# EQUITY IN BURSARY ALLOCATION IN RELATION TO INTERNAL EFFICIENCY OF SECONDARY SCHOOLS IN BUNGOMA COUNTY, KENYA

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## DECLARATION

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## CERTIFICATION

This thesis has been submitted for examination with our approval as the University Supervisors.

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## DEDICATION

This work is dedicated to my dear family who provided me the inspiration to be where I am, my dear wife Anne and Sons; Larry, Mark and Cephas. This work is also dedicated to my dear mother Rose for laying a strong foundation of education for me.

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## ABSTRACT

Basic education is very critical in any education system because of the crucial role it plays in catalyzing national development. Consequently, maintaining a high student enrolment at this level should be a priority for all countries. The Constituency Bursary Fund (CBF) was established by the government of Kenya through an Act of Parliament in 2003. The purpose of this study was to investigate equity in bursary allocation in relation to internal efficiency of secondary schools in Bungoma County, Kenya. The objectives of the study were: to determine the relationship between Bursary demand and amount disbursed to secondary school students; to investigate the relationship between bursary allocation and student participation rates in secondary schools; to establish the relationship between bursary allocation and student performance in secondary schools; to determine if there is any significant difference in bursary disbursements by tuition fees charged and to determine the relationship between selected students' characteristics and bursary allocation to secondary school students. The study was guided by Human Capital Theory. The study employed a mixed method research design. The population of the study was 206 principals from secondary schools, 9 CDF managers, 5 banks managers and 88,343 students. The sample size was 48 principals, 9 CDF managers, 5 bank managers and 883 students. The study sampled 9 CDF managers and 5 bank managers using purposive sampling and simple random sampling to select 48 principals and 883 students. Data was collected through questionnaires and document analysis. Qualitative data were analyzed through thematic narration, while quantitative data were analyzed using descriptive statistics and inferential statistics (multiple regression model and Pearson correlation). The study findings indicated that there was a strong significant relationship between Bursary amount demanded and amount received; there was a weak but significant negative relationship between bursary allocation and students' non-attendance rates. The study concluded that as the amount of bursary allocation to recipients increased so did the students' performance with implication that higher bursary awards enables students to remain in school and attend lessons and they are more likely to perform better. Bursary disbursements were more or less the same between male and female students. The study recommended that children of the poor echelons of the society should be assisted to access the extra-county schools through systematic measures that allow them to progress and perform well from primary schools.

## TABLE OF CONTENTS

## LIST OF TABLES

## LIST OF FIGURES

## LIST OF APPENDICES

## LIST OF ABREVIATIONS AND ACRONYMS

| | |
|---|---|
| AIDS: | Acquired Immune Deficiency Syndrome |
| ASAL: | Arid and Semi – Arid Land |
| BOM: | Board of Management |
| CBF | Constituency Bursary Fund |
| CBOs: | Community Based Organizations |
| CDF: | Constituency Development Fund |
| EFA: | Education For All |
| FDSE: | Free Day Secondary Education |
| FPE: | Free Primary Education |
| HIV | Human Immune Deficiency Virus |
| KESSP: | Kenya Education Sector Support Program |
| KNUT: | Kenya National Union of Teachers |
| KSSHA: | Kenya Secondary Schools Heads Association |
| MDGs: | Millennium Development Goals |
| MoEST: | Ministry of Education Science and Technology |
| NARC: | National Alliance Rainbow Coalition |
| NGOs: | Non-Governmental Organizations |
| OECD: | Organization for Economic Co-operation and Development |
| SAPs | Structural Adjustment Programmes |
| UPE: | Universal Primary Education |

## OPERATIONAL DEFINITION OF TERMS

**Access:** Ability of a student joining secondary school education from a primary school and ability to undertake uninterrupted secondary learning.

**Beneficiaries**: Students who receive the secondary education bursary awards after the allocations are made by the bursary scheme.

**Bursary Allocation**: Refers to amount of bursary amounts allocated to a student to cater for school fees.

**Bursary**: Amount awarded to a student to supplement fee payment by the bursary scheme.

**Completion**: Ability to take a full secondary school cycle and take a terminal examination

**Constituencies**: Defined regions in a country, like Kenya, usually with Member of Parliament who represents the people living there in parliament.

**Criteria**: Right procedure of the bursary award policy guidelines to be used by the bursary committees in selecting the Secondary Education Bursary fund's beneficiaries from among applicants in the constituency.

**Decentralization**: Taking the awarding procedure closer to the beneficiaries at the grassroots in all parts of the country and allowing the communities to determine the needy students since they know them better.

**Equity**: Fair and reasonable way of disbursing bursaries to secondary school students using the right criteria.

**Internal Efficiency**: Ability of a secondary school to meet the internally set objectives.

**Participation rates**: The proportion of students who are able to attend school

successfully.

**Poverty**: A condition that renders individuals unable to financially support and meet their basic needs.

**Recipients**: Students who benefit from bursary allocations.

**Retention**: Ability to remain in the cycle for four years.

**Student participation rates**: Output that comes from the school. In this study, it includes retentions, availability in school, partaking exams & CATs and involvement in other school key activities.

