	N	384	384	
Self-reliance	Pearson Correlation	.660**	.749**	1
	Sig. (2-tailed)	0.000	0.000	
	N	384	384	384

**. *Correlation is significant at the 0.01 level (2-tailed).*

The results of the Pearson's product moment correlation analysis as presented in Table 30 show varied degrees of interrelationships. The contemporary pedagogical approaches have a moderate positive and statistically significant correlation with self-reliance (r= 0.660; p- value (sig. 2 tailed) = 0.000 < 0.01). Similarly, decolonizing pedagogical approaches have a fairly strong, positive, and statistically significant correlation with self-reliance (r=0.749; p-value (sig. 2 tailed) = 0.000<0.01). This shows that that increase in both the contemporary and indigenous pedagogical approaches would lead to increase in self-reliance among students. The results also reveal that the decolonizing pedagogical approaches (r = 0.749) have a correlation with self-reliance that is superior to the contemporary pedagogical approaches (r = 0.660). This means that decolonizing the pedagogical approaches in the Kenyan education system would result in improvement in self-reliance among students.

4.7.4 Regression Analysis and Hypothesis Testing

The second objective of the study was to establish the influence of decolonizing pedagogical approaches on self-reliance among students in the Kenyan education system. Decolonizing Pedagogical approaches were conceived in terms of integrating elements of African indigenous pedagogical approaches into the contemporary Kenyan classrooms and pedagogical approaches. The measures of the Pedagogical approaches (contemporary and indigenous African) included the teacher's role,

learner's role, content delivery method, teacher/learner relation, and choice of method of instruction.

Respondents had been asked to indicate the extent to which they agreed with statements about pedagogical approaches used in the contemporary Kenyan education system. Respondents were also asked to rate the extent to which various African indigenous pedagogical approaches would enhance the Kenyan education system. Self-reliance measures were composed of attitude, creativity, responsibility, autonomy, hard work, confidence in own capabilities and self-esteem. To determine the relationship between decolonizing pedagogical approaches and self-reliance, the following hypothesis was tested.

H_{02}: *There is no statistically significant relationship between decolonizing pedagogical approaches and self-reliance among students in the Kenyan education system.*

The results of the regression analysis of pedagogical approaches and self-reliance are presented in Table 31

Table 31: Regression Analysis of Pedagogical Approaches and Self-Reliance

a). The Goodness of Fit

Model	R	R^2	$A.R^2$	S.E.E
Contemporary	.660[a]	0.436	0.434	0.48955
Decolonizing	.749[a]	0.562	0.560	0.43145

b). The Overall Significance of the Model

Model		S.S	df	M.S	F	Sig.
Contemporary	Regression	70.630	1	70.630	294.712	.000[b]
	Residual	91.549	382	0.240		
	Total	162.178	383			
Decolonizing	Regression	91.070	1	91.070	489.239	.000[b]
	Residual	71.108	382	0.186		
	Total	162.178	383			

c). The Individual Significance of the Model

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
Contemporary	(Constant)	1.219	0.127		9.623	0.000
	Pedagogical Approaches	0.680	0.040	0.660	17.167	0.000
Decolonizing	(Constant)	-1.174	0.206		-5.704	0.000
	Pedagogical Approaches	1.233	0.056	0.749	22.119	0.000

a). Dependent Variable: Self-reliance

The results in Table 31(a) show that decolonizing pedagogical approaches had a statistically significant relationship with self-reliance. The coefficients of determination for the contemporary pedagogical approaches and for the decolonizing pedagogical approaches were 0.436 and 0.562 respectively. This suggests that 43.6 % of variation in Self-reliance is explained by the contemporary pedagogical approaches. In addition, decolonizing pedagogical approaches explained 56.2% of variation in self-reliance. On the basis of this result the study revealed that Decolonizing pedagogical approaches have moderate significance towards self-reliance.

Information in Table 31 (b) in addition indicate that the contemporary pedagogical approaches significantly influenced self-reliance with F Statistic value = 294.712 and a P-value of 0.000<0.05. The decolonizing pedagogical approaches with an F statistic

value = 489.239 and a P-value of 0.000<0.05 was also revealed as having had a significant relationship with self-reliance. This implies that the model is statistically significant at 5% level of significance.

Table 31(c) further contains results that indicate that the contemporary pedagogical approaches had a positive relationship with self-reliance (regression coefficient = 0.680, t-value = 17.167, P-value of 0.000<0.05). This suggests that for one unit change in contemporary pedagogical approaches, self-reliance increases by a factor of 0.680. The P-value = 0.000<0.05 indicates that there exists a highly significant relationship between contemporary pedagogical approaches and self-reliance. The regression model for the prediction of self –reliance can be stated as follows:

$Y = 1.219 + 0.680X_{21}$ …………………………………………………………….......(5)

Where:

X_{21} = Contemporary pedagogical approaches

Y = Self-reliance

1.219 = y-intercept (constant). Estimate of expected value of self-reliance when contemporary pedagogical approaches is Zero.

0.680 = an estimate of the expected increase in Self-reliance in response to a unit increase in Kenyan pedagogical approaches

Further, the study revealed that there exists a significant relationship between decolonizing pedagogical approaches and self-reliance at 5% level of significance (regression coefficient=1.233, t-value=22.119, and P-value 0.000<0.05). This implies that for one unit change in decolonizing pedagogical approaches, there is an increase in self-reliance by a factor of 1.233. The regression model for the prediction of self-reliance can be stated thus:

$Y = -1.174 + 1.233X_2$ …………………………………………………………………(6)

Where:

X_2 =Decolonizing pedagogical approaches

Y = Self-reliance

-1.174 = y-intercept (constant). Estimate value of self-reliance when decolonizing pedagogical approaches is Zero. (constant)

1.233= an estimate of the expected increase in Self-reliance in response to a unit increase in Decolonizing pedagogical approaches.

In conclusion the study revealed that the contemporary pedagogical approaches and the decolonizing pedagogical approaches contributed significantly towards self-reliance. The Null hypothesis that there is no significant influence of decolonizing pedagogical approaches on self-reliance is not supported in the current study. Based on the findings of this study, it was further revealed that the decolonizing pedagogical approaches model (with a regression coefficient =1.233) was superior to the contemporary pedagogical approaches model (regression coefficient= 0.680). This indicates that decolonizing pedagogical approaches have greater influence in promoting self-reliance among students in the Kenyan education system than the contemporary pedagogical approaches. This finding is in consonance with the opinions expressed by participants in the interviews on decolonizing pedagogical approaches and self-reliance. It was suggested that self-reliance as an outcome of education depended on among other things, the approaches employed to transmit knowledge, skills and attitudes to the learner.

Self-reliance was seen as a consequence of possession of practical skills and a positive attitude towards work that learners could employ in their societies to earn a living. It was suggested that teachers need to pay more attention to the learning process by affording learners opportunities to participate in the discovery and construction of knowledge in a manner modelled along African indigenous education practices. Participants observed that the Kenyan education system was not sufficient to train learners for self-reliance because it still suffered "colonial hangovers" that sustained teacher-centred methods of instruction where the teacher (colonizer) dominated over the learners (colonized). It was noted that there is need to change that relationship to an approach that is capable of nurturing confidence, independence, a spirit of inquiry and exploration among learners.

Participants opined that decolonizing the process of learning through integration would promote self-reliance since African indigenous educators employed methods of teaching and learning that gave the learner the opportunity to acquire knowledge and skills in a manner that prepared them to use them to survive in their environment. Learning in the African indigenous sense emphasized acquisition of practical skills rather than theory. Educators taught mainly through demonstration rather than

explanation and the children were trained mainly through solving of problems. Participants suggested that these methods of learning produced individuals who had skills for living a life of self-reliance in their own societies. It was suggested that the Kenyan education system needs to be enriched through integrating indigenous pedagogical approaches as a way of training students for a life of self-reliance. Learners need to be exposed to learning by doing. This is expected to facilitate the development of the learners' creativity which is vital in propagation independent individuals who are creative enough to use the knowledge gained in class to solve problems within their environment.

Findings in this study are in consonance with other studies on decolonization and integration of indigenous pedagogies into contemporary education systems. Kanu (2011) found that classrooms with the most thorough integration of indigenous pedagogy outperformed their counterparts on tests and examinations, showed higher-level thinking, and confidence, and among Indigenous students, there was better attendance. Kaya and Seleti (2013) in rooting for use of community experts posited that the wealth of knowledge that still exists among the elders and other knowledge holders in African local communities demonstrates the vibrant intellectualism to which African researchers and intellectuals should turn. Hamilton-Ekeke and Dorgu (2015) postulated that for learners and instructors, the inclusion of indigenous methods into schools often augments educational efficacy by providing an education that adheres to an indigenous person's own characteristic perspectives, experiences, language, and customs, thereby making it easier for children to transition into the realm of adulthood.

The findings in this study are in agreement with Omolewa (2007) who suggested that the holistic approach of African indigenous education as a strategy for teaching and learning is valid because the learner is liberated from the authoritarianism of the teacher, the curriculum and the institution frees him/her to develop self-discipline, engage in self-directed learning and self-fulfillment. The findings in this study are also in consonance with Ugwu and Diovu (2016) in a study in Nigeria on integration of indigenous knowledge and practices into chemistry teaching and students' academic achievement where they found that integration of indigenous knowledge

and practices into chemistry teaching enhances students' understanding and achievement in chemistry. Cadwallader (2004) also found that when indigenous knowledge was systemically and holistically included into schools, students' achievement improved. It is also in line with Abonyi (2002), who revealed that ethnoscience-based instructional package facilitates interest in science. The improved interest in ethnoscience which is also indigenous science could be due to the wealth of knowledge and experiences of students from cultural practices.

Respondents were asked to suggest aspects of teaching/learning methods used in Kenyan schools that may limit development of self-reliant learners. Their responses are recorded on Table 32

Table 32: Pedagogical Aspects hindering Self-reliance

Suggestion	Percentage
Overuse of lecture method of instruction/Teacher-centred instruction	51%
Overuse of textbooks/copying notes from textbooks/dictation of notes	6%
Over-emphasis on passing exams/Drilling students/coaching/exam-oriented teaching	11%
Rote learning	6%
Emphasis on explanation rather than demonstration/Spoon feeding rather than problem solving/theoretical teaching	21%
Too much assignments/Homework	5%

Information on Table 32 shows that Majority of the respondents (51%) suggested that Overuse of the lecture method of instruction and teacher-centred instruction was an hindrance to acquisition of self-reliance by students. Emphasis on explanation rather than demonstration/Spoon-feeding rather than problem solving/theoretical teaching was suggested by 21% of the respondents. Over-emphasis on passing exams/Drilling students/coaching/exam-oriented teaching was suggested as a possible hindrance to acquisition of self-reliance skills by Kenyan students by 11 % of the respondents. Other aspects of the Kenyan education system suggested as likely to hinder self-reliance among students include: Overuse of textbooks/copying notes from textbooks/dictation of notes (6%), Rote learning (6%) and too much assignments/ Homework (5%).

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Other studies have argued against teacher-centred methods of instruction in favour of more heuristic approaches. Ogunniyi and Ogawa (2008) suggest that learners must be provided with opportunities to undertake problem-solving activities and to argue, dialogue, discuss and express themselves freely without feeling intimidated. Nasongo and Nasimiyu (2009) suggested that the pedagogical process of education in Kenya tends to accentuate the cognitive dimension reflected in the largely examination centered focus and the meritocracy associated with it as a major hindrance to self-reliance among students.

4.8 Decolonizing School Environment and Self-Reliance

The third objective of this study was to determine the extent to which decolonizing school environment promotes self-reliance among students in the Kenyan education system. Decolonizing school environment involves integrating aspects of African indigenous learning environment into the contemporary school environment in Kenya. Two sets of items were included in the questionnaire to measure the physical facilities, teaching/learning resources, school routine and the social environment in both the contemporary Kenyan education system and in the indigenous African education system.

4.8.1 Descriptive Statistics on Contemporary Kenyan School Environment

Ten items were developed to measure the extent to which the Kenyan education system embraces a school environment which theoretical and empirical literature indicates as important in promoting self-reliance. Respondents were required to rate the extent to which they agreed with the selected statements describing the school environment in the contemporary Kenyan education system. The findings are presented in Table 33

Table 33: Frequency Distribution on Contemporary School Environment

Statement	SD	D	N	A	SA
There are enough library facilities for students to study independently.	148 (38.5%)	128 (33.3%)	50 (13%)	40 (10.4%)	18 (4.7%)
Farms in educational institutions are well developed for learners to practice agriculture	119 (31%)	144 (37.5%)	65 (16.9%)	36 (9.4%)	20 (5.2%)
Schools have adequate Art rooms, music rooms, computer labs and workshops	145 (37.8%)	130 (33.9%)	60 (15.6%)	29 (7.6%)	20 (5.2%)
There is a good variety of equipment and instruments for learning practical subjects in educational institutions	99 (25.8%)	136 (35.4%)	76 (19.8%)	55 (14.3%)	18 (4.7%)
Educational institutions have manageable numbers of learners in classrooms	72 (18.8%)	123 (32.0%)	88 (22.9)	75 (19.5%)	26 (6.8%)
Free interactions exist between learners and teachers in Educational institutions	47 (12.2%)	96 (25.0%)	109 (28.4%)	96 (25.0%)	36 (9.4%)
Dorms and classes are not congested	95 (24.7%)	120 (31.3%)	87 (22%)	57 (14.8%)	25 (6.5%)
Teachers do not control School routines	98 (25.5%)	144 (37.5%)	55 (14.3%)	62 (16.1%)	25 (6.5%)
Students decide what to do and when to do it mainly on their own.	158 (41.1%)	110 (28.6%)	46 (12%)	40 (10.4%)	30 (7.8%)
There is no elaborate routine for all the days of the week in Educational institutions	130 (33.9%)	116 (30.2%)	57 (14.8%)	52 (13.5&)	29 (7.6%)
Average Score	111.1 (28.9%)	124.7 (32.5%)	69.3 (18.0%)	54.2 (14.1%)	24.7 (6.4%)

Results on Table 33 indicate that majority of the respondents (38.5%) strongly disagreed that there are enough library facilities for students to study independently. This implies that schools do not have enough facilities for students to study on their own. The majority of the respondents (37.5%) disagreed that farms in educational institutions are well developed for learners to practice agriculture. On their opinion about the statement that schools have adequate art rooms, music rooms, computer labs and workshops, majority of the respondents (37.8%) strongly disagreed. Majority of the respondents (35.4%) disagreed that there is a good variety of equipment and instruments for learning practical subjects in educational institutions as well as with the statement that educational institutions have manageable numbers of learners in classrooms (32.0%). On whether free interactions exist between learners and teachers in Educational institutions, majority of the respondents (28.4%) were neutral.

Respondents disagreed that dorms and classes are not congested (31.3%) and that teachers do not control school routines (37.5%). Majority of the respondents strongly disagreed that students decide what to do and when to do it mainly on their own (41.1%) and that there is no elaborate routine for all the days of the week in Educational institutions (33.9%). Further tabulation of the respondent's opinion on the contemporary school opinion are presented using Means on Table 34

Table 34: Means on Contemporary School Environment

Statement	N	Mean	S.D	C.V
There are enough library facilities for students to study independently.	384	2.09	1.16	55.47
Farms in educational institutions are well developed for learners to practice agriculture	384	2.20	1.13	51.45
Schools have adequate Art rooms, music rooms, computer labs and workshops	384	2.09	1.14	54.67
There is a good variety of equipment and instruments for learning practical subjects in educational institutions	384	2.37	1.15	48.52
Educational institutions have manageable numbers of learners in classrooms	384	2.64	1.19	45.01
Free interactions exist between learners and teachers in Educational institutions	384	2.94	1.17	39.70
Dorms and classes are not congested	384	2.47	1.20	48.48
Teachers do not control School routines	384	2.41	1.21	50.37
Students decide what to do and when to do it mainly on their own.	384	2.15	1.28	59.40
There is no elaborate routine for all the days of the week in Educational institutions	384	2.31	1.27	55.13
Overall Mean Score	384	2.37	1.19	50.82

The results presented on Table 34 show that the overall mean score for the items describing the contemporary Kenyan school environment was 2.37 with a standard deviation of 1.19. This shows that the majority of respondents disagreed with the selected statements. This rating further indicates that the contemporary Kenyan school environment doesn't promote self- reliance among students. Respondents disagreed that there are enough library facilities for students to study independently with a mean score of 2.09 and standard deviation of 1.16. This reveals that the Kenyan education system doesn't have enough library facilities for students. "Farms in educational institutions are well developed for learners to practice agriculture" had a mean score of 2.20 and a standard deviation of 1.13. This shows that respondents disagreed with

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the statement, indicating that educational institutions do not necessarily have well developed farms for learners to practice agriculture on. An item sought respondents' opinion on whether schools have adequate Art rooms, music rooms, computer labs and workshops. The means core was 2.09 with a standard deviation of 1.14. This shows that respondents disagreed with the statement meaning that schools do not have adequate art rooms, music rooms, computer labs and workshops.