# CHAPTER ONE

# INTRODUCTION TO THE STUDY

## 1.1 Background of the Study

Education is universally regarded as an indispensable tool for social, economic, political and personal development (Taylor, & Schellinger, 2011). Acquiring education assists in improving the welfare of people as a society, community or individuals (Lawson, 2005). Kenyan primary education lays the foundation for secondary education, while secondary education provides a vital link between primary education and the world of work on one hand, and a springboard to tertiary and/or higher education and training on the other (Proost., 2017; De Bruyn, Breynaert, Arijs, De Hertogh, Geboes, Thijs, & Ferrante, 2017). As a result, excellent outcomes in secondary education immeasurably contribute to the country's economic development by producing appropriate human resource at the higher education level that is integral in supporting greater productivity (Taylor, Shindler & Fleisch, 2008). Therefore meaningful access to secondary school education requires more than a simple enrolment but also includes participation in the education system.

Due to the increased focus on basic and secondary education and educational attainment, several educational policy documents ranging from The Jomtien Declaration on Education for All (EFA) in 1990 and the Dakar Framework for Action in 2000 have been developed. More recently, the Sustainable Development Goal (SDGs) was formulated to focus on 10 targets encompassing many different aspects of education, key of which was the attainment of universal primary and secondary education for all girls and boys to complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes by the year 2030 (United Nations Educational Scientific and Cultural Organization (UNESCO), 2018). After the formulation of the SDGs, preliminary

data suggest slow progress in many countries despite reports of increased school enrollment (Bhutta, 2010). The slow progress is country-specific but one explanation stands out in virtually all countries: educational costs rank as one of the most significant factors in educational access and attainment (Kwiek, 2009).

The cost of financing secondary education varies widely from one country to another and from one region to another (Murray, Johnstone & Marcucci, 2010; Chambers, 2008), but the requirement for the cost of education remains almost similar across the board (Johnstone & Marcucci, 2017). Most of the requirements for financing secondary education depend on the number of children in secondary school, running programs within the curriculum, contribution of financial and other resources from various stakeholders and the costs per child. The main costs basically include tuition fees, examination fees, costs of uniforms, cost of hiring extra teachers, purchase of teaching materials, feeding, transportation and extra curriculum activities (Lewin, 2009). Achieving most of these requirements guarantees quality education, yet over the past few years, the cost of meeting these requirements in education has been rising at a rate that outpaces consumer price indices (Johnstone & Marcucci, 2017). Despite the high cost, the issue of affordability of secondary education should play an important role to help in the achievement of secondary education.

Experience across both the developed and developing countries suggests that providing extra resources to schools is an ineffective way to improve affordability, access and sometimes quality of the educational attainment (Lewin & Caillods, 2008). This has been shown to encourage students enrollment in several developed and developing countries of the world where planning for education has been in place over the years. Many of these countries realized that charging costly levies and other costs incurred during the learning

process effectively blocked many students from accessing secondary education and therefore a large portion of the population would have been left outside the formal educational system (Woodhall & Psacharopoulos 1985).

In Sub-Saharan Africa, the issue of costs of education has been grappled with for almost five decades (Mingat & Psacharopoulos, 1985; Lewin, 2009; Hinchliffe, 2010). This was so because school attendance in the region has been the lowest compared to the rest of the world and the region is also regarded as the poorest in the world. Thus, the relatively high cost of education in the region is linked with widespread poverty causing low enrollment and educational attainment. Moreover, in some countries where the cost of secondary education is relatively lower, increased students' attendance of secondary schools has been reported (Abdalla, 2003; Verspoor, 2007). Many countries within the SSA regions have gradually realized that the high cost of education effectively locks out many deserving students from accessing education and therefore issues of financing education have been considered.

In Kenyan education, the high cost of secondary education was realized more than five decades ago and as a result, the government has attempted to shoulder the burden of school levies through the introduction of several funding strategies over the years. In most cases, the government provide on average 20-30 percent allocation of state financial resources and caters for the tuition expenses (World Bank, 2005; Okumbe, 1999; Malenya, 2008; Kinuthia, 2009; UNESCO, 2010) and the parent of the student pay for such items as books and school running expenses. However, it is during the implementation of the free primary education in the year 2002 that the government realized that there was a need to start early planning to ensure continuity, accessibility, and affordability of post-primary education. The government through its policy indicated that up to 50% of the cost of

secondary school should be eased from the parents. This was to be achieved through several external sources of funding including through secondary school bursary scheme at the county and constituency level.