An item sought respondents' opinion on the statement that there is a good variety of equipment and instruments for learning practical subjects in educational institutions. The mean score was 2.37 with a standard deviation of 1.15. This shows that the respondents disagreed with the statement, indicating that educational institutions lack a variety of equipment and instruments for learning practical subjects. Respondents were neutral on the statements that educational institutions have manageable numbers of learners in classrooms (M=2.64, S.D= 1.19) and that free interactions exist between learners and teachers in Educational institutions (M=2.94, S.D= 1.17). It was suggested to the respondents that dorms and classes are not congested. The mean score for the item was 2.47 with a standard deviation of 1.20. This shows that that the respondents disagreed with the opinion, revealing that dorms and classrooms in Kenyan educational institutions are congested. Respondents disagreed with the statement that teachers do not control school routines with a mean score of 2.41 and standard deviation of 1.20 indicating that the school routine is controlled by the teachers. An item suggested that Students decide what to do and when to do it mainly on their own. The mean score was 2.15 with a standard deviation of 1.28. This shows that respondents disagreed with this statement suggesting that students do not necessarily decide what to do or how to it in the Kenyan education system. That there is no elaborate routine for all the days of the week in Educational institutions was rated with a mean score of 2.31 and a standard deviation of 1.27. This shows that respondents disagreed with the opinion, therefore revealing that there is an elaborate routine for students in the educational institutions.

Further analysis of the respondent's opinion on the contemporary school environment is presented in Appendix VIII (Table A11 and Table A12). There was a significant difference in the opinions of respondents with the means standing at 2.08 and 2.40 for

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academic staff and students respectively. This shows that the academic staff's disagreement with the presence of environments that would favour self-reliance was stronger than that of the students. The suggestion that schools have adequate Art rooms, music rooms, computer labs and workshops was rated lowest by academic staff with a mean of 1.77 and S.D=0.767. Students rated the suggestion that there were enough library facilities for students to study independently lowest with a mean of 2.14 and S.D=1.206. It is clear from the above findings that learners in the Kenyan education system are not adequately exposed to school environments that would facilitate self-reliance. The schools lack basic facilities that are required for acquisition of practical skills; the social environment is not learner friendly while there are routines strictly controlled by the teachers, leaving little room for learners to acquire independence and confidence.

During interviews with Deans of schools of education in selected universities and with graduates, it was suggested that a school environment that would promote self-reliance among students needed to be one that has adequate human and physical resources. Participants observed that for leaners to acquire the knowledge, skills and attitudes necessary for self-reliance, students should learn in rich environments that provide adequate physical facilities like laboratories, workshops, library, spacious classrooms as well as enough teachers and support staff. For schools to explore and nurture creativity in learners for instance, it was noted that they need to have enough facilities to provide learners with opportunities to identify, appreciate and develop confidence in their talents and creative potentialities and capabilities. Well-equipped and spacious art rooms, music rooms, home science rooms, resourceful libraries and spacious playgrounds and other sports facilities were identified as invaluable resources for nurturing talents and creativity among learners.

Participants in the interview observed that many students in Kenyan educational institutions were learning in poor school environments. It was noted that majority of public primary and secondary schools, especially those in rural and poor urban neighbourhoods were learning in environments that were below expected standards. Participants observed that day secondary schools that had been set up to create room for increasing enrollment lacked basic physical facilities for learning such as

laboratories, workshops, libraries and even classrooms. Further, those that had the physical facilities were reported to lack the relevant equipment, tools, instruments, books and other reference materials.

It was revealed in the interviews that private provision of education had been on a steady rise. Participants noted that many privately-owned educational institutions, especially primary schools and tertiary institutions had been registered by government agencies even though they didn't meet the basic requirements for the establishment of such institutions. A good number of privately-owned primary schools, it was observed, lacked basic facilities including playgrounds since many had been set up on very limited spaces. Children enrolled in such schools lacked the facilities for play, further deteriorating the learning environment as teachers often applied punitive methods of social control to manage the learners in the small spaces they occupied.

Interviews further revealed that many schools, colleges and universities in Kenya were grappling with the challenge of over enrollment in their classrooms and lecturer halls. According to participants, this challenge was particularly serious especially in public secondary schools. This, it was noted, was a precipitated by a new government of Kenya effort to attain a 100% transition from primary to secondary schools. Participants noted that the new effort was done haphazardly without proper preparation especially in terms of putting up adequate physical facilities like classrooms and dormitories as well as recruitment and employment of enough teachers. This, it was observed, has resulted in large numbers of learners in the classrooms, dormitories and other facilities. Participants observed that congestion in classrooms has been a major limitation to teacher-learner interaction and has largely been linked to the adoption of teacher-centred methods of instruction and negative methods of social control.

Graduates interviewed observed that there was very little or no direct interaction between individual learners and their tutors especially in secondary schools and universities where over enrollment was common. Participants noted that learners were mainly dealt with in large groups, even where working as individuals would have been more productive. They cited practical lessons in science subjects where students

worked in groups that were too large to allow all individual learners to acquire the requisite practical competencies. As a result, subjects that required learners to acquire practical skills were often taught using theoretical approaches hence denying learners opportunities to acquire hands on skills that are crucial for a life of self-reliance.

Interviews with Deans of schools of education in selected universities revealed that schools in Kenya today were being constructed on very limited space. It was observed that most day secondary schools that were established by the Mwai Kibaki led NARC government after they took over power in the year 2002, were established on land that was hived off from existing public primary schools. Participants noted that this led to division of land that was initially meant for single schools. This led to the establishment of schools that lacked adequate space for outdoor activities and learning resources. Drawing from their own school experience Dean C observed that many schools lacked enough space to establish school farms where learners would be exposed to activities such as bee keeping, pig, poultry and dairy farming, establishment of tree nurseries and fish farming among others. These activities, it was observed exposed learners to the world of work while encouraging a positive attitude towards agriculture which remains the backbone of the Kenyan economy and the largest avenue for employment and self-employment.

Participants in the interviews observed that the social environment in Kenyan schools had been deteriorating partly as a result of over enrolment and due to societal attitude that emphasized performance in examination at the expense of acquisition of relevant competencies. It was noted that students learned in very harsh environments that featured very rigid school schedules/routines and often very hostile administrations. Participants observed that learners in many schools were mainly engaged in long hours of study and teacher-led tuition that in some cases began very early in the morning and ended late in the evening leaving students with little or no time for extra-curricular activities. This process, it was noted, left learners as passive participants in the learning process who lacked personal initiative or commitment to study, innovativeness or deeper exploration of knowledge. This type of school environment is likely to stifle creativity among learners as well as create an attitude of dependency on teachers and set routines.

These findings are in agreement with other studies on School environments in Africa and in Kenya. Muricho and Chang'ach (2013) found that some schools in Kenya have inadequate, physical facilities such as classes' laboratories, and libraries, or they are available with no equipment for effective teaching and learning. Gituiku (2006) found out that most schools that offer Art and Design have to do with meager or improvised resources, which are hardly sufficient to the student population, a situation that forces teachers to change methodology to lean heavily towards lecture method and demonstration as opposed to hands-on experiences. In a study investigating the factors affecting performance in KCSE art and design in Nairobi county, Otati (2013) found that there was lack of balance between theory and practical aspects of the subject due to limited materials, tools and equipment in the subject. Ojwang (2015) in a study on factors influencing infrastructure development in public primary schools in Kathonzweni Division, Makueni concluded that the quality of infrastructure among quite a number of public primary schools in Kathonzweni division was in poor state.

Mugambi (2013) in a study on factors affecting learning in pre-schools in Meru South District, Kenya found that classrooms were not attractive and friendly and that indoor learning environment in most public early childhood learning centres in Meru South District were not stimulative and conducive as it ought to be for young children. Mugambi further reported that classrooms were congested and that the classrooms did not meet the hygienic threshold befitting the standards required in ECE learning environment. Mege (2014) in a study investigating the influence of school environmental factors on teaching-learning process found that Schools within Lower Nyokal division, Homa bay county Kenya had general inadequacy of physical facilities, with some being almost totally unavailable. Mege further reported that the Teaching-learning process was found to be greatly affected by the inadequacy of physical facilities such as playing fields, toilets and libraries. Ithuta (2014). In a study on the determinants of internal efficiency in public primary schools in tigania east district, found that pupils did not have adequate sitting place in their classes and they sat more than the required number of pupils in a desk. Ithuta further reported that pupils whose schools lacked facilities and materials were significantly more likely to perform poorly than those pupils whose schools were well equipped.

Studies in Tanzania have revealed similar school environment related challenges. Ishengoma (2003) observed that schools and Colleges in Tanzania face an acute shortage of textbooks and reference books and that the Ministry of Education could not provide them due to limited funding capacity. Mosha (2014) in a study on factors affecting students' performance in English Language in Zanzibar Rural and Urban Secondary Schools found that classrooms were overcrowded, which affected teaching negatively Lymo (2017) in a study investigating the factors affecting quality of education in Arusha District found that there were inadequate physical facilities such as classrooms, desks, chairs and that the available classrooms were poorly constructed with inadequate spacing. Nsa *et al* (2014) in a study carried out in Nigeria on school environmental variables and students' academic performance in Agricultural Science found that many schools did not have a conducive environment and relied on classroom instructions leading to poor performance in Practical examinations. In a study on Qualitative Education for self-reliance, Risikat (2014) found that a majority of the educational institutions in Nigeria lacked the various equipment needed for effective teaching and learning, particularly equipment needed for teaching and learning such subjects as Introductory Technology, Woodwork, Metalwork, Home Economics etc.

4.8.2 Descriptive Statistics on Indigenous African Learning Environment

Decolonizing school environment involves integration of elements of indigenous African learning environment into the Kenyan education system. Seven items describing aspects of indigenous African learning environment were included in the questionnaires for this study. Respondents were asked to rate the extent to which each of the aspects would enhance the Kenyan education system. The results are presented on Table 35

Table 35: Frequency Distribution on Indigenous African learning Environment

Statement	NE	SE	N	LE	VLE
Having flexible routines in Educational institutions.	32 (8.3%)	52 (13.5%)	45 (11.7%)	172 (44.8%)	83 (21.6%)
Having teaching and learning resources that reflect the learners' culture and local environment.	19 (4.6%)	49 (12.8%)	44 (11.5%)	146 (38.0%)	126 (32%)
Encouraging a social environment of unity and collective responsibility.	21 (5.5%)	30 (7.8%)	46 (12.0%)	155 (40.4%)	132 (34.4%)
Having an environment where teacher and students view each other as partners in the learning process.	19 (4.3%)	43 (11.2%)	51 (13.3%)	121 (31.5%)	150 (39.1%)
Teachers engage learners in a one-on-one relationship rather than as groups of learners.	35 (9.1%)	57 (14.8%)	69 (13.0%)	126 (32.8%)	97 (25%)
Teachers playing role of mentor, coach and trainer.	14 (3.6%)	31 (8.1%)	43 (11.2%)	130 (33.9%)	166 (43.2%)
Embracing an education that focuses more on the individual learner rather than the group.	19 (4.9%)	41 (10.7%)	46 (12.0%)	122 (31.8%)	156 (40.6%)
Average Score	22.7 (5.9%)	43.3 (11.3%)	49.1 (12.8%)	138.9 (36.2%)	130 (33.9%)

Results on Table 35 reveal that majority of students rated as useful to a large extent "Having flexible routines in educational institutions (44.8%), having teaching and learning resources that reflect the learners culture and local environment(38.0%), encouraging a social environment of unity and collective responsibility(40.4%), having an environment where teacher and students view each other as partners in the learning process(32.9%) and teachers engage learners in a one-on- one relationship rather than as groups of learners(32.8). Majority of respondents rated as useful to a very large extent, "teachers playing role of mentor, coach and trainer" (43.2%) and "embracing an education that focuses more on the individual learner rather than the group" (40.6%).

Further information on indigenous school environments is presented on Table 36 using means.

Table 36: Means on Indigenous School Environment

Statement	N	Mean	S.D	C.V
Having flexible routines in Educational institutions	384	3.58	1.20	33.66
Having teaching and learning resources that reflect the learners' culture and local environment	384	3.81	1.17	30.68
Encouraging a social environment of unity and collective responsibility	384	3.90	1.12	28.78
Having an environment where teacher and students view each other as partners in the learning process	384	3.89	1.19	30.53
Teachers engage learners in a one-on- one relationship rather than as groups of learners	384	3.50	1.27	36.15
Teachers playing role of mentor, coach and trainer	384	4.05	1.09	27.01
Embracing an education that focuses more on the individual learner rather than the group	384	3.92	1.18	30.11
Overall Mean Score	384	3.81	1.17	30.99

The information presented on Table 36 shows that the average mean was 3.81 with a standard deviation of 1.17. This reveals that respondents rated the seven indicators of the Indigenous African learning environment as useful to a large extent in enhancing the Kenyan education system. Respondents rated "having flexible routines in educational institutions" as useful to a large extent with a mean of 3.58 and a standard deviation of 1.20. Respondents also rated as useful to a large extent "having teaching and learning resources that reflect the learners culture and local environment" (M=3.81, S.D=1.17), " encouraging a social environment of unity and collective unity" (M=3.90, S.D=1.12), "Having an environment where teacher and students view each other as partners in the learning process" (M=3.89, S.D=1.19) as well as "teachers engage learners in a one-on- one relationship rather than as groups of learners"(M=3.50, S.D=1.27). Other indicators rated by respondents as useful to a large extent include Teachers playing role of mentor, coach and trainer (M=4.05, S.D= 1.09), and embracing an education that focuses more on the individual learner rather than the group (M=3.92, S.D= 1.18). From the information presented on Table 35 and Table 36 it is observed that respondents rated suggestions for integration of indigenous African school environment into the Kenyan education system as useful to a large extent. Further information presented in Appendix VIII (Table 13 and Table 14) show that academic staff rated the suggestions on African indigenous school environment higher than the rating by students with means of 4.02 and 3.77 respectively. This means that decolonizing school environment through integration of elements of the indigenous African school environments into the Kenyan education

system would promote self-reliance to a large extent. This opinion was confirmed by participants in the interviews with Deans and graduates.

According to the participants, a learning environment to promote self-reliance needs to be one that provides opportunities for instructors and learners to interact at a close level rather than one where learners are treated as groups. Students need to be taught in a friendly environment where they see their instructors as mentors or coaches. It was observed that to be self-reliant students need to learn in an environment where they take responsibility for their own learning and work independently with minimum supervision. Students need to be taught to plan their time independently rather than be brought up under rigid school programmes that do not allow for development of an attitude of self-reliance and confidence in their own capacity to manage their personal affairs.

To decolonize the school environment, according to the participants, it would involve a multifaceted approach that involves decolonizing both the physical school environment as well as the minds of the stakeholders in the education sector, especially the teachers. It was noted that more learning needs to take place outside the ordinary classroom walls, so that learners have more learning experiences in the real world and within the natural environments. Learners would need for instance to learn Agriculture especially from within the farm setting while business education could be learned from within business establishments that may include among other things a school canteen. The social environment, it was proposed, would also need to be reviewed to enable a more collaborative and collegiate environment between teachers and the learners. This would be necessary to diminish the "subject-object" relationship that obtains between teachers and learners in many Kenyan school environments which still reflects the colonial teacher-learner relationship.

The colonial school environment, it was noted, portrayed the teacher as superior, powerful, and gave him/her the privilege to use very punitive and demeaning methods of social control while the learner was socialized to accept an inferior, dependent and often humiliating position. Participants suggested that this colonial type of school environment which has persisted many years after independence needs to be gradually

eliminated to allow for a friendlier environment that allows more subject-subject interaction between teachers and learners like was the case in many indigenous African communities. Participants observed that this kind of environment would enable learners to learn more from their teachers and especially be confident, innovative and creative, aspects that are crucial to a life of self-reliance.

The findings of this study are supported by various studies on school environments and self-reliance. Msuya *et al* (2014) in their study on revitalization of education for self-reliance (ESR) in Tanzania advocate for awareness creation through training on the importance of strong school-community partnership, developing partnership programmes aiming at benefiting both the school and community, establishing needed infrastructures at school and in the community in order to use ESR activities as pedagogical resources as well as agricultural technologies dissemination pathway to contribute to community development. While emphasizing the need for school-community linkages, Brookes (2003) observed that if education is to become more applicable, to become a real force for humanizing societies in which we live, then it must become more closely linked to the local, to the spheres of action and influence which most of us experience.

These findings are in also consonance with Arenas *et al*., (2009) who advocated for a learning environment where schools seek a balance between participating in indoor and outdoor settings, spending time in human-built and natural habitats, and fostering intellectual talents alongside manual training, physical activities, and artistic endeavors. They also prefer an environment where Education and childrearing are seen as a social responsibility shared by all of the members of the community. Omolewa (2007) has suggested an environment that embraces a holistic approach as a strategy for teaching and learning in which the learner is liberated from the authoritarianism of the teacher, the curriculum and the institution. Omolewa further observes that the learner, through this approach is free to develop self-discipline, engage in self-directed learning and self-fulfilment and in addition they are encouraged to build self-esteem and to ensure that new information is placed in a familiar context.

4.8.3 Correlation of School Environment and Self-reliance

The Pearson's Product Moment technique was used to carry out Correlational analysis to determine the relationship between indicators of contemporary (Kenyan) school environment decolonized (integrated) school environment and self-reliance. It was meant to identify the strength and direction of the association between the indicators of these variables. The results are presented on Table 37

Table 37: Correlation of School Environment and Self-reliance

		Contemporary School Environment	Decolonizing Environment	Self-reliance
Contemporary School Environment	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	384		
Decolonizing Environment	Pearson Correlation	.810**	1	
	Sig. (2-tailed)	0.000		
	N	384	384	
Self-reliance	Pearson Correlation	.563**	.603**	1
	Sig. (2-tailed)	0.000	0.000	
	N	384	384	384

**. Correlation is significant at the 0.01 level (2-tailed).

The results of the Pearson's product moment correlation analysis as presented in Table 37 show varied degrees of correlation between the variables under study. The contemporary school environment is statistically significantly correlated with self-reliance (r= 0.563; p-value (sig. 2 tailed) = 0.000 < 0.01). Similarly, decolonizing school environment has a strong positive and statistically significant correlation with self-reliance (r=0.603; p-value (sig. 2 tailed) =0.000<0.01). This indicates that a change in both the contemporary and decolonizing school environment would result in a positive change in self-reliance among students. The results further reveal that that decolonizing school environment has a greater correlation with self-reliance than the contemporary school environment and would therefore be prefered for improving self-reliance among students.

4.8.4 Regression Analysis and Hypothesis Testing

The third objective of the study was to determine the extent to which decolonizing school environment promotes self-reliance among students in the Kenyan education system. The literature and empirical evidence had suggested that decolonizing school

environment would be associated with self-reliance. Decolonizing school environment was an independent variable in the study and was measured using indicators that assessed both the contemporary and African indigenous learning environments. These Measures included Physical facilities, teaching/learning resources, School routine and social environment. Data was collected using 9 items on the contemporary Kenyan school environment and 7 items on the African indigenous school environment. Each item consisted of a statement that was measured on a five-point Likert-type scale. Composite index for each of the two types of school environment were computed and used in testing the hypothesis. To satisfy the third objective, the following hypothesis was tested using simple linear regression model:

$H_{03:}$ *There is no statistically significant relationship between decolonizing school environment and self-reliance among students in the Kenyan education system.*

The results of the regression analysis are presented on Table 38.

Table 38: Regression Analysis of School Environment and Self-Reliance

a). The Goodness of Fit

Model	R	R Square	A.R^2	S.E.E
Contemporary	.563[a]	0.317	0.316	0.53833
Decolonizing	.603[a]	0.364	0.362	0.51971

b). The Overall Significance of the Model

Model		S.S	Df	M.S	F	Sig.
Contemporary	Regression	51.475	1	51.475	177.622	.000[b]
	Residual	110.703	382	0.290		
	Total	162.178	383			
Decolonizing	Regression	59.000	1	59.000	218.438	.000[b]
	Residual	103.178	382	0.270		
	Total	162.178	383			

c). The Individual Significance of the Model

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
Contemporary	(Constant)	2.017	0.104		19.421	0.000
	School Environment	0.485	0.036	0.563	13.327	0.000
Decolonizing	(Constant)	0.726	0.180		4.039	0.000
	School Environment	0.790	0.053	0.603	14.780	0.000

a). Dependent Variable: Self-reliance

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The study findings on Table 38 (a) indicate that the value of R squared for the contemporary school environment and the decolonizing school environment was 0.317 and 0.364 respectively. This shows that the contemporary school environment explains 31.7 % of the variation in self-reliance. The decolonizing school environment explains 36.4% of the variation in self-reliance. These results imply that both the contemporary and decolonizing school environment have slight significant influence on self-reliance.

Results of this study presented on Table 38 (b) also reveal that the contemporary school environment had significant influence on self-reliance with F-Statistic =177.622 and a P-value of 0.000<0.05 at 5 % significance level. The decolonized school environment with an F-statistic =218.438 and a P-value of 0.000<0.05 also showed a statistically significant relationship with self-reliance at 5 % level of significance.

Results on Table 38 (c) further indicate that the contemporary school environment was considered statistically significant with a regression coefficient of 0.485, a t-value of 19.421 and a P-value of 0.000<0.05. This suggests that one unit change in the contemporary School environment corresponds to increase in self-reliance by a factor of 0.485. The regression model for the prediction of self –reliance can be stated as follows

$Y = 2.017 + 0.485X_{31}$……………………………………………………………………………(7)

Where:

X_{31} = Contemporary school environment

Y = Self-reliance

2.017 = Y-intercept (constant). Estimate of expected value of self-reliance when contemporary school environment is Zero.

0.485 = an estimate of the expected increase in Self-reliance in response to a unit increase in contemporary school environment

Further, the study reveals that there exists a significant relationship between decolonizing school environment and self-reliance at 5% level of significance (regression coefficient=0.790 t-value=814.780, and P-value 0.000<0.05). This implies that for one unit change in decolonizing pedagogical approaches, there is an increase

in self-reliance by a factor of 0790. The regression model for the prediction of self – reliance can be stated as follows

$Y = 0.726 + 0.790X_3$ ……………………………………………………………………(8)

Where:

X_3 = Decolonizing school environment

Y = Self-reliance

0.726 = Y-intercept (constant). Estimate value of self-reliance when decolonizing school environment is Zero. (constant)

0.790 = an estimate of the expected increase in Self-reliance in response to a unit increase in Decolonizing school environment

In conclusion the study revealed that the decolonizing school environment contributed significantly towards self-reliance. The Null hypothesis that there is no statistically significant relationship between decolonizing school environment and self-reliance is not supported in the current study at 5% significance level. This result also reveals that the decolonizing school environment model (regression coefficient = 0.790) is superior to the contemporary school environment model (regression coefficient = 0.485) in terms of promoting self-reliance among students in the Kenyan education system.

The finding that decolonizing the school environment is an improvement on the contemporary school environment with regard to promoting self-reliance is in agreement with opinion expressed by respondents participating in the interviews with the researcher. Participants noted that the contemporary school environment has maintained features introduced by colonial educators where the teacher treated the students in a humiliating manner and controlled the learning environment using coercion, threats and brutal punishments. It was observed that decolonizing the environment would result in a more friendly school environment where the teacher-learner relation was cordial and provided for close interaction and collaboration in learning. This would allow learners to be more confident, to explore their interests and talents and work creatively without undue fear of the teacher. These aspects, it was observed are crucial for promoting self-reliance among students.

The finding agrees with Omolewa (2007) who suggested that the holistic approach of African indigenous education as a strategy for teaching and learning is valid because the learner is liberated from the authoritarianism of the teacher, the curriculum and the institution frees him/her to develop self-discipline, engage in self-directed learning and self-fulfillment which are key to self-reliance. Ambaa (2015) suggested that examinations should demand creativity and originality in the leaner as opposed to mere memorization of facts meaning that even the universally accepted facts should not be perceived as being absolute. Room should be created for the leaner to experience and rediscover knowledge afresh including indigenous knowledge.

Respondents were required to suggest school environment challenges that may limit the Kenyan education system in its aim of preparing learners for self-reliance. Their suggestions are summarized in Table 39.

Table 39: School Environment Challenges that may limit Self-reliance

Suggestion	Percentage
Inadequate facilities/infrastructure.	39.4%
Congested environment/classes/ high enrolment against limited facilities.	10.6%
Harsh /Hostile administration.	3.2%
Inadequate teachers.	7.4%
Insecure/ noisy/ dirty environment.	11.7%
Limited teacher-student interaction.	6.4%
Too much supervision.	3.2%
Rigid timetabling/ routines/ limited extra-curricular activities.	6.4%
Inadequate resources.	11.7%

Results on Table 39 indicate that the majority of respondents (39.4%) suggested inadequate facilities/infrastructure as a challenge that may limit self-reliance. Inadequate resources was suggested by 11.7 % of the respondents while a similar number suggested insecure/noisy or dirty environment as an additional challenge limiting self-reliance by students. 10.6% of the respondents suggested Congested environment, classes, or high enrolment against limited facilities as another possible challenge to acquisition of self-reliance by students. Other school environment challenges suggested by respondents include: inadequate teachers (7.4%), limited teacher-student interaction (6.4%), rigid timetabling, routines or limited extra-curricular activities (6.4%), harsh or hostile administration (3.2%) and too much supervision (3.2%). These suggestions are in agreement with Anobi (2007) who found

that deficiency of human and material resources was an hindrance to technological takeoff in Nigeria and had drastically limited education for self-reliance. Modi (2013) in a study in South Sudan found that there were not enough teachers, such that some subjects were not taught by professional teachers of the subjects. Modi further showed that most schools lacked instructional materials and facilities, such as textbooks, science and computer laboratories and libraries, clean drinking water, good sanitation facilities and fences. This type of school environment, it was concluded was a hindrance to acquisition of relevant skills and competencies. In a study in Kitui County, Kenya, Gideon (2014) found that in most schools the physical facilities such as dining hall, classrooms, laboratories, toilets, kitchen, store and the library were inadequate.

4.9 Decolonizing Evaluation and self-reliance

The fourth objective of this study was to determine the extent to which decolonizing evaluation promotes self-reliance among students in the Kenyan education system. Decolonizing evaluation involves integrating aspects of African indigenous evaluation into the contemporary evaluation in Kenya. Two sets of items were included in the questionnaire to measure the nature of evaluation in terms of Theoretical/Practical approach, frequency of evaluation, evaluator, length of evaluation and skills/knowledge measured in both the contemporary Kenyan education system and in the indigenous African education system.

4.9.1 Descriptive Statistics on Contemporary Evaluation

Fourteen items were developed to measure the extent to which the Kenyan education system embraces evaluation which theoretical and empirical literature indicates as important in promoting self-reliance. Respondents were required to rate the extent to which they agreed with the selected statements describing evaluation in the contemporary Kenyan education system. The findings are presented in Table 40

Table 40: Frequency Distribution on Contemporary Evaluation

Statement	SD	D	N	A	SA
Cheating in exams is not common.	139 (36.2%)	118 (30.7%)	56 (14.6%)	54 (14.1%)	17 (4.4%)
Most examinations are not in the form of written tests.	161 (41.9%)	137 (35.7%)	33 (8.6%)	35 (9.1%)	18 (4.7%)
Most concepts are assessed using practical tests.	120 (31.3%)	142 (37.0%)	61 (15.9%)	36 (9.4%)	24 (6.3%)
Teachers judge learners' performance by observing them work.	98 (25%)	139 (36.2%)	59 (15.4%)	71 (18.4%)	17 (4.4%)
Exams test ability to solve problems rather than memory.	100 (26.0%)	107 (27.9%)	59 (15.4%)	75 (19.5%)	43 (11.2%)
Teachers use a wide variety of methods to assess learners' performance.	66 (17.2%)	104 (27.1%)	60 (15.6%)	109 (28.4%)	45 (11.7%)
Learners do not spend a lot of time revising for written tests.	102 (26.6%)	140 (36.5%)	51 (13.3%)	68 (17.7%)	23 (6.0%)
Parents and teachers do not attach great value to examination results.	126 (32.8%)	134 (34.9%)	49 (12.8%)	50 (13%)	25 (6.5%)
Tests adequately measure learners' skills and potentialities.	59 (15.4%)	107 (270%)	65 (16.9%)	108 (28.1%)	45 (11.7%)
Teachers prompt learners to think in their tests.	31 (8.1%)	81 (21.1%)	69 (18.0%)	156 (40.6%)	47 (12.2%)
Tests measure more than theoretical attainment of learners.	46 (12.0%)	92 (24%)	69 (18.0%)	120 (31.3%)	57 (14.8%)
Assessment tasks allow students to exhibit higher-order thinking.	37 (9.6%)	87 (22.7%)	68 (17.7%)	134 (34.9%)	58 (15%)
Tests require evidence of understanding, not just recall.	44 (11.5%)	74 (19.3%)	71 (18.5%)	130 (33.9%)	65 (16.9%)
Tests encourage creativity.	57 (14.8%)	94 (24.5%)	58 (15.1%)	102 (26.6%)	73 (19.0%)
Average Score	84.7 (22.5%)	111.1 (28.9%)	59.1 (15.4%)	89.1 (23.2%)	39.8 (10.4%)

Information on Table 40 shows that majority of respondents strongly disagreed that cheating in exams is not common(36.2%) and that most examinations are not in the form of written tests(41.9%).majority of the respondents of this study disagreed that most concepts are assessed using practical tests(37.0%), teachers judge learners performance by observing them work(36.2%), exams test ability to solve problems rather than memory(27.9%), learners do not spend a lot of time revising for written tests(36.5%) and that parents and teachers do not attach great value to examination results (34.9%).

Majority of the respondents agreed that in the Kenyan education system, teachers use a wide variety of methods to assess learners' performance (28.4%), tests adequately measure learners skills and potentialities (28.1%), teachers prompt learners to think in their tests (40.6%) tests measure more than theoretical attainment of learners (31.3%) assessment tasks allow students to exhibit higher-order thinking (34.9%), tests require evidence of understanding, not just recall (33.9%) and that tests encourage creativity(26.6%). Further analysis of the respondents' opinion on contemporary evaluation is presented using Means on Table 41

Table 41: Means on Contemporary Evaluation

Statement	N	Mean	S.D	C.V
Cheating in exams is not common.	384	2.20	1.20	54.47
Most examinations are not in the form of written tests.	384	1.99	1.14	57.20
Most concepts are assessed using practical tests.	383	2.22	1.17	52.62
Teachers judge learners' performance by observing them work.	384	2.40	1.18	49.10
Exams test ability to solve problems rather than memory.	384	2.62	1.35	51.55
Teachers use a wide variety of methods to assess learners' performance.	384	2.90	1.31	44.98
Learners do not spend a lot of time revising for written tests.	384	2.40	1.22	50.82
Parents and teachers do not attach great value to examination results.	384	2.26	1.23	54.33
Tests adequately measure learners' skills and potentialities.	384	2.93	1.28	43.75
Teachers prompt learners to think in their tests.	384	3.28	1.16	35.51
Tests measure more than theoretical attainment of learners.	384	3.13	1.27	40.56
Assessment tasks allow students to exhibit higher-order thinking.	384	3.23	1.23	38.09
Tests require evidence of understanding, not just recall.	384	3.26	1.27	38.93
Tests encourage creativity.	384	3.10	1.36	43.92
Overall Mean Score	384	2.71	1.24	46.84

The research findings on Table 41 indicate that respondents disagreed that in the Kenyan education system, cheating in exams is not common (M=2.20, S.D=1.20), most examinations are not in the form of written tests (M=1.99, S.D=1.14), most concepts are assessed using practical tests (M=2.22,S.D=1.17), teachers judge learners performance by observing them work (M=2.40, S.D=1.18), learners do not spend a lot of time revising for written tests (M=2.40, S.D= 1.22), and parents and teachers do not attach great value to examination results (M=2.26, S.D=1.23).

Respondents were neutral that in the Kenyan education system: Exams test ability to solve problems rather than memory (M=2.62, S.D=1.35), teachers use a wide variety of methods to assess learners' performance (M=2.90, S.D= 1.31), tests adequately measure learners skills and potentialities(M=2.93, S.D= 1.28), teachers prompt learners to think in their tests (M=3.28, S.D=1.16), tests measure more than theoretical attainment of learners (M=3.13, S.D=1.27) assessment tasks allow students to exhibit higher-order thinking (M=3.23, S.D=1.23), tests require evidence of understanding, not just recall (M=3.26, S.D=1.27) and tests encourage creativity (M=3.10,S.D=1.36). The overall mean score for the contemporary Kenyan evaluation was 2.71 with a standard deviation of 1.24. This shows that the respondents were neutral about the extent to which the contemporary evaluation features aspects that could promote self-reliance.

Further scrutiny of the results as presented on contemporary evaluation as presented on appendix VIII (Table 15 and Table 16) indicate a major difference in the opinions of the Academic staff and those of the students. The overall Mean score for students on this variable was 2.80 indicating that the students were neutral about the extent to which aspects of evaluation shown to have influence on self-reliance are present in the Kenyan education system. However, the overall Mean score for academic staff was 2.22 which indicate that this group of respondents disagreed with the presence of the evaluation aspects under study in the contemporary education in Kenya. These findings indicate that the evaluation in the contemporary Kenyan education is not adequate for preparing individual learners for self-reliance. The results indicate that cheating in exams was common while most exams are theoretical in nature and that parents and teachers attach great value to examination results.

During the interview with university graduates and Deans of schools of education in selected Kenyan universities, participants were asked to describe what, in their opinion, would constitute an evaluation that would develop self-reliance among students. According to the participants, an evaluation that promotes self-reliance should be one that measures competencies acquired by learners accurately. It was also suggested that for self-reliance to be achieved, evaluation should be structured to nurture creativity among students and to measure learner's ability to work

independently and solve day to day problems. Participants also suggested that evaluation should measure practical skills as well as theory and test the learners understanding of concepts rather than memorization of facts.