The Secondary Schools Bursary Scheme was introduced by the government in the 1993/1994 financial year to enhance access, ensure retention and reduce disparities and inequalities in the provision of secondary school education (Njeru & Orodho, 2003; Orodho, 2003; Institute Policy Analysis and Research Policy Brief, 2008). In particular, the bursaries targeted students from underprivileged families, those living in slum areas, those facing difficult circumstances, those from pockets of poverty in high potential areas, districts in arid and semi-arid lands (ASALs), orphans and girl-child (Okumbe, 1999). At the inception of the fund, funds were disbursed directly to secondary schools from the ministry of education headquarters. Due to the lack of clear guidelines to schools on how to identify needy students for bursary awards, beneficiaries were identified in different ways. However, in most cases, the head teachers ultimately decided on who was to be awarded the bursary and the amounts to be allocated. After the National Alliance Rainbow Coalition (NARC) government took over power in 2003, it changed the disbursement of the secondary Education Bursary Fund from the Ministry of Education to be allocated through the constituencies. Constituency Development Fund (CDF) kitty was then introduced to give more power to the local communities to identify and support secondary education for the needy children from poor families and vulnerable groups. In 2013, the bursary was included in County Development Package (Psiwa, Irungu & Muriithi, 2017). Moreover, the government also encouraged other sectorial players to be involved in the provision of funding to the secondary schools, which witnessed several banks, Non−Governmental Organizations, county government arms, churches among other

sources (Okumbe, 1999).

Each of the bursary donors has their guidelines for allocation of the bursaries. Claims have been advanced that although bursaries are available; it rarely benefits the needy students (Olembo, 2007). This persists despite evidence that students from poor families are still unable to access secondary school education despite its availability in relevant organizations (Olembo, 2007; IPAR, 2010; Wileye & Njeru, 2010). Nthiga (2014) posits that the process of sending money from central government to constituencies then to schools takes a long time. No study has yet determined the complexity of money transfer from other sources of funding to students. By the time recipients get the money, many would have been sent away from school, which may affect many aspects of the students' educational quality and efficiency. Major concerns with bursary allocation revolve around weak administrative systems and questionable allocation criteria (Meleis, 2018). As a result of this, most secondary school-going children are unable to participate fully in this intermediate education as reflected by increasing (7.1%) dropout rates (Onyango & Njeru, 2004). Moreover, when students cannot regularly meet the need to pay their fees, they are frequently sent home thus exacerbating absenteeism while the schools find it difficult to manage their student participation rates for the students leading to problems such as low retention, dropouts, repetitions, absenteeism and poor academic performance in secondary school (Olembo, 2012). Given the foregoing argument, relating equity in the distribution of bursary funds and student participation rates in schools, there is an urgent need to establish equity in the distribution of bursary and relate this to efficiency in schools for many areas in Kenya.

## 1.2 Statement of the problem

In Kenya, the government has the policy to assist needy students' access to secondary education. The policy has seen many players in the field to assist needy student access secondary schools. At present, there are myriad sources of bursaries such as CDF, county government, Equity bark, Co-op Bank Foundation, NGO's, church, Foundations, politicians and even individuals. Introduction of bursary to cater for the poor and needy students has remained critical to the improvement of school retention, completion rate and access to education. However, the shifting of bursary scheme from schools to the constituency development fund committee and its criteria used to award the disadvantaged groups in society cast shadows. While it is assumed that basic government guideline provided assists in identification and allocation. Other intervening factors such as nepotism and political influence downplay the objective of improving access, retention, and completion (Osei, 2010).

Every year these sources declare huge amounts of bursaries allocated to needy students to assist them in accessing and participating in Secondary Education. At the same time, many secondary school students are unable to access even their leaving certificate and result slips owing to huge balances they owe schools. The secondary schools' principals have insisted that such balances must be cleared before the certificates are released. This conflict has exposed the inconsistencies in bursary allocation to the needy students which need to be empirically investigated. Miako (2012), conducted a study in Nyandarua County on school levies and their effects on access and retention since the introduction of the free day secondary education, this study found that many parents were unable to pay school levies provide uniform and other basic needs like food negatively affecting retention rates, leading to low retention rates. Kosgei (2012) in a study on "beyond school inputs and resources: an assessment of the effects of subsidies educational outputs in

Kenya" found that educational subsidies lead to high completion rates in Kenya. Masimbwa (2010) in a study conducted in Kericho County on cost-saving measures in enhancing efficiency in secondary schools found that effective use of educational subsidies leads to high completion rates in secondary schools in Kericho. Onkoba (2011) assessed the impact of the bursary on student participation rates in secondary schools in Gucha Kisii County and found that bursary awarded did not meet student financial needs; the management of bursary by constituency committee is overridden with a number of negative influences such as nepotism and political inclination that made them to be considered as fair, the existing bursary committee entrusted with management of this kitty has weakness affecting the performance of its duty more so identification, award and disbursement of the bursary which is always delayed. It was against this background that the researcher was motivated to carry out a study on equity in bursary allocation in relation to internal efficiency of secondary schools in Bungoma County, Kenya.

### 1.3 Purpose of the Study

The purpose of the study was to investigate equity in bursary allocation in relation to internal efficiency of secondary schools in Bungoma County, Kenya specifically student participation rates, student performance and amount of fees charged.

### 1.4 Specific Objectives of the Study

The objectives of the study were to:

i. To determine the relationship between Bursary demand and amount disbursed to secondary school students in Bungoma County of Kenya.
ii. To investigate the relationship between bursary allocation and student participation rates in secondary schools in Bungoma County.
iii. To establish the relationship between bursary allocation and student Performance

in secondary schools in Bungoma County.

iv. To determine if there is any significant difference in Bursary disbursements by tuition fees charged in Bungoma County secondary schools.

v. Determine the relationship between selected students' characteristics (gender, school categories and socio-economic status) and bursary allocation to secondary school students in Bungoma County of Kenya.

### 1.5 Hypotheses of the Study

In order to respond to the objectives of the study, the following hypotheses were formulated and tested;

**$Ho_1$**: There is no significant relationship between bursary demand and amount disbursed to secondary school students in Bungoma County of Kenya.

**$H_{02}$**: There is no significant relationship between bursary allocation and student participation rates in secondary schools in Bungoma County.

**$H_{03}$**: There is no significant relationship between bursary allocation and student performance in secondary schools in Bungoma County.

**$H_{04}$**: There is no significant difference in bursary disbursements by tuition fees charged in Bungoma County secondary schools.

**$H_{05}$**: There is no significant relationship between students' gender and bursary allocation to secondary school students in Bungoma County of Kenya.

**$H_{06}$**: There is no significant relationship between students' school category and bursary allocation to secondary school students in Bungoma County of Kenya.

**$H_{06}$**: There is no significant relationship between students' socio-economic status and bursary allocation to secondary school students in Bungoma County of Kenya.

## 1.6 Justification of the Study

The Constituency Bursary Fund was introduced by the government as a safety net at the secondary education level (IPAR, 2008). However, there are increasing concerns with regard to its ability to cushion the disadvantaged groups. Major concerns revolve around inadequate funds rendering it unable to cater for all the needy cases, weak administrative systems and questionable allocation criteria. Due to these shortcomings, access and retention of the targeted students remain low. On this basis, this study endeavored to assess the modalities of bursary allocations and their effect on access and retention of secondary school students in Bungoma County. Bungoma County is the third largest populous in the nation and receives the third largest share of national funds that are channeled to counties. However, it is also on record that Bungoma County has one of the highest poverty indexes in Kenya. Hence, the study seeks to establish how the bursary sources are utilized to bridge the poverty and access to education in Bungoma County.

## 1.7 Significance of the Study

The top-down approach to channelization of educational funds through centralized planning driven by the state has failed to yield positive results hence the shift towards people centered approaches that drive development from the grass roots. These approaches enhance people's participation in development decision making contributing towards their empowerment. Bursaries have the potential of advancing learning among students through involvement of the various organs in the community. This devolution could therefore significantly contribute to enhanced access to education among the most-needy in the society. Little is known about the distribution and management of existing bursary schemes in Kenya; therefore, studies on bursary allocations will serve as a benchmark for identifying loopholes and corrective measures at policy level.

Lessons learnt from the implementation of bursary allocations will be used as foundation for designing other decentralization schemes to aid development in the country. Also looking at the manifestations of patronage and corruption will contribute towards exposing any irregularities that are likely to occur due to particularistic interests of stakeholders handling the fund hence controlling leakages and promoting efficiency and equity.

Moreover, findings are expected to be of significance to policy makers in the Ministry of Education, they will use these findings to establish how the constituency bursary fund is administered in regard to financing secondary education in Kenya. Secondly, it is hoped that documented results will provide policy makers, educational professionals and practitioners with much needed information on the current loopholes in constituency bursary allocation mechanism with a view of redefining strategies to curb them. The study findings will also contribute to the existing literature on Bursary utilized to enhance and student retention and access to education.

### 1.8 Scope of the Study

The study was carried out in Bungoma County, which has nine sub-counties. The study only examined 206 public secondary schools in the study area. The period of study was between, January 2014 to January 2015. Particular focus was on bursary allocations and the way it contributes towards the internal efficiency in schools to meet its primary objectives of enhancing access and retention in secondary education in Kenya. Similarly, the study targeted Bursary Administrators (principals, bank managers and CDF managers) and students to give their views concerning financial contribution towards students' secondary education from all the stakeholders. The content of this study was limited to equity in bursary distribution from all stakeholders providing bursaries to schools and internal efficiency of schools.

### 1.9 Limitations of the study

The study had the following limitations arising from methodological approaches. Many studies highlight the use of Lorenz Curves as measures of equity where cumulative frequencies of recipients are plotted against bursaries allocated. However, given the nature of the study, it was not possible to deal into Lorenz and gene coefficients to measure equity. The role of the study to show equitable allocation of bursaries on one hand as it relates to internal efficiency on the other hand. This was taken as a limitation to this study. Internally, students sit different exams set and moderated by their teachers. The quality of exams in different categories of school may have been different because the study did not use national examinations. Given that the researcher was comfortable, limitations were overcome by the understanding that the syllabus is the same and that all teachers are trained nd qualified serving by the Teachers Service Commission (TSC).

### 1.10 Assumptions of the Study

The study was based on the following assumptions; during the study, it was assumed that the data collected from the questionnaire were at the interval level of measurement and the association between the two variables shall be linear, various sources of bursary support to the needy students are complimentary such that students who benefit from either of the sources of support get the information shared among the bursary support agents. The study also assumes that students who benefit from the any of the bursary support in any one given year, remains needy for the entire period of study at the secondary school. In the event that a student's socio-economic status changed in the course of his/her studies, this study assumed such impromptu changes. Finally, it was assumed that all the respondents gave their true views about stakeholder perception in bursary allocations on student participation rates in secondary schools in Bungoma County.