On evaluation in the Kenyan education system and self-reliance, participants noted that the system emphasized summative evaluation at the expense of formative evaluation. It was observed that the Kenyan public attached too much importance to terminal examination results and that many aspects of the education system were focused on preparing students to pass in national examination rather than acquisition of relevant skills and competencies for living a life of self-reliance. This was attributed to colonial legacy that introduced white collar occupations, access to which was based on acquisition of relevant examination certificates. Participants noted that besides offering opportunities for personal success in the formal employment sector, successful performance in schools was valued by teachers as this was also crucial to their career development since their promotion to higher levels was pegged partly on performance in national examinations by their students. For these reasons learners, parents and teachers have gradually become socialized to attach value to acquisition of certificates, lack of necessary competencies notwithstanding.

Participants in the interviews noted evaluation in the Kenyan education system measured mainly theory at the expense of practical skills. It was also observed that examiners tended to test learner's ability to memorize and reproduce facts rather than measure their actual understanding of concepts. It was further noted that students in Kenyan schools were subjected to excessive evaluation in the form of school opening exams, mid-term exams, and end of term exams in addition to countless continuous assessment tests (CATs) and random assessment tests (RATs), all designed to drill learners for the various terminal examinations. As a result of this obsession with evaluation, Kenyan students often resulted to rote learning at the expense of deep understanding of concepts and acquisition of relevant skills and competencies as well as problem solving skills necessary for successful living. Participants observed that many holders of various certificates in practical fields such as IT, agriculture, engineering, and the fine arts often come out of the education system lacking practical skills to practice effectively and efficiently in their own fields of expertise.

The findings in this study are in agreement with Mackatiani (2017) who in a study on the influence of examination approaches on quality education in Kenya found that pupils spent most of the time doing a series of examinations. He further found that there was drilling of pupils through revision of the examination papers so as to enable them to reproduce the acquired knowledge when national examinations are being administered. Nasongo and Musungu (2009) found that the pedagogical process of education in Kenya tends to emphasize the cognitive dimension reflected in the largely examination-based focus and the meritocracy associated with it. They further reported that education tends to ignore the imparting of knowledge and skills for life, rather, it focuses on selection and placement of the few who pass examinations at the detriment of the majority who do not perform well

Boit, Njoki and Chang'ach (2012) in another study in Kenya observed that learning had been reduced to studying texts, particularly at the secondary school levels, because the immediate goal of learning is to pass tests that open doors to higher education. Owino (1997) observed that at the school's level, standard examination in agriculture, art and craft consisted of multiple-choice type of questions. He further reported that although this type of examination has the advantage of objectivity and easy marking, its validity to predict the school leavers' ability in higher level of education training and employment was doubtful. Rehmanni (2003) in a study in Pakistan found that teachers often switched their teaching methods to mainly the lecture method and adopted teacher and curriculum centered approaches to teaching and learning so as to ensure good performance in examinations.

4.9.2 Descriptive Statistics on African Indigenous Evaluation

A decolonizing evaluation was conceived in terms of integration of elements of indigenous African evaluation into the Kenyan education system. Eight items describing aspects of indigenous African evaluation were included in the questionnaires for this study. Respondents were asked to rate the extent to which each of the aspects would enhance the Kenyan education system. The results are presented on Table 42

Table 42: Frequency Distribution on African Indigenous Evaluation

Statement	NE	SE	N	LE	VLE
Having evaluation procedures which mainly measure acquisition of relevant skills and knowledge	38 (9.9%)	33 (8.6%)	48 (12.5%)	143 (37.2%)	121 (31%)
Having evaluation procedures that gradually test learners' achievement over long periods	16 (4.2%)	54 (14.1%)	56 (14.6%)	154 (40.1%)	104 (27.1%)
Having tests that measure practical abilities rather than theoretical attributes	19 (4.9%)	36 (9.4%)	50 (13.1%)	121 (31.5%)	158 (41.1%)
Having tests that measure learner's ability to think and solve problems rather than ability to memorize facts	13 (3.4%)	38 (9.9%)	37 (9.6%)	127 (33.1%)	169 (44%)
Using a wide variety of assessment for measuring attainment rather than single final exams	12 (3.1%)	32 (8.3%)	49 (12.8%)	130 (33.9%)	161 (41.9%)
Attaching more value on acquisition of knowledge and skills rather than performance in exams and certificates	14 (3.6%)	33 (8.6%)	41 (10.7%)	116 (30.2%)	180 (46.9%)
Embracing tests that test problem solving and creativity rather than memory.	13 (3.4%)	30 (7.8%)	42 (10.9%)	125 (32.6%)	174 (45.3%)
Laying emphasis on skills and knowledge attainment rather than assessment for selection to higher levels of education	16 (4.2%)	25 (6.5%)	44 (11.5)	131 (34%)	168 (43.8%)
Average Score	17.6 (4.6%)	35.1 (9.1%)	45.9 (11.9%)	130.9 (34.1%)	154.4 (40.2%)

Information in Table 42 shows that majority of the respondents rated as useful to a large extent, "Having evaluation procedures which mainly measure acquisition of relevant skills and knowledge "(37.2%) and "Having evaluation procedures that gradually test learners' achievement over long period" (40.1%) respectively. The following suggestions were rated as useful to a very large extent by the majority of the respondents: Having tests that measure practical abilities rather than theoretical attributes(41.1%), having tests that measure learners ability to think and solve problems rather than ability to memorize facts(44.0%), using a wide variety of assessment for measuring attainment rather than single final exams(41.9%), attaching more value on acquisition of knowledge and skills rather than performance in exams and certificates(46.9%) embracing tests that test problem solving and creativity rather than memory(45.3%), and laying emphasis on skills and knowledge attainment rather than assessment for selection to higher levels of education (43.8%).

Further tabulation on respondents' opinion on African indigenous evaluation is presented on Table 43 using Means.

Table 43: Means on African indigenous Evaluation

Statement	N	Mean	S.D	C.V
Having evaluation procedures which mainly measure acquisition of relevant skills and knowledge	383	3.72	1.27	34.05
Having evaluation procedures that gradually test learners achievement over long periods	384	3.72	1.13	30.40
Having tests that measure practical abilities rather than theoretical attributes	383	3.95	1.17	29.58
Having tests that measure learners ability to think and solve problems rather than ability to memorize facts	384	4.04	1.11	27.51
Using a wide variety of assessment for measuring attainment rather than single final exams	384	4.03	1.08	26.76
Attaching more value on acquisition of knowledge and skills rather than performance in exams and certificates	384	4.08	1.12	27.33
Embracing tests that test problem solving and creativity rather than memory.	384	4.09	1.08	26.53
Laying emphasis on skills and knowledge attainment rather than assessment for selection to higher levels of education	384	4.07	1.09	26.77
Overall Mean Score	384	3.96	1.13	28.62

Research findings presented on Table 43 indicate that the overall mean score for the African indigenous evaluation measures was 3.96 with a standard deviation of 1.13. This shows that respondents considered the selected measures as useful to a large extent for enhancing the Kenyan education system. An item sought the respondents' opinion on the usefulness of having evaluation procedures which mainly measure acquisition of relevant skills and knowledge. The mean score for the item was 3.72 with a standard deviation of 1.27. This shows that respondents considered the indicator as useful to a large extent. Another item sought the respondents' opinion on having evaluation procedures that gradually test learners' achievement over long periods. The mean score was 3.72 with a standard deviation of 1.17. This reveals that respondents rated the measure as useful to a large extent. Respondents were required to rate having tests that measure practical abilities rather than theoretical attributes. The mean score for the item was 3.95 with a standard deviation of 1.17. This shows that respondents considered having tests that measure practical abilities as useful to a large extent. An item sought the respondents' opinion on having tests that measure learners' ability to think and solve problems rather than ability to memorize facts. The

mean score for the item was 4.04 with a standard deviation of 1.11, meaning that respondents rated this indicator as useful to a large extent.

An item required the respondents to rate the usefulness of using a wide variety of assessment for measuring attainment rather than single final exams. The mean score for this item was 4.03 with a standard deviation of 1.08. This implies that respondents considered using a wide variety of assessment as useful to a large extent. The respondent's opinion on the usefulness of attaching more value on acquisition of knowledge and skills rather than performance in exams and certificates was sought. The mean score for the item was 4.08 with a standard deviation of 1.12. This reveals that respondents considered the measure as useful to a large extent. Respondents' opinion on the usefulness of embracing tests that test problem solving and creativity rather than memory was sought. Respondents rated the suggestion as useful to a large extent with a mean score of 4.09 and a standard deviation of 1.08. An item sought respondents' opinion on laying emphasis on skills and knowledge attainment rather than assessment for selection to higher levels of education. The mean score was 4.07 with a standard deviation of 1.09. This shows that respondents considered laying emphasis on skills and knowledge attainment as useful to a large extent.

Findings on Table 42 and Table 43 indicate that respondents considered selected aspects of African indigenous evaluation as useful to a large extent in improving the contemporary education system. According to additional information on Appendix VIII (Table A17) the academic staff rated "attaching more value on acquisition of knowledge and skills rather than performance in exams and certificates" as useful to a very large extent. The highest rated suggestion among the students (Appendix VIII, Table A18)) was "embracing tests that test problem solving skills and creativity rather than memory". These findings indicate that decolonizing Evaluation through integrating elements of the African indigenous evaluation into contemporary evaluation in Kenya would be useful to a large extent in promoting self-reliance among students. This opinion was further explored through interviews with deans of faulty/school of education and graduates from selected universities.

Decolonizing evaluation was interpreted mainly in terms of "decolonizing the minds" of stakeholders in the education sector that include learners, their parents, instructors at all levels and communities so as to change their general attitude towards examination. Participants observed that an education that promotes self-reliance ought to focus on providing learners with practical skills and competencies that are useful in solving their day to day problems and to enable them earn a living without necessarily depending on others or depending solely on wage employment. Education and evaluation in the indigenous African sense focused on skills and competence acquisition, where no individual "failed". It was noted that decolonizing evaluation would depend on changing the attitude of stakeholders towards the entire concept of evaluation in order to embrace a new evaluation that is pegged on measuring actual skills and competencies acquired by learners. Participants however noted the enormity of this task since attitudes that had been developed over many decades would require a lot of time and resources to change.

A decolonial approach to evaluation, according to the participants would involve integrating aspects of the indigenous African evaluation into the contemporary evaluation strategies. This would involve laying more emphasis on the practical aspects of learning, and basing evaluation more on measuring of skills acquired by learners rather than theoretical facts, learned through memorizing of information. It was observed that evaluation needs to be more continuous, integrated to the day to day lessons of the teachers as it happened in the indigenous education in Africa. The instructors need to be trained on ways to integrate evaluation in their day to day lessons in a manner that is effective and adequate to so that the results are reliable for making judgement about the ability of the learners.

These findings are in agreement with Ugwu and Okpara (2016) who found that incorporation of indigenous knowledge and practices into chemistry teaching improved the understanding of chemistry concepts and hence enhanced students' achievement in the subject. They suggested that Practical examination in chemistry which is based on modern science/academic ways of learning should include indigenous knowledge and practices in the society that has chemistry orientation in them. Ngugi (1981) while arguing for the "decolonization of the minds" suggested

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that colonial education did not give Africans confidence in their ability and capacities to overcome problems or to become masters of the laws governing external nature as human beings but instead tended to make them feel their insufficiencies and their inability to do anything about the conditions of their lives. Ngugi further reiterated that the formal western oriented education system inherited after independence not only nurtured among the elites a sense of renunciation of their indigenous heritage but also impacted individuals' sense of self-confidence in expressing and appreciating their native values and cultures.

These findings are also in consonance with Boit, Njoki and Chang'ach (2012) in a study on Kenyan examinations in which they suggested that teaching should equip the learner with the right attitude, knowledge, understanding, skills, ways of knowing and practical competencies needed to function autonomously in society, and which reflect the underlying aims of education and broadly accepted values of the society in question. Kafwa, Mwaka and Musamas (2014) in a study titled the evaluation dilemma in the Kenyan education system recommended that more emphasis should be laid on formative evaluation where the learners "achievements are continuously gauged within the whole period of the learners" programme. Mackatiani (2017) found that examinations in Kenya were aimed at selecting a few individuals for slots set aside in institutions of excellence or acquisition of employment posts and therefore recommended that there should be a shift from perceiving examinations as tool for promotional measures to that of acquisition of competencies. Akinpelu (2005) suggested that work should be effectively integrated into the school curriculum through increase in practical productive work.

4.9.3 Correlation of Evaluation and Self-reliance

The Pearson's Product Moment technique was used to carry out Correlational analysis to determine the relationship between indicators of contemporary evaluation, decolonized (integrated) evaluation and self-reliance. It was meant to identify the strength and direction of the association between the indicators of these variables. The results are presented on Table 44

Table 44: Correlation of Evaluation and Self-reliance

		Contemporary Evaluation	Decolonizing Evaluation	Self-reliance
Contemporary Evaluation	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	384		
Decolonizing Evaluation	Pearson Correlation	.915**	1	
	Sig. (2-tailed)	0.000		
	N	384	384	
Self-reliance	Pearson Correlation	.487**	.488**	1
	Sig. (2-tailed)	0.000	0.000	
	N	384	384	384

**. *Correlation is significant at the 0.01 level (2-tailed).*

Results on Table 44 indicate a moderate positive and significant correlation between the indicators of the contemporary evaluation and self-reliance (r=0.487, p-value 0.000<0.01). There is a moderate positive but significant correlation between the decolonizing evaluation (integrated evaluation) and self-reliance (r=0.488, p-value 0.000<0.01). This shows that increase in both the contemporary and decolonizing evaluation would result in a moderate and positive increase in self-reliance. The results further reveal that decolonizing evaluation would only have a marginal improvement on self-reliance when compared to the contemporary evaluation.

4.9.4 Regression Analysis and Hypothesis Testing

The fourth objective of the study was to determine the extent to which decolonizing evaluation promotes self-reliance among students in the Kenyan education system. The literature and empirical evidence had suggested that decolonizing evaluation would be associated with self-reliance. Decolonizing evaluation was a composite independent variable in the study and was measured using indicators that assessed both the contemporary and African evaluation. These measures included theoretical/practical approach, frequency of evaluation, evaluator, length of evaluation, skills/knowledge measured.

Data was collected using 14 items on the contemporary evaluation and 8 items on the African evaluation. Each item consisted of a statement that was measured on a five-

point Likert-type scale. Composite index for each of the two types of evaluation were computed and used in testing the hypothesis. To satisfy the fourth objective, the following hypothesis was tested using simple linear regression model.

$H_{04:}$ *There is no statistically significant relationship between decolonizing evaluation and self-reliance among students in the Kenyan education system.*

The results of the regression analysis are presented on Table 45.

Table 45: Regression Analysis of evaluation and Self-Reliance

a). The Goodness of Fit

Model	R	R^2	A^2	S.E.E
Contemporary	.487[a]	0.237	0.235	0.56911
Decolonizing	.488[a]	0.238	0.236	0.56871

b). The Overall Significance of the Model

Model		S.S	df	M.S	F	Sig.
Contemporary	Regression	38.454	1	38.454	118.729	.000[b]
	Residual	123.724	382	0.324		
	Total	162.178	383			
Decolonizing	Regression	38.626	1	38.626	119.425	.000[b]
	Residual	123.552	382	0.323		
	Total	162.178	383			

c). The Individual Significance of the Model

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
Contemporary	(Constant)	1.191	0.200		5.942	0.000
	Evaluation	0.583	0.054	0.487	10.896	0.000
Decolonizing	(Constant)	0.513	0.513		1.961	0.051
	Evaluation	0.718	0.066	0.488	10.928	0.000

a). Dependent Variable: Self-reliance

The results in Table 45 show that decolonizing evaluation had a statistically significant relationship with self-reliance. The coefficient of determination is 0.237 for the contemporary evaluation and 0.238 for the Decolonizing evaluation. This suggests that 23.7% of variation in Self-reliance is explained by the contemporary evaluation while Decolonizing evaluation explained 23.8% of variation in self-

reliance. On the basis of this result the study revealed that Decolonized evaluation has significant influence on self-reliance.

Results on Table 45 further reveal that the contemporary evaluation significantly influenced self-reliance with F-Statistic value = 118.729 and a P-value of 0.000<0.05. Similarly, the decolonizing evaluation, with an F-statistic value = 119.425 and a P-value of 0.000<0.05 was also shown as having significant relationship with self-reliance. This implies that the model is statistically significant at 5% level of significance.

The results on Table 45 (c) revealed that there exists a positive relationship between Contemporary Evaluation and Self-reliance (Regression coefficient = 0.583, t-value = 10.896, p–value = 0.000<0.05). This suggests that for one unit change in Contemporary Curriculum, Self-reliance increases by a factor of 0.583. Since p – value = 0.000 is less than 0.05, it indicates that there exists a highly statistically significant relationship between Contemporary Evaluation and Self-reliance at 5 % significance level. The regression model for the prediction of self –reliance can be stated as follows:

$Y = 1.191 + 0.583X_{41}$……………………………………………………………………(7)

Where:

X_{41} = Contemporary evaluation

Y = Self-reliance

1.191 = y-intercept (constant). Estimate of expected value of self-reliance when contemporary evaluation is Zero.