### 1.11 Theoretical Framework

The study was guided by Human Capital Theory developed by Schultz in 1961 (Nafukho, Hairston & Brooks, 2004). Human capital theory rests on the assumption that formal education is highly instrumental and necessary to improve the productive capacity of a population. In short, human capital theorists argue that an educated population is a productive population. Human capital theory emphasizes how education increases the productivity and efficiency of workers by increasing the level of cognitive stock of economically productive human capability, which is a product of innate abilities and investment in human beings. The provision of formal education is seen as an investment in human capital, which proponents of the theory have considered as equally or even more worthwhile than that of physical capital (Woodhall & Psacharropoulos, 1985).

Human Capital Theory (HCT) concludes that investment in human capital will lead to greater economic outputs, however, the validity of the theory is sometimes hard to prove and contradictory. In the past, economic strength was largely dependent on tangible physical assets such as land, factories and equipment. Labor was a necessary component, but increases in the value of the business came from investment in capital equipment. Modern economists seem to concur that education and health care are the key to improving human capital and ultimately increasing the economic outputs of the nation (Becker 1993).

In the new global economy, hard tangible assets may not be as important as investing in human capital. Thomas Friedman, in his wildly successful book, The World is Flat 2007, wrote extensively about the importance of education in the new global knowledge economy. Friedman, not to be confused with the famous economist Milton Friedman, is a journalist. His popular book has exposed millions of people to human capital theory. The

term itself is not introduced, but evidence as to why people and education (human capital) are vital to a nation's economic success, is a common recurring theme in the book.

Throughout western countries, education has recently been re-theorized under Human Capital Theory as primarily an economic device. Human Capital Theory is the most influential economic theory of western education, setting the framework of government policies since the early 1960s. It is increasingly seen as a key determinant of economic performance. A key strategy in determining economic performance has been to employ a conception of individuals as human capital and various economic metaphors such as technological change, research, innovation, productivity, education, and competiveness. Economic consideration per se in the past, however, has not determined education.

Human capital theory stresses the significance of education and training as the key to participation in the new global economy. In one if its recent reports, the Organization of Economic Cooperation and Development (OECD), for example, claims that the radical changes to the public and private sectors of the economy introduced over recent years in response to globalization will be severe and disturbing to many established values and procedures. In another report it explains internationalism in higher education as a component of globalization. The OECD believes that internationalism should be seen as an imperative in 21st Century capitalism. This form of capitalism is based on investment in financial markets rather than in manufacturing of commodities, thus requiring dependence on electronic technology.

The success of any nation in terms of human development is largely dependent upon the physical and human capital stock. Thus, recent social research focuses on the behavioural sciences of humanity in relation to economic productivity. Generally, human capital

represents the assets each individual develops to enhance economic productivity. Further, human capital is concerned with the wholesome adoption of the policies of education and development. In short, the human capital theorists argue that an educated population is a productive population. Human capital theory emphasizes how education increases the productivity and efficiency of workers by increasing the level of cognitive stock of economically productive human capability, which is a product of innate abilities and investment in human beings. The provision of formal education is seen as a productive investment in human capital, which the proponents of the theory have considered as equally or even more equally worthwhile than that of physical capital.

This theory forms an important theoretical base of this study because it explains the high government investment in education in form of bursaries and the communities contribute by foregoing other projects to promote education in Kenya. Investment in education will be realized through high enrolments, high transition rates from primary to secondary school, and provision of facilities and resources of secondary schools. Since bursaries are an investment, this study will analyze the extent to which this investment is realized. It will find out how much of the bursaries have been invested in human capital by funding secondary education and the relation it has had on accessibility to secondary education.

### 1.12 Conceptual Framework

Excelling schools mobilize their intellectual capital and social capital to achieve desired student participation rates (Hanushek, 2008). For this to be possible there is need for the government, school management, parents, and the community to work together for the benefit of the schools. Bursary in Kenya is an example of a partnership between the government and the schools in achieving proper student participation rates in schools.