0.583 = an estimate of the expected increase in Self-reliance in response to a unit increase in contemporary evaluation

Further, the findings of this study as presented on Table 45 (c) reveal that there exists a significant relationship between decolonizing evaluation and self-reliance at 5% level of significance (regression coefficient=0.718, P-value 0.000<0.05). This implies that for one unit change in decolonizing evaluation, there is an increase in self-reliance by a factor of 0.718. The regression model for the prediction of self –reliance can be stated as follows:

$Y = 0.718X_4$……………………………………………………………………….(8)

Where:

Y = Self-reliance

X_4 =Decolonizing evaluation

0.718= an estimate of the expected increase in Self-reliance in response to a unit increase in Decolonizing evaluation.

In conclusion the study revealed that the contemporary evaluation and the decolonizing evaluation contributed significantly towards self-reliance. The Null hypothesis that there is no significant relationship between decolonizing evaluation and self-reliance is not supported in the current study at 5 % level of significance.

The results in Table 45 show that the decolonizing evaluation model (regression coefficient=0.718) is superior to the contemporary evaluation model (regression coefficient=0.583). This indicates that decolonizing evaluation would be more preferable for improving Self-reliance among students in the Kenyan education system. These findings are in agreement with opinions expressed by participants in the interviews with the researcher. It was suggested in the interviews that decolonizing evaluation in the Kenyan education system would impact positively on self-reliance. Participants suggested that the evaluation strategies and procedures employed in the contemporary education were an outcome of a colonial education practice that seemed to reward certificates at the expense of skills and competences. Despite efforts to promote self-reliance through the introduction of the 8-4-4 system, participants indicated that the greatest handicap to self-reliance remained in the value for certification that had been impressed on Africans by colonialists. To achieve self-reliance, it was suggested that there was need to first "decolonize the minds" of the citizenry in order to shift their interest to acquisition of knowledge and skills necessary for autonomous living. To this end, participants indicated that there was need to evaluate evaluation itself with an aim of decolonizing it by making it more practical in nature through attaching more value to acquisition of knowledge and skills rather than to results in theoretical examinations.

These findings are in agreement with Mackatiani (2017) who observed that modern examinations-oriented system of Kenya is a direct replication of the old imperial examination system which was adopted in Kenya in 1908 for the purpose of selecting religious catechists and administrative officials. He suggested that it was prudent for Kenya to decolonize education and embrace a quality-oriented education system. Munroe *et al*. (2013, p. 332) observes that decolonising assessment practices and approaches enables indigenous peoples to be educated in a manner that respects identity and culture as they become responsible and productive citizens guided by such values as love, respect, honesty, humility, courage, wisdom, and compassion in order to live in harmony. Fomunyan (2017) proposes that decolonising teaching and learning in engineering education should be about engaging assessment practices that move beyond stringent testing to engaging empathy and the development of the individual

Respondents were asked to suggest strategies that may be used to enhance evaluation in the Kenyan education system in order to prepare students for self-reliance. Their suggestions are summarized in Table 46

Table 46: Strategies for Enhancing Evaluation to Prepare Students for Self-reliance

Suggestion	Percentage
Assessing learners as individuals rather than groups	5.2%
Having practical oriented evaluation/ Assessing practical abilities of learners	42.7%
Attaching more value to acquisition of skills rather than performance in exams	20.8%
Embracing continuous evaluation/doing formative rather than summative assessment	18.8%
Eliminating cheating in exams	2.1%
Using evaluation methods that enhance innovativeness and nurture creativity and talents	4.2%
Test learners' ability to solve everyday problems	3.1%
Using a wide variety of assessment methods to improve learner's creativity	3.1%

Information on Table 46 indicates that many respondents (42.7%) suggested having practical oriented evaluation or assessing practical abilities of learners as a good strategy for enhancing evaluation in order to prepare students for self-reliance. Attaching more value to acquisition of skills rather than performance in exams was

suggested by 20.8% of the respondents. Embracing continuous evaluation/doing formative rather than summative assessment was suggested by 18.8 % of the respondents. Other studies have made similar suggestions for enhancing self-reliance. Boit, Njoki and Chang'ach (2012) in a study on the influence of examination on the stated curriculum goals in Kenya proposed that the Ministry of Education should emphasize on formative evaluation more than the summative. In addition, they observed that the purpose of education is to acquire knowledge, skills and attitudes for the development of the self-reliance and therefore teachers should not prepare students just to pass examinations but also to be innovative, creative, and imaginative. Mackatiani (2017) suggested changing the existing examinations-oriented model of education in Kenya to a quality oriented model which will develop students through recognition of special skills, individual talents and creativity. This would enhance self-reliance.

4.10 Decolonizing Kenyan Education System and Self-reliance

The purpose of this study was to determine the influence of decolonizing the Kenyan education system on self-reliance among students. A decolonizing education system was conceived in terms of integrating aspects of African indigenous education into the contemporary Kenyan education system. To achieve the purpose of the study four indicators of the education system were identified. The indicators included curriculum, pedagogical approaches, school environment and curriculum. Two sets of items were included in the questionnaire to measure the curriculum, pedagogical approaches, school environment and evaluation in both the contemporary Kenyan education system and in the indigenous African education system.

4.10.1 Summary of Descriptive Statistics

For each of the four indicators of the education system(curriculum, pedagogical approaches, school environment and evaluation), two sets of items were prepared to measure the extent to which respondents agreed with their presence in the contemporary Kenyan education system and to measure the extent to which integrating elements of African indigenous education would improve the contemporary system. The respondents were requested to indicate the extent to which they agreed with selected statements about the Kenyan education system. Selected

statements capture indicators of a curriculum, pedagogical approaches, school environment and evaluation which according to literature reviewed would be associated with self-reliance. They were given four sets of items rated on a five-point Likert scale ranging from: of **SD** – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree from which to choose. Decolonizing the curriculum involves integration of African indigenous curriculum elements into the contemporary Kenyan curriculum. Respondents were requested to rate the extent to which integrating of selected elements of the indigenous African curriculum, pedagogical approaches, school environment and evaluation could enhance the Kenyan education system using a scale of **NE** – To no extent; **SE** – To a small extent; **N** – Neutral; **LE** – To a large extent; and **VLE** – To a very large extent; The summary of the findings are presented on Table 47

Table 47: Summary of Descriptive Statistics

		N	Mean	S.D	C.V
Curriculum	Contemporary Curriculum	384	2.95	1.27	43.00
	African Indigenous Curriculum	384	3.71	1.24	33.54
Pedagogical Approaches	Contemporary Pedagogical Approaches	384	2.57	1.23	48.45
	African Indigenous Pedagogical Approaches	384	3.84	1.21	31.67
Environment	Contemporary School Environment	384	2.37	1.19	50.82
	African Indigenous School Environment	384	3.81	1.17	30.99
Evaluation	Contemporary Evaluation	384	2.71	1.24	46.84
	African Indigenous Evaluation	384	3.96	1.13	28.62
Self-reliance		384	2.85	1.22	43.04

Results presented on Table 47 indicate that the overall mean for the Kenyan curriculum was 2.95 with a standard deviation of 1.27 while that of African indigenous curriculum was 3.71 with a standard deviation of 1.24. This means that the respondents were neutral about the extent to which curriculum in the Kenyan education systems contains aspects which according to literature reviewed would promote self-reliance among students. The results also show that respondents rated the integration of selected elements of African indigenous curriculum as capable of improving the Kenyan curriculum to a large extent.

Results on Table 47 also show that the overall mean for the contemporary Kenyan pedagogical approaches was 2.57 with a standard deviation of 1.23 while that of African indigenous pedagogical approaches was 3.84 with a standard deviation of 1.21. These results reveal that respondents disagreed with most of the statements describing the presence of selected pedagogical approaches that literature shows would promote self-reliance in the contemporary Kenyan education. These results also imply that respondents rated the selected elements of the African indigenous curriculum that literature reviewed indicate would improve self-reliance as useful to a large extent in improving the Kenyan education system.

Results on Table 47 show that the overall mean for the contemporary Kenyan school environment was 2.37 with a standard deviation of 1.19 while the mean for African indigenous school environment was 3.81 with a standard deviation of 1.17. This shows that the majority of respondents disagreed with the selected statements describing the school environment in contemporary Kenyan education system. This rating further indicates that the contemporary Kenyan school environment doesn't promote self- reliance among students. These results also reveal that respondents rated the indicators of the Indigenous African learning environment identified in reviewed literature as capable of promoting self-reliance as useful to a large extent in enhancing the Kenyan education system.

Results presented on Table 47 indicate that the overall mean for the contemporary Kenyan evaluation was 2.71 with a standard deviation of 1.24 while that of African indigenous evaluation was 396 with a standard deviation of 1.13. This means that the respondents were neutral about the extent to which evaluation in the Kenyan education system contains aspects which according to literature reviewed would promote self-reliance among students. The results also show that respondents rated the integration of selected elements of African indigenous evaluation as capable of improving the Kenyan curriculum to a large extent.

4.10.2 Correlation Analysis

The Pearson's Product Moment technique was used to carry out Correlational analysis to determine the relationship between indicators of decolonizing evaluation,

decolonizing pedagogical approaches, decolonizing school environment, decolonizing evaluation and self-reliance. It was meant to identify the strength and direction of the association between the indicators of these variables. The results are presented on Table 48

Table 48: Correlation of Decolonizing Kenyan Education and Self-reliance

		Self-reliance	Decolonizing Curriculum	Decolonizing Pedagogical	Decolonizing Environment	Decolonizing Evaluation
Self-reliance	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	384				
Decolonizing Curriculum	Pearson Correlation	.736**	1			
	Sig. (2-tailed)	0.000				
	N	384	384			
Decolonizing Pedagogical	Pearson Correlation	.749**	.581**	1		
	Sig. (2-tailed)	0.000	0.000			
	N	384	384	384		
Decolonizing Environment	Pearson Correlation	.603**	.405**	.614**	1	
	Sig. (2-tailed)	0.000	0.000	0.000		
	N	384	384	384	384	
Decolonizing Evaluation	Pearson Correlation	.488**	.409**	.596**	.291**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	384	384	384	384	384

**. *Correlation is significant at the 0.01 level (2-tailed).*

Results on Table 48 indicate a positive fairly strong and significant correlation between decolonizing pedagogical approaches and self-reliance (r=0.749, p-value 0.000<0.01). There is also a strong, positive and statistically significant correlation between the decolonizing curriculum and self-reliance (r=0.736, p-value 0.000<0.01). Results also indicate that decolonizing school environment is statistically significantly correlated with self-reliance (r=0.603, p-value 0.000<0.01). There is a moderate and positive but statistically significant correlation between the decolonizing evaluation and self-reliance (r=0.488, p-value 0.000<0.01). These findings indicate that all the variables under study had statistically significant correlations with self-reliance.

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Decolonizing pedagogical approaches had the highest correlation while decolonizing evaluation had the lowest with self-reliance. These results reveal that increase in all the variables under study would result in significant increase in self-reliance.

4.10.3 Multiple Regression Analysis of Decolonizing Kenyan Education and Self-reliance

The purpose of this study was to determine the influence of decolonizing the Kenyan education system on self-reliance among students. The literature and empirical evidence had suggested that decolonizing education would be associated with self-reliance. Decolonizing curriculum, pedagogical approaches, school environment and evaluation were independent variables in the study and were measured using indicators that assessed both the contemporary and African indigenous: curriculum, pedagogical approaches, school environment and evaluation respectively. Data was collected using items on the contemporary Kenyan education and items on the African indigenous education. Each item consisted of a statement that was measured on a five-point Likert-type scale. Composite index for each of the two types of curriculum, pedagogical approaches, school environment and evaluation were computed and used in testing the hypothesis. The multiple regression model considered in this study can be stated as follows:

$H_{03:}$ *There is no statistically significant relationship between decolonizing Kenyan education and self-reliance among students.*

The results of the regression analysis are presented on Table 49.

Table 49: Multiple Regression Analysis of Decolonizing Kenyan Education and Self-
reliance

a). The Goodness of Fit

Model	R	R^2	Adjusted.R^2	S.E.E
Decolonizing education	.850[a]	0.723	0.720	0.34409

b). The overall Significance of the Model

Model		S.S	Df	M.S	F	Sig.
Decolonizing education	Regression	117.306	4	29.326	247.698	.000[b]
	Residual	44.872	379	0.118		
	Total	162.178	383			

c). The individual Significance of the Model

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
Decolonizing education	(Constant)	-1.889	0.185		-10.210	0.000
	Curriculum	0.553	0.043	0.435	13.001	0.000
	Pedagogical approaches	0.570	0.072	0.346	7.895	0.000
	School environment	0.264	0.045	0.201	5.825	0.000
	Evaluation	0.066	0.050	0.045	1.322	0.187

a. Dependent Variable: Self-reliance

The results on Table 49 reveal that the coefficient of determination (Adjusted R^2) for decolonizing Kenyan education was 0.720. This implies that 72% of variation in self-reliance is accounted for by the independent variables (decolonizing curriculum, decolonizing pedagogical approaches and decolonizing school environment) in the model. Based on these results, the model is recommended for predictive purpose. This is because the coefficient of determination is above 70%. The researcher considers this model suitable for adoption.

This study revealed that the contemporary education model had an F-value of 247.698 and P-value of 0.000<0.05. This indicates that the model is statistically significant at 5% significance level. The study sought to determine the contribution of all the study

variables (decolonizing curriculum, decolonizing pedagogical approaches, decolonizing school environment and decolonizing evaluation) on self-reliance using a multiple regression model. It was found that decolonizing curriculum, decolonizing pedagogical approaches and decolonizing school environment were statistically significant with P-values less than 5% significance level. Decolonizing evaluation was found to be statistically insignificant with a P-value more than 5% significance level. Decolonizing pedagogical approaches with a regression coefficient of 0.570 was found to have the highest contribution to self-reliance followed by decolonizing curriculum with a regression coefficient of 0.553. This indicates that a unit change in decolonizing pedagogical approaches corresponds to an increase in self-reliance by a factor of 0.570 while a unit increase in decolonizing curriculum corresponds to an increase in self-reliance by a factor of 0.553. A unit increase in decolonizing school environment corresponds to a marginal increase of self-reliance by a factor of 0.264.

In conclusion the study revealed that decolonizing education contributes significantly towards self-reliance. Decolonizing pedagogical approaches had the highest contribution to self-reliance followed closely by decolonizing curriculum. Decolonizing school environment had marginal but significant contribution to self-reliance while decolonizing evaluation was found to have insignificant contribution to self-reliance. The regression model for the prediction of self –reliance can be stated as follows:

$Y = -1.889 + 0.553X_1 + 0.570X_2 + 0.264X_3$ …………………………………………..(9)

Where:

Y= Self-reliance

X_1= Decolonizing curriculum

X_2= Decolonizing Pedagogical approaches

X_3= Decolonizing School environment

-1.889= Estimated value of self-reliance when the value of all the variables under study is zero.

Although studies relating decolonizing of education to self-reliance are rare, many studies have been done in Africa and other formerly colonized societies on decolonization of education through integration of aspects of indigenous education

into contemporary education systems. The findings in this study are supported by findings from similar studies carried out in Kenya and in other parts of the world. In an examination on the role of African indigenous knowledge systems in promoting the relevance of higher education in South Africa, Kaya and Seleti (2013) concluded that the western approach to higher education in Africa was too abstract and had created an inconsistency between learning and living among graduates by making higher education too distant from the developmental challenges facing the surrounding communities. They suggested that the holistic and community-based nature of AIKs could help to mitigate this contradiction due to its emphasis on the fusion between theory and practice including the importance of using local languages in social practice, teaching, and learning. Hamilton-Ekeke and Dorgu (2015) postulate that elevation of indigenous methods of education and the inclusion of traditional knowledge enables those in Western and post-colonial societies to re-evaluate the inherent hierarchy of knowledge systems. They further observe that indigenous knowledge could contribute to solve existing problems and achieving the intended objectives of education systems which include self-reliance. Respondents were requested to suggest any challenges facing the Kenyan education system that may hinder promotion of self-reliance. The responses are summarized in Table 50

Table 50: Challenges facing Kenyan Education that may Hinder Promotion of Self-reliance

Suggestion	Percentage
Exam oriented curriculum/system, emphasis on grades rather than competencies	15.3%
Exam malpractices and cheating	4.2%
Inappropriate curriculum, content does not reflect situation in societies, rigid or shallow curriculum	10.2%
Inappropriate teaching methods	5.9%
Curriculum oriented towards white collar jobs	5.1%
Curriculum emphasizes theory rather than practical skills; education is too theoretical	20.3%
Education focuses on attainment of certificates	3.4%
Inadequate learning resources/instructional materials, facilities, infrastructure	15.3%
Inadequate teachers/personnel	7.6%
Inadequate exposure to technical skills and real-life situations, poor linkage to skills industry, poor nurturing of talents	12.7%

Results presented on Table 50 indicate that majority of the respondents (20.3%) suggested the fact that curriculum emphasizes theory rather than practical skills or that education is too theoretical as one of the key challenges facing Kenyan education and which may hinder promotion of self-reliance. Exam-oriented curriculum/system where emphasis is on grades rather than competencies was suggested by 15.3% of the respondents. Another 15.3% of the respondents pointed at inadequate learning resources/instructional materials, facilities and infrastructure as another major challenge facing the Kenyan education system and which could hinder self-reliance among students. Inadequate exposure to technical skills and real-life situations, poor linkage to skills industry and poor nurturing of students was cited by 12.7% of the respondents. Other challenges identified by respondents include "Inappropriate curriculum, content does not reflect situation in societies, rigid or shallow curriculum" (10.2%), "Inadequate teachers/personnel" (7.6%), "Inappropriate teaching methods" (5.9%), and "Curriculum oriented towards white collar jobs" (5.1%). A few respondents (4.2%) identified exam malpractices and cheating while other identified the fact that education focuses on attainment of certificates (3.4%) as other possible challenges in the education system that may hinder self-reliance among students in Kenya.