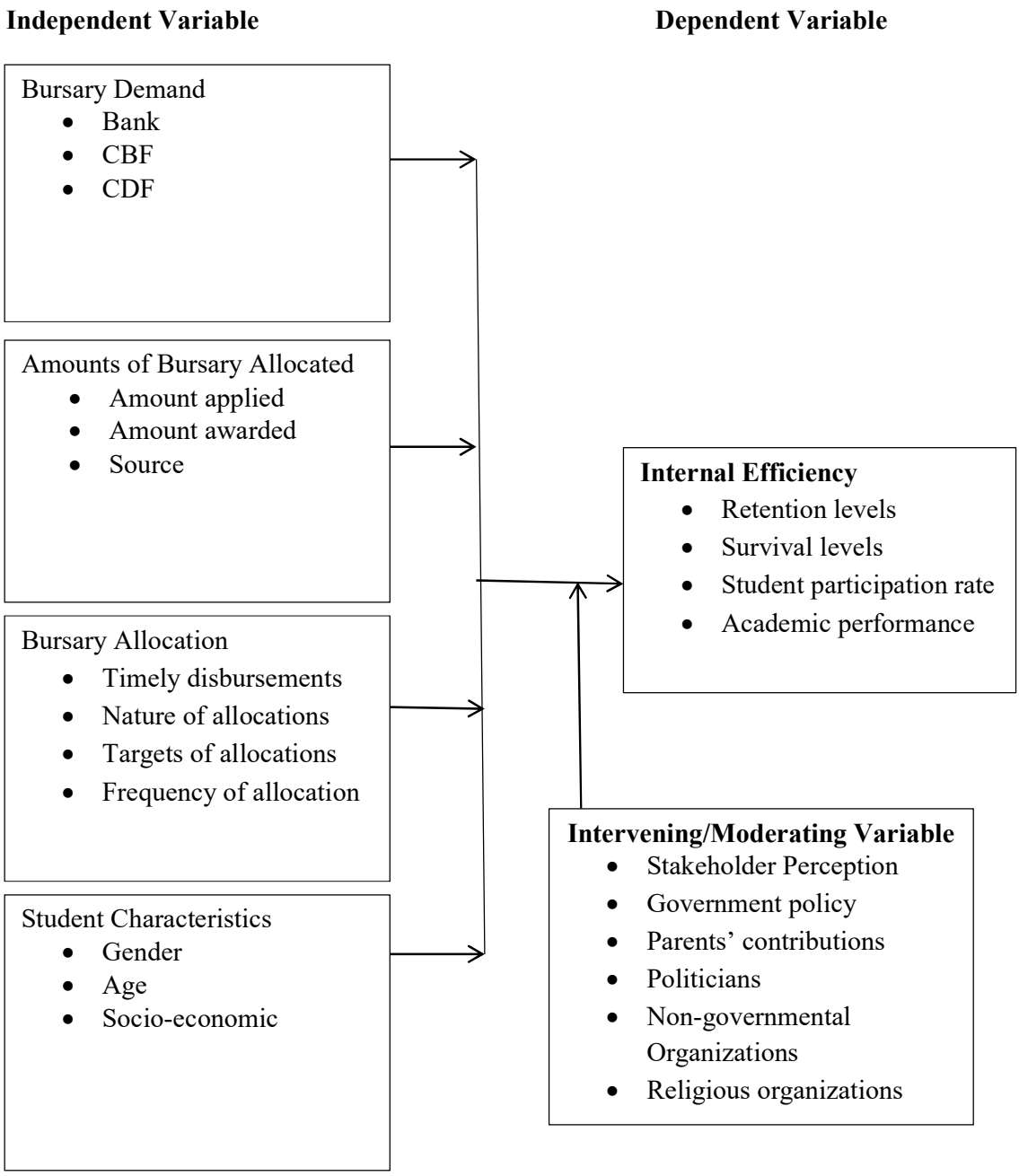



**Figure 1.1: Bursary Distribution and Student participation rates**

Source (Author)

Figure 1.1 shows the relationship between the dependent and independent variables of the study. As shown in the figure, the student participation rates in public secondary, which is the dependent variable, could be affected by equity in fund distribution, amounts of

bursary awarded, criteria used to ensure equity and challenges faced by the CBF. The relations of these variables on the effectiveness of the student participation rates could also be influenced by government policy on free secondary education, which is the intervening variable of the study.

The independent variables of the study were the bursary demand; the amounts of bursary allocated; bursary allocations and equity contributions of CDFs, Banks, and County Government in Bursary allocations. The dependent variable that is student participation rates was measured by retentions, repetition, participation and academic performance. The relationship between the dependent and independent variable was however believed to be moderated/intervened by other factors which included; stakeholder perception, government policy, parents' contributions, politicians and politics, non-governmental Organizations as well as religious organizations.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.0 Introduction

This chapter is concerned with review of works related to the financing of education and how safety nets such as bursary have influenced secondary school education. Emphasis will however, be laid on bursary as a supplement for financing secondary education alongside with the other means of financing such as government, parents, and community. Literature was reviewed under the following headings; United Nations Organizations rationale on education, Kenya rationale on education, cost of education, financing of education in the world, financing of education in Africa, financing of secondary education in Kenya, finances and continuity in learning, problems in financing public secondary schools in Kenya, Bursary schemes in Kenya before 2002 and after 2002, disbursement of MOE bursary funds.

## 2.1 The Concept of Equity in Education

According to Organization for Economic Cooperation Development (2007) Equity in education has two dimensions. The first is fairness, which implies ensuring that personal and social circumstances – for example gender, socio-economic status or ethnic origin – should not be an obstacle to achieving educational potential. The second is inclusion, which implies ensuring a basic minimum standard of education for all – for example that everyone should be able to read, write and do simple arithmetic. The two dimensions are closely intertwined: tackling school failure helps to overcome the effects of social deprivation which often causes school failure. The benefits from education are large. In the United States, for example, workers with tertiary qualifications earn more than double the income of those with no post-compulsory qualifications. Education is associated with

better health, a longer life, successful parenting and civic participation. Fair and inclusive education is one of the most powerful levers available to make society more equitable.

Kenya is in the category of countries, which have chosen a capitalist path to development, but at the same time, subscribing in its policy statements commitments to socialist principals. Sessional Paper No. 10 of 1965 (Republic of Kenya, 1965), which provides guidelines about the aims of Kenyan society, point out the most systematic policy statements on Kenyan egalitarian principles to be pursued within the framework of African Socialism. In the Development Plan of 1979 - 1983, the government stated that during this period the educational opportunities would have to be substantially improved to reach target groups such as the pastoralists, small scale farmers, landless rural workers and urban poor (Republic of Kenya, 1979).

However, as the budgetary allocation to the Ministry of Education, Science and Technology continued to increase, there was a general observation that access and participation levels in secondary schools by the needy had not kept pace (Kinyanjui, 1991). Claims have been advanced that although government expenditures on education are high; it rarely benefits the most needy and that most students with exemplary performance in Kenya Certificate of Primary Education Examination are unable to proceed to secondary schools because their poor parents can hardly afford the required fees (Olembo, 2012). Government of Kenya Report (Republic of Kenya, 1999), reveal that the high cost of learning and teaching facilities have proved unaffordable for students from poor families thus leading to low participation rates and high dropout rates for the poor. This contrasts with the government policy to direct bursary allocation to the poor but academically talented students commensurate with their academic achievements in order to enhance their access and participation rates in secondary school education. Although

this was an indication that the government might not be achieving parity in secondary school participation, empirical studies have not been documented on the actual status of bursary distribution to recipients. Given the foregoing policy statements in regard to equalizing educational opportunities through bursary subsidies among children from poor households, there was need for an analysis of the concrete reality in which provision of bursaries was being carried out and then contrasted with the policy pronouncements (Odebero, 2008).

### 2.2 Concept of Student Participation in Education

Student participation rates in the provision of education is the aim of stakeholders such as the government, parents and students, indicators of efficiency can be used to measure effectiveness of schools and achieving institutional and national goals (Onkoba, 2011). Whereas it is central to government policy, head teachers to put in place ways of promoting student participation rates and reducing factors or conditions contributing to inefficiency. Student participation rates is viewed as the capacity of the educational system to turn out graduates at any level in the most efficient or best way, which is without wastage, stagnation and repetition (Khamala, 2012).

A system of education is judged to be internally efficient if there is optimal enrolment, no wastages (dropouts and repetitions), reduced unit cost and presence of optimal class size as a result of the optimal enrolment. He further pointed out that student participation rates of schools and other educational institutions is achieved when educational resources are utilized in an optimal way. The implication here is that there should be optimum enrolment of students in educational institutions so that the resources can be fully utilized. He suggests that the resources used in education should be properly utilized by the enrolled number of students so that they can reap maximally from them and hence a given

educational institution realizing student participation rates (Khamala, 2012).

The issue of student participation rates in the public education system is the weakness of consistency between the system input and output, the proportion of spending up to education about of government spending. The system suffers from a relatively high repetition and dropout rates in addition to the relative weakness in the level of graduates. The Ministry of Education to adopt a set of policies, strategies, and programs related to reducing the proportion of waste and raising the level of student participation rates through the application of continuous assessment method in elementary school and continue in the application of teaching strategies. Vocational guidance for students and so on studies related to the internal effectiveness of the education system and indicate during the years of the Eighth Plan to a marked improvement in the repetition and dropout rates compared to what was in the past 7 years (Morsi, Munir, Nouri & Ghani, 2011).

More or less, inside effectiveness of any teaching framework is accepted to have high co-connection with instructive sources of informal, procedures, and yields of the framework. Then again as per Taylor and Schellinger (2001), the topic of the quality of teaching is likewise an issue of internal proficiency in teaching framework. In this way, internal productivity and nature of the teaching framework can be shown by ascertaining the advancement, redundancy and dropout rates, at different review levels. Besides effectiveness, it incorporates cycle consummation and the survival rates at some interval and cycle to cycle transfers rate. In other words, enhancing the internal proficiency of education framework is naturally enhancing nature of training in light of the fact that they concentrate on the relationship of teaching information sources, procedures and yields of the framework.

UNESCO (2018) characterized the term dropout as used to refer to leaving school at some time just before the culmination of a certain phase of instruction or a given transitional or non-terminal point in the level of training. The fundamental indications of wastages, specifically falling out of school, rely on the kind of instruction frameworks. It is characterized in connection to the qualities of the different instructive frameworks. The traverse of mandatory learning and the period amid the years into certain grades differ from nation to nation in various instructive frameworks. In the less developed nations, in any case, early dropping-out of school is an imperative issue, of the about 96 million learners who joined schools out of nowhere in 1995, one quarter which is equivalent to 24 million were most likely going to spurn their learning earlier before accomplishing Grade 5 (UNESCO, 2008).

The provision of secondary education has changed particularly since independence with the quantity of schools and students expanding from 151 and 30,000 out of 1963 to 4,111 and 1,487,989 out of 2010 (Ministry of Education, 2012). The introduction of Free Secondary Education (FSE) brought about higher increment in enrollment in the public secondary schools by 17.1 percent in 2008 (Republic of Kenya, 2009) when contrasted with 13.7 percent in 2007, and the expansion was noted in the resulting years.