Other researchers have identified similar challenges to self-reliance in the Kenyan education system. Ambaa (2015) cited irrelevancy of the 8-4-4 curriculum matter to the learner's daily life, inadequate teaching facilities and examination-oriented methods of instruction that contradicted the initial objective for equipping the learner with vocational skills. In a study examining the teaching and learning resources related challenges facing small and medium-sized public secondary schools in Kenya, Makori and Onderi (2014) found that many schools lacked teaching and learning resources such as libraries, laboratories, textbooks, classrooms, furniture, and sports facilities. In a study on factors affecting students' performance in Art and Design in Nairobi County, Kenya, Otati (2013) found that basic materials, tools and equipment, sufficient and equipped art rooms, textbooks and reference materials were insufficient for teaching/learning Art and design in schools.

Respondents were requested to suggest additional African indigenous education practices that could be integrated into the Kenyan education system to promote self-reliance among students. Their responses are presented in Table 51

Table 51: African Indigenous Education Practices that may Promote Self-reliance

Suggestion	%
Including local agricultural activities in curriculum/Enhancing agriculture education	8.4%
Focusing on learners' talents and interest, early identification of potentialities, Focus on creativity	14.5%
Learning through apprenticeship, observation, mentorship, On job training, involvement of experts with hands on skills	18.1%
Focusing on practical skills/work rather than theory, subjects that enhance creativity, inclusion of technical subjects	37.3%
Communal approach to teaching, community involvement, community specific knowledge, training based on community needs	13.3%
Hands on approach to learning, focus on solving day to day problems	8.4%

Results on Table 51 reveal that majority of the respondents (37.3%) suggested that focusing on practical skills/work rather than theory, including subjects that enhance creativity and technical subjects in the curriculum as an African indigenous education practice that may promote self-reliance. Learning through apprenticeship, observation, mentorship, on job training, involvement of experts with hands on skills was suggested by 18.1% of the respondents. 14.5% of the respondents suggested focusing on learner's talents and interest, early identification of potentialities, and focus on creativity as another practice from indigenous African education that may promote self-reliance. Communal approach to teaching, community involvement, community specific knowledge, and training based on community needs was proposed by 13.3% of the respondents. Other practices suggested by respondents as capable of promoting self-reliance include hands on approach to learning, focus on solving day to day problems (8.4%) and Including local agricultural activities in curriculum/Enhancing agriculture education (8.4%).

The suggestions made by respondents in this study are in consonance with Omolewa (2007) who suggested proposed contextualization of teaching and learning as a means to strengthen and develop the links between the learning environments of school, home and community. He further suggested adoption of different African traditional

modes of education, which allow learners to integrate their own learning experiences with the school programme. Agriculture was identified as a potential unifying theme in the integration of indigenous education into contemporary education to solve modern challenges including self-reliance (Omolewa, 2007). Ambaa (2015) suggests that teaching in learning institutions in Kenya should be related to the learner's interest and experience and that development of the inherent talents that individuals possess would be vital in realizing self-reliance as an aim of education. Akinpelu (2005), suggested that work should be effectively integrated into the school curriculum through increase in practical productive work if self-has to be achieved in Nigeria

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of the Findings

The purpose of this study was to establish the influence of decolonizing the Kenyan education system on self-reliance among students. This study utilized the descriptive survey design and the correlational research design. Since in this study both the causal effects of relationships as well as the extent to which the combination of independent variables influence the outcome of the self-reliance was desired, then both descriptive research design and correlational research design was the most suitable for the study. A sample size of 384 respondents made up of 60 members of Academic staff and 324 fourth year bachelor of education students in public and private universities was selected to participate in the study. The research instrument used for data collection included questionnaires and interview schedules.

The first objective of the study was to determine the extent to which decolonizing curriculum promotes self-reliance among students in the Kenyan education system. Decolonizing curriculum was conceived in this study in terms of integration of elements of African indigenous curriculum into the contemporary curriculum. It was revealed that the contemporary Kenyan curriculum features aspects that would promote self-reliance only to a moderate extent. Decolonizing curriculum in the Kenyan education system through integration of aspects of the African indigenous curriculum was found to promote self-reliance to a large extent. Teaching subjects that that develop practical skills received the highest mean score. Inclusion of indigenous knowledges in the curriculum and the contextualization of curriculum were revealed as capable of promoting self-reliance among students. Decolonizing curriculum is statistically significantly correlated with self-reliance among students in the Kenyan education system. Variation in self-reliance can be accounted for by decolonizing curriculum in the regression model. The hypothesis that there was no significant relationship between decolonizing curriculum and self-reliance was not supported in the current study.

The second objective of the study was to establish the influence of decolonizing pedagogical approaches on self-reliance among students in the Kenyan education

system. The overall mean for the contemporary pedagogical approaches was 2.57 meaning that the pedagogical approaches do not promote self-reliance among students. The overall mean for the African indigenous pedagogical approaches was 3.84 showing that respondents rated the integration of selected elements of African indigenous pedagogical approaches as capable of improving the education system to a large extent. Changing the role of the student from a passive receiver of knowledge to a reflective thinker and problem solver received the highest mean score. Learning practical skills from experts received the lowest mean score. Decolonizing pedagogical approaches and self-reliance among students in the Kenyan education system were statistically significantly correlated. From the regression model a significant variation in self-reliance can be accounted for by decolonizing pedagogical approaches. The hypothesis that there was no significant relationship between decolonizing pedagogical approaches and self-reliance was not supported in the current study.

The third objective of the study was to determine the extent to which decolonizing school environment promotes self-reliance among students in the Kenyan education system. The overall mean for the contemporary school environment was 2.37 meaning that the contemporary school environment does not promote self-reliance among students. The overall mean for the African indigenous school environment was 3.81 showing that respondents rated the integration of selected elements of African school environment as capable of improving the Kenyan curriculum to a large extent. Teachers playing role of mentor, coach and trainer received the highest mean score. It was suggested that the colonial type of school environment that portrayed the teacher as superior, powerful, and with privilege to use punitive methods of social control should be eliminated to allow for a friendlier environment that allows a subject-subject interaction between teachers and learners in the model of African indigenous education. Decolonizing school environment and self-reliance were found to be statistically significantly correlated. From the regression model, variation in self-reliance can be accounted for by decolonizing school environment. The null hypothesis was not supported and it was concluded that decolonizing school environment had a statistically significant relationship with self-reliance among students in the Kenyan education system

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The fourth objective of the study was to establish the extent to which decolonizing evaluation promotes self-reliance among students in the Kenyan education system. The overall mean for the contemporary Kenyan evaluation was 2.71 meaning that the Kenyan evaluation only promotes self-reliance to a moderate extent. The overall mean for the African indigenous curriculum was 3.96 showing that respondents rated the integration of selected elements of African indigenous evaluation as capable of improving the Kenyan education system to a large extent. Embracing tests that measure problem solving skills and creativity rather than memory was highly rated for promoting self-reliance. It was suggested that laying more emphasis on the practical aspects of learning, and basing evaluation more on measuring of skills acquired by learners rather than theoretical tasks would promote self-reliance. Decolonizing evaluation and self-reliance among students in the Kenyan education system were statistically significantly correlated. From the regression model a significant variation in self-reliance can be accounted for by decolonizing evaluation. The hypothesis that there was no significant relationship between decolonizing evaluation and self-reliance was not supported in the current study.

5.2 Conclusions

Making inferences from the findings resulting from the quantitative and qualitative data collected for this study, the results reveal some vital facts upon which the conclusions are based. One of the things we can infer from this study is that decolonizing the Kenyan education would have a positive influence on self-reliance among students.

The study revealed that decolonizing curriculum in the Kenyan education system through integrating aspects of the indigenous African curriculum had significant relationship with self-reliance among students. Teaching subjects that develop practical skills, those that promote creativity among learners and those that promote hands-on experiences received the highest mean scores. Presenting learners with a curriculum that instills skills to exploit their immediate environments was also highly rated in promoting self-reliance.

The study showed that decolonizing the pedagogical approaches in the Kenyan education system through integrating elements of African indigenous education into the contemporary pedagogical approaches had significant relationship with self-reliance. Changing role of student from passive receiver of knowledge to a reflective thinker and problem solver as well as laying more emphasis on practical rather than theoretical learning had the highest mean scores. Teachers' insisting more on demonstration rather than explanation was also rated well for promoting self-reliance among students.

It was revealed in the study that decolonizing school environment had significant relationship with self-reliance. Integrating aspects of indigenous African learning environment such as teachers playing the role of mentor, coach and trainer as well as embracing an education that focuses more on the individual learner rather than the group were highly rated.

The study revealed that decolonizing evaluation through integrating of aspects of African indigenous evaluation into the contemporary Kenyan evaluation has a significant relationship with self –reliance. Embracing tests that measure problem solving skills and creativity rather than memory, and the attitude of attaching more value on acquisition of knowledge and skills rather than performance in examinations and certificates, received the highest mean scores. Laying emphasis on skills and knowledge attainment rather than assessment for selection to higher levels of education was also highly rated.

5.3 Recommendation

Based on the findings of the current study, the researcher made the following recommendations:

i.   There is need for decolonization of the contemporary curriculum in Kenya. This could be done by integrating Indigenous knowledges into the curriculum, having a curriculum that is work oriented, emphasizes communal work, nurtures creativity and develops talents of learners from an early age.

ii. Pedagogical approaches used by instructors at all levels in the Kenyan education system need to be decolonized. To promote self-reliance, aspects of

African indigenous education such as laying emphasis on practical skills rather than theory, changing the role of the student from a passive receiver of knowledge to a reflective thinker and problem solver as well as making lessons learner-centred needs to be embraced.

iii. To promote self-reliance, there is need to decolonize the contemporary school environment in Kenya. A social environment where the teacher plays the role of a mentor, coach and trainer and where focus is placed on the individual learner rather than the group is recommended.

iv. There is need to embrace evaluation modelled along the lines of African indigenous education where focus is on measuring problem solving skills, creativity and independence rather than memory and acquisition of academic certificates.

v. There is need to embrace the African practice of wholesome moulding of each child into a functional and self-reliant member of family and the community in which all members of the community participate in the education of children.

5.4 Suggestions for Further Research

Arising from some of the implications and limitations of this study, recommendations for further study are made:

i. An investigation on the institutional and community-based challenges to decolonization of education in Kenya.

ii. A comparative study on the prospects of integration of African indigenous knowledges in urban and rural school in Kenya.

iii. To establish the influence of ICT on self-reliance among students in East Africa.

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APPENDICES

Appendix I

The Size of Randomly Chosen Sample

The table for determining the size of a randomly chosen sample for a given population of N cases such that the sample proportion is within + 0.05 of the population within a 95% level of confidence.

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	241	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

N=Population size; S= Sample size

Source: Kathuri and Pals (1993).

Appendix II

Questionnaire for Students

Self-reliance is an important value for all individuals in the Kenyan society today. This study seeks to establish how the Kenyan education system can be decolonized by integrating practices of African Indigenous education into contemporary education in order to promote self-reliance among students. The information you provide will be accepted and treated with strict confidentiality. It will be used only for the purposes of this study. You are requested to answer the following questions as honestly as possible.

SECTION A: Respondent's Personal Information

Instructions: tick (ᵛ) or complete where appropriate.

1. (a) Gender. Male [   ]   Female [   ]

(b) Category of university: Private [   ]   Public [   ]

(c) Age bracket [ ]below 21 [ ]22-24years [ ]25-28 years   [ ]29-35 years   [ ] over 35 year

(d) Religion/Denomination [   ] Catholic [   ] Protestant [   ] Muslim [   ] Hindu   [   ] Indigenous

   Others (specify)………………….

2. (a) Pease indicate your area of specialization in education

[   ] Arts subjects

[   ] science subjects

[   ] Agriculture/AGED

[   ] Technical subjects

[   ] Early Childhood education

[   ] Others, Specify……………………………………………………………

  (b) Please indicate category of secondary school attended

[   ] National school

[   ] Extra county schools

[   ] County schools

[   ] Day school

[   ]Private school

(c) Please indicate type of school attended

[ ] Boarding schools

[ ] Day schools

3(a). Rate the extent to which you agree with the following statements about curriculum in the Kenyan education using a scale of **SD** – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree

	Statement	SD	D	N	A	SA
i	Curriculum focuses on community-centred knowledge and skills					
ii	Music and drama are highly encouraged in educational institutions					
iii	Students have ample time to participate in communal programmes					
iv	Technical subjects feature prominently in the education system					
v	Subjects in the education system enable learners to explore their creativity					
vi	Content of curriculum enables students to develop their potential and talents.					
vii	There's a wide variety of subjects provided in the education system					
viii	Students are exposed to a work-oriented curriculum					
ix	Subjects taught in the education system enable students develop strong self-esteem					
x	Content of curriculum nurtures spirit of independence					
xi	Choice of subjects to study is not entirely made by learners					
xii	Content of subjects taught in educational institutions is derived from the immediate/local environment					
xiii	Kenyan curriculum exposes learners to the world of work					
xiv	Students are presented with a challenging curriculum designed to develop independent thinking.					

3(b) Rate the extent to which the following ways of integrating an African curriculum could enhance the Kenyan education system using a scale of **NE** – To no extent; SE – To a small extent; **N** – Neutral; **LE** – To a large extent; and **VLE** – To a very large extent;

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	Statement	NE	SE	N	LE	VLE
i.	Aligning content to immediate needs of society					
ii.	Teaching subjects that develop practical skills					
iii.	Teaching subjects that emphasize hands-on experiences					
iv.	Emphasizing on individual talents in the choice of subjects					
v.	Teaching subjects that promote creativity among learners					
vi.	Presenting learners with a curriculum that instills skills to exploit their immediate environment					
vii.	Focusing on the local environment as the main source of content for the curriculum					
viii.	Integrating objectives of African indigenous education in the curriculum					
ix.	Involvement of local communities in curriculum development					

3(c) Suggest other strategies that may be used to improve the curriculum in the Kenyan education system

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SECTION C: Pedagogical Approaches

4 (a). To what extent do you agree with the following statements about pedagogical approaches (teaching and learning methods) used in the Kenyan education using a scale of **SD** – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree

	Statement	SD	D	N	A	SA
i.	Teachers use group discussions effectively					
ii.	The lecture method of teaching is not common in our school classrooms					
iii.	There is extensive use of experimentation in Kenyan school classrooms					
iv.	There is effective use of field study in the Kenyan education system					
v.	Resource persons are often used in classrooms					

vi.	Teachers allow learners to learn through discovery					
vii.	Teachers assign projects to learners					
viii.	"Role play" is often used to explain concepts in classrooms					
ix.	Teachers encourage problem solving skills rather than memorizing of facts by learners.					
x.	Learners choose what to learn and how to learn it.					
xi.	Teachers focus on acquisition of competence, not coverage of syllabus					
xii.	Teachers spend more time on practical lessons than on theory.					

4(b) Rate the extent to which the following ways of integrating African indigenous pedagogical approaches could enhance the Kenyan education system using a scale of **NE** – To No Extent; **SE** – To a small extent; **N** – Neutral; **LE** – To a large extent; and **VLE** – To a very large extent;

	Statement	NE	SE	N	LE	VLE
i.	Learning practical skills from experts					
ii.	Having teachers who take a close personal interest in the learner					
iii.	Teachers seeing students as people who must be nurtured					
iv.	Changing role of student from passive receiver of knowledge to a reflective thinker and problem solver					
v.	Making student actively involved in his/her own learning					
vi.	Having teachers who are not transmitters of knowledge but facilitators of learning					
vii.	Embracing parents, members of community and various experts as potential teachers for students					
viii.	Insisting more on demonstration rather than explanation					
ix.	Laying more emphasis on practical rather than theoretical learning					

4 (c) suggest aspects of teaching/learning methods used in Kenyan schools that may limit development of self-reliant learners

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SECTION D: School Environment

5(a) Kindly rate the following factors/statements using a scale of **SD** – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree

	Statement	SD	D	N	A	SA
i	There are enough library facilities for students to study independently.					
ii	Farms in educational institutions are well developed for learners to practice agriculture					
iii	Schools have adequate Art rooms, music rooms, computer labs and workshops					
iv	There is a good variety of equipment and instruments for learning practical subjects in educational institutions					
v	Educational institutions have manageable numbers of learners in classrooms					
vi	Free interactions exist between learners and teachers in Educational institutions					
vii	Dorms and classes are not congested					
viii	Teachers do not control School routines					
ix	Students decide what to do and when to do it mainly on their own.					
x	There is no elaborate routine for all the days of the week in Educational institutions					

5(b) Rate the extent to which the following ways of integrating the African indigenous learning environment could enhance the Kenyan education system using a scale of **NE** – To no extent; SE – To a small extent; **N** – Neutral; **LE** – To a large extent; and **VLE** – To a very large extent;

	Statement	NE	SE	N	LE	VLE
i.	Having flexible routines in Educational institutions					
ii.	Having teaching and learning resources that reflect the learners' culture and local environment					
iii.	Encouraging a social environment of unity and collective responsibility					
iv.	Having an environment where teacher and students view each other as partners in the learning process					

v.	Teachers engage learners in a one-on- one relationship rather than as groups of learners					
vi.	Teachers playing role of mentor, coach and trainer					
vii.	Embracing an education that focuses more on the individual learner rather than the group					

5(c) Suggest school environment challenges that may limit the Kenyan education system in its aim of preparing learners for self-reliance.

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SECTION E: Evaluation

This section contains statements regarding evaluation in the Kenyan education systems

6 (a) Kindly rate the following factors/statements using a scale of **SD** – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree

	Statement	**SD**	**D**	**N**	**A**	**SA**
i	Cheating in exams is not common					
ii	Most examinations are not in the form of written tests					
iii	Most concepts are assessed using practical tests					
iv	Teachers judge learner's performance by observing them work					
v	Exams test ability to solve problems rather than memory					
vi	Teachers use a wide variety of methods to assess learners' performance					
vii	Learners do not spend a lot of time revising for written tests					
viii	Parents and teachers do not attach great value to examination results					
ix	Tests adequately measure learners' skills and potentialities					
x	Teachers prompt learners to think in their tests					
xi	Tests measure more than theoretical attainment of learners					
xii	Assessment tasks allow students to exhibit higher-order thinking.					
xiii	Tests require evidence of understanding, not just recall.					
xiv	Tests encourage creativity					

6(b) Rate the extent to which the following ways of integrating African indigenous evaluation could enhance the Kenyan education system using a scale of **VLE** – To a very large extent; **LE** – To a large extent; **N** – Neutral; **SE** – To a small extent; and **NE** – To no extent

	Statement	NE	SE	N	LE	VLE
i.	Having evaluation procedures which mainly measure acquisition of relevant skills and knowledge					
ii.	Having evaluation procedures that gradually test learner's achievement over long periods					
iii.	Having tests that measure practical abilities rather than theoretical attributes					
iv.	Having tests that measure learner's ability to think and solve problems rather than ability to memorize facts					
v.	Using a wide variety of assessment for measuring attainment rather than single final exams					
vi.	Attaching more value on acquisition of knowledge and skills rather than performance in exams and certificates					
vii.	Embracing tests that test problem solving and creativity rather than memory.					
viii.	Laying emphasis on skills and knowledge attainment rather than assessment for selection to higher levels of education					

6 (c) Suggest strategies that may be used to enhance evaluation in the Kenyan education system in order to prepare students for self-reliance

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SECTION F: Self-reliance

This section contains statements regarding self-reliance and the Kenyan education system.

7(a). Kindly rate the following factors/statements using a scale of **SD** – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree

	Statement	SD	D	N	A	SA
i.	Learners leave the education system capable of living independently					
ii.	Most graduates can survive without wage employment					
iii.	Graduates of the education system are highly creative and versatile enough to perform many different tasks.					
iv.	Graduates have great confidence in their own capabilities					
v.	Graduates of education system can work independently without supervision					
vi.	Graduates would rather create jobs for themselves rather than go out seeking for jobs ("tarmacking")					
vii.	Graduates can live without relying on other people					
viii.	Most graduates prefer self-employment to wage employment					
ix.	Graduates have enough skills to survive in a world that faces shrinking job opportunities					
x.	Graduates do not continue receiving support from Parents and guardians after graduation					
xi.	Graduates have skills needed in the community					
xii.	Graduates of the school system have high self-esteem					
xiii.	Educational institutions identify and develop learners' potentialities					
xiv.	Graduates of Educational institutions can survive in any environment					
xv.	Graduates have sufficient knowledge and skills to go into self-employment.					

8. Suggest any challenges facing the Kenyan education system that may hinder promotion of self-reliance among students

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9. **S**uggest African indigenous education practices that could be integrated into the Kenyan education system to promote self-reliance among learners

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Questionnaire for Academic Staff

 Self-reliance is an important value for all individuals in the Kenyan society today. This study seeks to establish how the Kenyan education system can be decolonized by integrating practices of African Indigenous education into contemporary education in order to promote self-reliance among students. The information you provide will be accepted and treated with strict confidentiality. It will be used only for the purposes of this study. You are requested to answer the following questions as honestly as possible.

SECTION A: Respondent's Personal Information
Instructions: tick (ᵛ) or complete where appropriate.

1.(a) Gender. Male [   ]   Female [   ]

(b) Category of university: Private [   ]   Public [   ]

2. (a) Pease indicate your level

      [ ] Full professor

      [ ] Associate Professor

      [ ] Senior Lecturer

      [ ] Lecturer

      [ ] Assistant Lecturer

  (b) Please indicate your area of specialization

      [ ] Education foundations

      [ ] Curriculum Development

      [ ] Educational Management, planning, Economics

      [ ] Educational psychology

      [ ] Educational Technology

      [ ] Others…..Specify……………………………………………………..

(c) Please indicate your years of experience in teaching at all levels

[ ]below 5 years   [ ]6-10years   [ ]11-15 years   [ ]16-20 years   [ ]over 21 years

3(a). Rate the extent to which you agree with the following statements about curriculum in the Kenyan education using a scale of **SD** – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree

	Statement	SD	D	N	A	SA
i	Curriculum focuses on community-centred knowledge and skills					
ii	Music and drama are highly encouraged in educational institutions					
iii	Students have ample time to participate in communal programmes					
iv	Technical subjects feature prominently in the education system					
v	Subjects in the education system enable learners to explore their creativity					
vi	Content of curriculum enables students to develop their potential and talents.					
vii	There's a wide variety of subjects provided in the education system					
viii	Students are exposed to a work-oriented curriculum					
ix	Subjects taught in the education system enable students develop strong self-esteem					
x	Content of curriculum nurtures spirit of independence					
xi	Choice of subjects to study is not entirely made by learners					
xii	Content of subjects taught in educational institutions is derived from the immediate/local environment					
xiii	Kenyan curriculum exposes learners to the world of work					
xiv	Students are presented with a challenging curriculum designed to develop independent thinking.					

3(b) Rate the extent to which the following ways of integrating an African curriculum could enhance the Kenyan education system using a scale of **NE** – To no extent; SE – To a small extent; **N** – Neutral; **LE** – To a large extent; and **VLE** – To a very large extent;

	Statement	NE	SE	N	LE	VLE
i.	Aligning content to immediate needs of society					
ii.	Teaching subjects that develop practical skills					
iii.	Teaching subjects that emphasize hands-on experiences					
iv.	Emphasizing on individual talents in the choice of subjects					
v.	Teaching subjects that promote creativity among learners					
vi.	Presenting learners with a curriculum that instills skills to exploit their immediate environment					
vii.	Focusing on the local environment as the main source of content for the curriculum					
viii.	Integrating objectives of African indigenous education in the curriculum					

		SD	D	N	A	SA
ix.	Involvement of local communities in curriculum development					

3(c) Suggest other strategies that may be used to improve the curriculum in the Kenyan education system

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SECTION C: Pedagogical Approaches

4 (a). To what extent do you agree with the following statements about pedagogical approaches (teaching and learning methods) used in the Kenyan education using a scale of **SD** – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree

	Statement	SD	D	N	A	SA
i.	Teachers use group discussions effectively					
ii.	The lecture method of teaching is not common in our school classrooms					
iii.	There is extensive use of experimentation in Kenyan school classrooms					
iv.	There is effective use of field study in the Kenyan education system					
v.	Resource persons are often used in classrooms					
vi.	Teachers allow learners to learn through discovery					
vii.	Teachers assign projects to learners					
viii.	"Role play" is often used to explain concepts in classrooms					
ix.	Teachers encourage problem solving skills rather than memorizing of facts by learners.					
x.	Learners choose what to learn and how to learn it.					
xi.	Teachers focus on acquisition of competence, not coverage of syllabus					
xii.	Teachers spend more time on practical lessons than on theory.					

4(b) Rate the extent to which the following ways of integrating African indigenous pedagogical approaches could enhance the Kenyan education system using a scale of **NE** – To No Extent; SE – To a small extent; **N** – Neutral; **LE** – To a large extent; and **VLE** – To a very large extent;

	Statement	NE	SE	N	LE	VLE
i.	Learning practical skills from experts					
ii.	Having teachers who take a close personal interest in the					

		SD	D	N	A	SA
	learner					
iii.	Teachers seeing students as people who must be nurtured					
iv.	Changing role of student from passive receiver of knowledge to a reflective thinker and problem solver					
v.	Making student actively involved in his/her own learning					
vi.	Having teachers who are not transmitters of knowledge but facilitators of learning					
vii.	Embracing parents, members of community and various experts as potential teachers for students					
viii.	Insisting more on demonstration rather than explanation					
ix.	Laying more emphasis on practical rather than theoretical learning					

4 (c) suggest aspects of teaching/learning methods used in Kenyan schools that may limit development of self-reliant learners

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SECTION D: School Environment

5(a) Kindly rate the following factors/statements using a scale of SD – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree

	Statement	SD	D	N	A	SA
i	There are enough library facilities for students to study independently.					
ii	Farms in educational institutions are well developed for learners to practice agriculture					
iii	Schools have adequate Art rooms, music rooms, computer labs and workshops					
iv	There is a good variety of equipment and instruments for learning practical subjects in educational institutions					
v	Educational institutions have manageable numbers of learners in classrooms					
vi	Free interactions exist between learners and teachers in Educational institutions					
vii	Dorms and classes are not congested					
viii	Teachers do not control School routines					
ix	Students decide what to do and when to do it mainly on their own.					
x	There is no elaborate routine for all the days of the week in Educational institutions					

5(b) Rate the extent to which the following ways of integrating the African indigenous learning environment could enhance the Kenyan education system using a scale of **NE** – To

no extent; SE – To a small extent; **N** – Neutral; **LE** – To a large extent; and **VLE** – To a very large extent;

	Statement	NE	SE	N	LE	VLE
i.	Having flexible routines in Educational institutions					
ii.	Having teaching and learning resources that reflect the learners' culture and local environment					
iii.	Encouraging a social environment of unity and collective responsibility					
iv.	Having an environment where teacher and students view each other as partners in the learning process					
v.	Teachers engage learners in a one-on- one relationship rather than as groups of learners					
vi.	Teachers playing role of mentor, coach and trainer					
vii.	Embracing an education that focuses more on the individual learner rather than the group					

5(c) Suggest school environment challenges that may limit the Kenyan education system in its aim of preparing learners for self-reliance.

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SECTION E: Evaluation

This section contains statements regarding evaluation in the Kenyan education systems

6 (a) Kindly rate the following factors/statements using a scale of **SD** – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree

	Statement	SD	D	N	A	SA
i	Cheating in exams is not common					
ii	Most examinations are not in the form of written tests					
iii	Most concepts are assessed using practical tests					
iv	Teachers judge learner's performance by observing them work					
v	Exams test ability to solve problems rather than memory					
vi	Teachers use a wide variety of methods to assess learners' performance					
vii	Learners do not spend a lot of time revising for written tests					
viii	Parents and teachers do not attach great value to examination results					
ix	Tests adequately measure learners' skills and potentialities					
x	Teachers prompt learners to think in their tests					
xi	Tests measure more than theoretical attainment of learners					
xii	Assessment tasks allow students to exhibit higher-					

	order thinking.				
xiii	Tests require evidence of understanding, not just recall.				
xiv	Tests encourage creativity				

6(b) Rate the extent to which the following ways of integrating African indigenous evaluation could enhance the Kenyan education system using a scale of **VLE** – To a very large extent; **LE** – To a large extent; **N** – Neutral; **SE** – To a small extent; and **NE** – To no extent

	Statement	NE	SE	N	LE	VLE
i.	Having evaluation procedures which mainly measure acquisition of relevant skills and knowledge					
ii.	Having evaluation procedures that gradually test learners achievement over long periods					
iii.	Having tests that measure practical abilities rather than theoretical attributes					
iv.	Having tests that measure learners ability to think and solve problems rather than ability to memorize facts					
v.	Using a wide variety of assessment for measuring attainment rather than single final exams					
vi.	Attaching more value on acquisition of knowledge and skills rather than performance in exams and certificates					
vii.	Embracing tests that test problem solving and creativity rather than memory.					
viii.	Laying emphasis on skills and knowledge attainment rather than assessment for selection to higher levels of education					

6 (c) Suggest strategies that may be used to enhance evaluation in the Kenyan education system in order to prepare students for self-reliance

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SECTION F: Self-reliance

This section contains statements regarding self-reliance and the Kenyan education system.

7(a). Kindly rate the following factors/statements using a scale of **SD** – Strongly Disagree; **D** – Disagree; **N** – Neutral; **A** – Agree; and **SA** – Strongly Agree

	Statement	SD	D	N	A	SA
i.	Learners leave the education system capable of living independently					
ii.	Most graduates can survive without wage employment					

iii.	Graduates of the education system are highly creative and versatile enough to perform many different tasks.					
iv.	Graduates have great confidence in their own capabilities					
v.	Graduates of education system can work independently without supervision					
vi.	Graduates would rather create jobs for themselves rather than go out seeking for jobs ("tarmacking")					
vii.	Graduates can live without relying on other people					
viii.	Most graduates prefer self-employment to wage employment					
ix.	Graduates have enough skills to survive in a world that faces shrinking job opportunities					
x.	Graduates do not continue receiving support from Parents and guardians after graduation					
xi.	Graduates have skills needed in the community					
xii.	Graduates of the school system have high self-esteem					
xiii.	Educational institutions identify and develop learners potentialities					
xiv.	Graduates of Educational institutions can survive in any environment					
xv.	Graduates have sufficient knowledge and skills to go into self-employment.					

8. Suggest any challenges facing the Kenyan education system that may hinder promotion of self-reliance among students

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9. **S**uggest African indigenous education practices that could be integrated into the Kenyan education system to promote self-reliance among learners

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Appendix IV

Interview

The study participants will be asked the following questions relating to self-reliance, and decolonization of the Kenyan education system.

Self-reliance

1. What are the key points in making sense of self-reliance?

2. What are the key strengths in the Kenyan education system in promoting self-reliance

3. What are the key Challenges in the Kenyan education system in promoting self-reliance

4. What would be the influence of integrating curriculum aspects of the African indigenous education into the Kenyan education system as a way of promoting self-reliance among students?

5. What would be the influence of integrating African indigenous education pedagogical approaches into the Kenyan education system as a way of promoting self-reliance among students?

6. What would be the influence of integrating aspects of African indigenous education learning environment into the Kenyan education system as a way of promoting self-reliance among students?

7. What would be the influence of integrating indigenous education evaluation procedures into the Kenyan education system as a way of promoting self-reliance among students?

Appendix V

Chuka University Ethics Committee Clearance Letter

INSTITUTIONAL ETHICS REVIEW COMMITTEE

Our Ref: CU/IERC/NCST/18/77   11th October, 2018

THE CHIEF EXECUTIVE OFFICER
NATIONAL COMMISION FOR SCIENCE, TECHNOLOGY AND INNOVATION
P.O. BOX 30623-00100
NAIROBI

Dear Sir/Madam,

<u>RE: RESEARCH CLEARANCE AND AUTHORIZATION FOR JAMES MWENDA
MURIUNGI. REG NO ED17/14153/14</u>

The above matter refers:

The Institutional Ethics Review Committee of Chuka University met and reviewed the Research
Proposal for the above named titled: Kenyan Education System and Self- Reliance: a
Decolonizing Perspective" The Supervisors are Prof. Njoki Wane and Prof. George Muthaa

The candidate has amended the issues which were highlighted in the check list, the permit should
therefore be issued.

Attached please find copies of the minutes, research clearance and authorization check list for
your perusal. Kindly assist the student get the research permit.

Yours faithfully,

Prof. Adiel Magana
CHAIR
INSTITUTIONAL ETHICS REVIEW COMMITTEE
cc: BPGS

NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION

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2241349,3310571,2219420
Fax:+254-20-318245,318249
Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/18/39679/26356**

Date: **3rd November, 2018**

James Mwenda Murungi
Chuka University,
P. O. Box 109-60400
CHUKA.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *"Kenyan education system and self-reliance: A decolonizing perspective"* I am pleased to inform you that you have been authorized to undertake research in **all Counties** for the period ending **30th October, 2019.**

You are advised to report to **the County Commissioners and the County Directors of Education, all Counties** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioners
All Counties.

The County Directors of Education
All Counties.

Appendix VII

NACOSTI Permit

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

National Commission for Science, Technology and innovation
P.O. Box 30623 – 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245
Email: dg@nacosti.go.ke, registry@nacosti.go.ke
Website: www.nacosti.go.ke

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH LICENSE

Serial No.A 21687

CONDITIONS: see back page

THIS IS TO CERTIFY THAT:
MR. JAMES MWENDA MURUNGi
of CHUKA UNIVERSITY, 0-60200
MERU, has been permitted to conduct
research in *All Counties*

on the topic: *KENYAN EDUCATION SYSTEM AND SELF-RELIANCE: A DECOLONIZING PERSPECTIVE*

for the period ending:
30th October, 2019

Permit No : NACOSTI/P/18/39679/26356
Date Of Issue : 3rd November, 2018
Fee Recieved : Ksh 2000

....
Applicant's Signature

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

194

Table A1: Academic Staff Opinion on Self-Reliance

Statement	N	Mean	S.D
Learners leave the education system capable of living independently	60	2.20	1.005
Most graduates can survive without wage employment	60	2.05	0.982
Graduates of the education system are highly creative and versatile enough to perform many different tasks.	60	2.05	0.910
Graduates have great confidence in their own capabilities	60	2.42	0.944
Graduates of education system can work independently without supervision	60	2.38	1.010
Graduates would rather create jobs for themselves rather than go out seeking for jobs ("tarmacking")	60	2.27	1.191
Graduates can live without relying on other people	60	2.52	1.172
Most graduates prefer self-employment to wage employment	60	2.03	0.956
Graduates have enough skills to survive in a world that faces shrinking job opportunities	60	2.33	1.084
Graduates do not continue receiving support from Parents and guardians after graduation	60	2.40	1.138
Graduates have skills needed in the community	60	2.53	1.065
Graduates of the school system have high self-esteem	60	2.58	0.996
Educational institutions identify and develop learners potentialities	60	2.40	1.028
Graduates of Educational institutions can survive in any environment	60	2.42	1.062
Graduates have sufficient knowledge and skills to go into self-employment.	59	2.37	1.081
Overall Mean Score	59	2.33	

Table A2: Student's Opinion on Self-Reliance

Statement	N	Mean	S.D
Learners leave the education system capable of living independently	324	2.52	1.223
Most graduates can survive without wage employment	324	2.58	1.270
Graduates of the education system are highly creative and versatile enough to perform many different tasks.	324	2.88	1.236
Graduates have great confidence in their own capabilities	324	3.12	1.175
Graduates of education system can work independently without supervision	324	3.06	1.214
Graduates would rather create jobs for themselves rather than go out seeking for jobs ("tarmacking")	324	3.02	1.308
Graduates can live without relying on other people	324	2.93	1.161
Most graduates prefer self-employment to wage employment	324	2.85	1.307
Graduates have enough skills to survive in a world that faces shrinking job opportunities	324	2.80	1.227
Graduates do not continue receiving support from Parents and guardians after graduation	324	2.95	1.214
Graduates have skills needed in the community	324	3.13	1.156
Graduates of the school system have high self-esteem	324	3.20	1.179
Educational institutions identify and develop learners potentialities	324	3.03	1.248
Graduates of Educational institutions can survive in any environment	324	3.03	1.223
Graduates have sufficient knowledge and skills to go into self-employment.	324	3.10	1.269
Overall Mean Score		2.95	

Table A3: Academic Staff Opinion on Contemporary Curriculum

Statement	N	Mean	S.D
Curriculum focuses on community-centred knowledge and skills	60	2.68	1.186
Music and drama are highly encouraged in educational institutions	60	2.73	1.260
Students have ample time to participate in communal programmes	60	2.38	0.940
Technical subjects feature prominently in the education system	60	2.37	1.041
Subjects in the education system enable learners to explore their creativity	60	2.52	1.112
Content of curriculum enables students to develop their potential and talents.	60	2.92	1.253
There's a wide variety of subjects provided in the education system	60	3.65	1.039
Students are exposed to a work-oriented curriculum	60	2.55	1.016
Subjects taught in the education system enable students develop strong self-esteem	60	2.88	0.993
Content of curriculum nurtures spirit of independence	60	2.73	1.133
Choice of subjects to study is not entirely made by learners	60	3.57	1.198
Content of subjects taught in educational institutions is derived from the immediate/local environment	60	2.50	1.000
Kenyan curriculum exposes learners to the world of work	60	2.48	1.081
Students are presented with a challenging curriculum designed to develop independent thinking.	60	2.45	1.171
Overall Mean Score	60	2.74	

Table A4: Student's Opinion on Contemporary Curriculum

Statement	N	Mean	S.D
Curriculum focuses on community-centred knowledge and skills	323	2.67	1.225
Music and drama are highly encouraged in educational institutions	324	2.95	1.311
Students have ample time to participate in communal programmes	324	2.50	1.152
Technical subjects feature prominently in the education system	324	2.92	1.380
Subjects in the education system enable learners to explore their creativity	324	3.14	1.317
Content of curriculum enables students to develop their potential and talents.	324	3.06	1.311
There's a wide variety of subjects provided in the education system	324	3.66	1.270
Students are exposed to a work-oriented curriculum	324	2.91	1.367
Subjects taught in the education system enable students develop strong self-esteem	324	3.20	1.258
Content of curriculum nurtures spirit of independence	324	3.05	1.183
Choice of subjects to study is not entirely made by learners	324	3.18	1.362
Content of subjects taught in educational institutions is derived from the immediate/local environment	324	2.53	1.270
Kenyan curriculum exposes learners to the world of work	324	3.02	1.299
Students are presented with a challenging curriculum designed to develop independent thinking.	324	3.12	1.377
Overall Mean Score		2.99	

Table A5: Academic Staff Opinion on African Indigenous Curriculum

Statement	N	Mean	S.D
Aligning content to immediate needs of society	60	3.93	1.006
Teaching subjects that develop practical skills	60	4.12	0.904
Teaching subjects that emphasize hands-on experiences	60	4.17	1.137
Emphasizing on individual talents in the choice of subjects	60	4.20	1.054
Teaching subjects that promote creativity among learners	60	4.12	1.043
Presenting learners with a curriculum that instills skills to exploit their immediate environment	60	4.20	0.898
Focusing on the local environment as the main source of content for the curriculum	60	3.98	1.033
Integrating objectives of African indigenous education in the curriculum	60	3.57	1.254
Involvement of local communities in curriculum development	60	3.70	1.280
Overall Mean Score	60	4.00	

Table A6: Student's Opinion on African Indigenous Curriculum

Statement	N	Mean	Std. Deviation
Aligning content to immediate needs of society	324	3.61	1.218
Teaching subjects that develop practical skills	324	3.88	1.210
Teaching subjects that emphasize hands-on experiences	324	3.81	1.141
Emphasizing on individual talents in the choice of subjects	323	3.76	1.338
Teaching subjects that promote creativity among learners	324	3.88	1.184
Presenting learners with a curriculum that instills skills to exploit their immediate environment	324	3.79	1.241
Focusing on the local environment as the main source of content for the curriculum	324	3.41	1.388
Integrating objectives of African indigenous education in the curriculum	324	3.35	1.279
Involvement of local communities in curriculum development	324	3.45	1.347
Overall Mean Score		3.66	

Table A7: Academic Staff Opinion on Contemporary Pedagogical Approaches

Statement	N	Mean	S.D
Teachers use group discussions effectively	60	3.00	1.089
The lecture method of teaching is not common in our school classrooms	60	2.12	1.106
There is extensive use of experimentation in Kenyan school classrooms	60	2.47	1.096
There is effective use of field study in the Kenyan education system	60	2.47	0.999
Resource persons are often used in classrooms	60	2.33	0.933
Teachers allow learners to learn through discovery	60	2.52	1.017
Teachers assign projects to learners	60	3.03	1.104
"Role play" is often used to explain concepts in classrooms	60	2.78	1.075
Teachers encourage problem solving skills rather than memorizing of facts by learners.	60	2.33	1.020
Learners choose what to learn and how to learn it.	60	1.83	0.994
Teachers focus on acquisition of competence, not coverage of syllabus	60	1.97	1.073
Teachers spend more time on practical lessons than on theory.	60	1.95	0.964
Overall Mean Score		2.40	

Table A8: Student's Opinion on Contemporary Pedagogical Approaches

Statement	N	Mean	Std. Deviation
The lecture method of teaching is not common in our school classrooms	323	2.52	1.286
There is extensive use of experimentation in Kenyan school classrooms	324	2.42	1.122
There is effective use of field study in the Kenyan education system	324	2.48	1.223
Resource persons are often used in classrooms	324	2.39	1.250
Teachers allow learners to learn through discovery	324	2.63	1.206
Teachers assign projects to learners	324	3.12	1.231
"Role play" is often used to explain concepts in classrooms	324	2.92	1.188
Teachers encourage problem solving skills rather than memorizing of facts by learners.	324	2.96	1.377
Learners choose what to learn and how to learn it.	324	2.22	1.318
Teachers focus on acquisition of competence, not coverage of syllabus	324	2.47	1.315
Teachers spend more time on practical lessons than on theory.	324	2.27	1.313
Overall Mean Score		2.58	

Table A9: Academic Staff Opinion on African Indigenous Pedagogical Approaches

Statement	N	Mean	S.D
Learning practical skills from experts	60	3.80	1.338
Having teachers who take a close personal interest in the learner	60	4.02	1.081
Teachers seeing students as people who must be nurtured	60	4.05	0.999
Changing role of student from passive receiver of knowledge to a reflective thinker and problem solver	60	4.22	1.121
Making student actively involved in his/her own learning	60	4.18	1.049
Having teachers who are not transmitters of knowledge but facilitators of learning	60	4.27	1.023
Embracing parents, members of community and various experts as potential teachers for students	60	3.95	1.199
Insisting more on demonstration rather than explanation	60	4.05	1.032
Laying more emphasis on practical rather than theoretical learning	60	4.18	1.112
Overall Mean Score	60	4.08	

Table A10: Students' Opinion on African Indigenous Pedagogical Approaches

	N	Mean	Std. Deviation
Learning practical skills from experts	324	3.58	1.275
Having teachers who take a close personal interest in the learner	324	3.70	1.244
Teachers seeing students as people who must be nurtured	324	3.87	1.156
Changing role of student from passive receiver of knowledge to a reflective thinker and problem solver	324	4.02	1.187
Making student actively involved in his/her own learning	324	3.84	1.194
Having teachers who are not transmitters of knowledge but facilitators of learning	324	3.77	1.236
Embracing parents, members of community and various experts as potential teachers for students	324	3.59	1.227
Insisting more on demonstration rather than explanation	324	3.84	1.231
Laying more emphasis on practical rather than theoretical learning	324	3.93	1.297
Overall Mean Score		3.79	

Table A11: Academic Staff Opinion on Contemporary School Environment

Statement	N	Mean	S.D
There are enough library facilities for students to study independently.	60	1.87	0.853
Farms in educational institutions are well developed for learners to practice agriculture	60	1.92	0.829
Schools have adequate Art rooms, music rooms, computer labs and workshops	60	1.77	0.767
There is a good variety of equipment and instruments for learning practical subjects in educational institutions	60	1.97	0.843
Educational institutions have manageable numbers of learners in classrooms	60	2.25	1.188
Free interactions exist between learners and teachers in Educational institutions	60	2.52	1.157
Dorms and classes are not congested	60	2.07	0.989
Teachers do not control School routines	60	2.18	1.200
Students decide what to do and when to do it mainly on their own.	60	2.12	1.316
There is no elaborate routine for all the days of the week in Educational institutions	60	2.18	1.282
Overall Mean Score	60	2.08	

Table A12: Students' Opinion on Contemporary School Environment

Statement	N	Mean	Std. Deviation
There are enough library facilities for students to study independently.	324	2.14	1.206
Farms in educational institutions are well developed for learners to practice agriculture	324	2.26	1.175
Schools have adequate Art rooms, music rooms, computer labs and workshops	324	2.15	1.188
There is a good variety of equipment and instruments for learning practical subjects in educational institutions	324	2.44	1.183
Educational institutions have manageable numbers of learners in classrooms	324	2.71	1.174
Free interactions exist between learners and teachers in Educational institutions	324	3.02	1.155
Dorms and classes are not congested	324	2.55	1.219
Teachers do not control School routines	324	2.45	1.212
Students decide what to do and when to do it mainly on their own.	324	2.16	1.272
There is no elaborate routine for all the days of the week in Educational institutions	324	2.33	1.271
Overall Mean Score		2.42	

Table A13: Academic Staff Opinion on African Indigenous School Environment

Statement	N	Mean	S.D
Having flexible routines in Educational institutions	60	3.78	1.027
Having teaching and learning resources that reflect the learners culture and local environment	60	4.10	0.986
Encouraging a social environment of unity and collective responsibility	60	4.07	1.039
Having an environment where teacher and students view each other as partners in the learning process	60	4.08	1.078
Teachers engage learners in a one-on- one relationship rather than as groups of learners	60	3.63	1.207
Teachers playing role of mentor, coach and trainer	60	4.18	0.854
Embracing an education that focuses more on the individual learner rather than the group	60	4.30	0.809
Overall Mean Score	60	4.02	

Table A14: Students' Opinion on African Indigenous School Environment

Statement	N	Mean	S.D
Having flexible routines in Educational institutions	324	3.54	1.232
Having teaching and learning resources that reflect the learners culture and local environment	324	3.76	1.193
Encouraging a social environment of unity and collective responsibility	324	3.87	1.137
Having an environment where teacher and students view each other as partners in the learning process	324	3.85	1.203
Teachers engage learners in a one-on- one relationship rather than as groups of learners	324	3.48	1.277
Teachers playing role of mentor, coach and trainer	324	4.02	1.132
Embracing an education that focuses more on the individual learner rather than the group	324	3.85	1.227
Valid N (listwise)	324	3.77	

Table A15: Academic Staff Opinion on Contemporary Evaluation

Statement	N	Mean	S. D
Cheating in exams is not common	60	1.95	1.096
Most examinations are not in the form of written tests	60	1.78	0.993
Most concepts are assessed using practical tests	60	1.73	0.841
Teachers judge learners performance by observing them work	60	1.85	0.917
Exams test ability to solve problems rather than memory	60	2.07	1.148
Teachers use a wide variety of methods to assess learners' performance	60	2.23	1.110
Learners do not spend a lot of time revising for written tests	60	2.10	1.003
Parents and teachers do not attach great value to examination results	60	1.60	0.741
Tests adequately measure learners skills and potentialities	60	2.12	1.059
Teachers prompt learners to think in their tests	60	2.78	1.136
Tests measure more than theoretical attainment of learners	60	2.73	1.163
Assessment tasks allow students to exhibit higher-order thinking.	60	2.75	1.144
Tests require evidence of understanding, not just recall.	60	2.87	1.255
Tests encourage creativity	60	2.48	1.242
Overall Mean Score	60	2.22	

Table A16: Student's Opinion on Contemporary Evaluation

Statement	N	Mean	S.D
Cheating in exams is not common	324	2.24	1.211
Most examinations are not in the form of written tests	324	2.03	1.160
Most concepts are assessed using practical tests	323	2.31	1.200
Teachers judge learners performance by observing them work	324	2.50	1.195
Exams test ability to solve problems rather than memory	324	2.72	1.362
Teachers use a wide variety of methods to assess learners' performance	324	3.03	1.303
Learners do not spend a lot of time revising for written tests	324	2.46	1.250
Parents and teachers do not attach great value to examination results	324	2.38	1.259
Tests adequately measure learners' skills and potentialities	324	3.08	1.264
Teachers prompt learners to think in their tests	324	3.37	1.148
Tests measure more than theoretical attainment of learners	324	3.20	1.277
Assessment tasks allow students to exhibit higher-order thinking.	324	3.32	1.227
Tests require evidence of understanding, not just recall.	324	3.33	1.258
Tests encourage creativity	324	3.22	1.355
Overall Mean Score		2.80	

Table A17: Academic Staff Opinion on African Indigenous Evaluation

Statement	N	Mean	S.D
Having evaluation procedures which mainly measure acquisition of relevant skills and knowledge	60	4.20	1.038
Having evaluation procedures that gradually test learners achievement over long periods	60	4.27	0.821
Having tests that measure practical abilities rather than theoretical attributes	60	4.25	0.895
Having tests that measure learners ability to think and solve problems rather than ability to memorize facts	60	4.40	0.785
Using a wide variety of assessment for measuring attainment rather than single final exams	60	4.48	0.725
Attaching more value on acquisition of knowledge and skills rather than performance in exams and certificates	60	4.53	0.812
Embracing tests that test problem solving and creativity rather than memory.	60	4.42	0.809
Laying emphasis on skills and knowledge attainment rather than assessment for selection to higher levels of education	60	4.40	0.741
Overall Mean Score	60	4.37	

Table A18: Students' Opinion on African Indigenous Evaluation

Statement	N	Mean	S.D
Having evaluation procedures which mainly measure acquisition of relevant skills and knowledge	323	3.63	1.287
Having evaluation procedures that gradually test learners achievement over long periods	324	3.62	1.152
Having tests that measure practical abilities rather than theoretical attributes	323	3.89	1.205
Having tests that measure learners ability to think and solve problems rather than ability to memorize facts	324	3.98	1.152
Using a wide variety of assessment for measuring attainment rather than single final exams	324	3.95	1.113
Attaching more value on acquisition of knowledge and skills rather than performance in exams and certificates	324	4.00	1.144
Embracing tests that test problem solving and creativity rather than memory.	324	4.02	1.118
Laying emphasis on skills and knowledge attainment rather than assessment for selection to higher levels of education	324	4.01	1.132
Overall Mean Score	322	3.89	