Asian Network of Training and Research Institutions in Educational Planning (ANTRIEP, 2008) did a study on improving school efficiency. The Asian experience done in Colombo, Sri Lanka purposed to improve school efficiency. The objectives were to: give an outline of the circumstance of various nations in Asia; look at how both internal and external school supervision and bolster supervision ought to be reinforced and adjusted to positively affect the nature of schools; investigate the part that assessment components (examinations, accomplishment tests and others) can play in enhancing the quality and

viability of schools; and talk about the system of teacher deployment and management , and ask at what levels diverse choices about conveying and overseeing educators can best be taken and how this choice procedure can be progressed. The investigation discovered among others that: assessments of basic and secondary schools are embraced without adequate data in regards to advancements in the field which gives enormous degree for delayed bureaucratic customs; assessment prompts exhaust among school staff and that the measures for assessment are abstract to the point that it is practically inconceivable for the evaluators.

Putting resources into educational facilities is the way to guaranteeing that schools move toward becoming foundations where the learners cooperate, gain from one another and gain from a steady school learning condition, and thus expand students' learning experience so that all the learners accomplish their educational objective (UNESCO, 2008). Besides, the usage of these school facilities, there is realization of productive learning results since it motivates and persuades the learners (Otero & McCoshan, 2005). Verger (2018), contends that proper use of physical facilities in schools controls dropout rates, keeps up student discipline, and influences the learner to stay persuaded for longer periods. The discovery by Yadaa (2001) together with the Report compiled by UNESCO (2008) have indicated that classrooms, use of teaching aids, stationeries, and laboratories affect learner's performance in their academics. Patten (2000) raises concern that some schools started without prior planning. So majority of the secondary schools lack teaching facilities such as libraries.

Ngware (2006) investigation on Improving Internal proficiency in elementary School of Tigray Regional State: Challenges and Prospects done in Ethiopia had the purpose of examining the challenges and prospects of primary education in Tigray. The objective was

to find out measures for improvement of the internal proficiency of the elementary education framework in the region. A descriptive survey research design was employed. Questionnaires, document review and semi-structured interview schedules were utilized in collecting data. According to the research findings, some main factors that caused students to fall out of school and repeating in some classes were: significant students were over age; principals and teachers were less qualified; parents were illiterate/ limited parents educational awareness; shortage of text book/school facilities and students who came from low economic background had negative attitude to education and health problems. Whereas the study under review was based on primary schools, the current study focused on public secondary schools. The reviewed study also looked at the challenges and prospects of improving student participation rates, whereas the current study specifically singled out how increased enrolment affected student participation rates.

Alston (2007) in a study on the School elements and internal proficiency of Secondary Schools in Ondo State, Nigeria had the purpose of investigating the relationship existing between school variables and internal proficiency of secondary schools. The study targets were: to determine whether or not secondary schools in Ondo State, Nigeria were internally efficient and to determine whether or not a relationship exists between school variables and student participation rates of the schools in order to correct erroneous impressions. The study used the inventory and the questionnaire as data collection instruments. This study adopted the ex-post facto and correlation research designs. The study found out that secondary schools in Ondo State, Nigeria were internally efficient. Teachers' qualification was found to be the best predictor of student participation rates in the schools. The study reviewed aimed at finding out whether the schools under study were internally efficient or not, and if a relationship existed between school variables and

student participation rates, whereas the current study looked at how increased enrolment affected student participation rates. The study reviewed used ex-post facto and correlation research designs while the current study used descriptive survey research design.

Boru (2013) in a study on factors that affect the internal proficiency in Public elementary schools of Moyale District, Marsabit County, Kenya had the purpose of establishing the factors influencing internal proficiency in public elementary schools in Moyale District. The targets of this study included: to determine how competence of teaching/learning materials influence internal proficiency, to establish how school physical facilities influence internal proficiency, to assess how pupils family background influence internal proficiency and to establish how drop out of pupils in the schools influence internal proficiency. The study found out that, adequacy of teaching and learning materials affected student participation rates, teachers qualification and in servicing of teachers can help improve student participation rates, and that schools did not have adequate teaching and learning materials which affected teaching and learning and hence student participation rates. Further, physical facilities influenced student participation rates because it encouraged meaningful learning and teaching. Schools student participation rates was found to be affected by pupil's dropout. Further, the findings also revealed that pupils' family background such as household poverty affected student participation rates of schools.

The Kenyan Government has fully acknowledged the significance of secondary education. This has influenced the Government to come up with the budget arrangement to this level of instruction so that to increment and guarantee astounding secondary school training for all the Kenyan citizens. In such manner, the administration of Kenya expanded allotment to the instruction division by eleven percent (11%) from the 108.3 billion Kenya shillings

out of 2006/2007 to 119.5 billion Kenya shillings of 2007/2008 and in 2008/2009 expanded it further to a sum of 138.241 billion Kenya shillings which is an expansion of 18.7 billion Kenya shillings from the earlier years. The expansion is because of the presentation of educational cost free secondary education and enlisting of more instructors (Republic of Kenya, 2008). In the funding of education in Kenyan secondary schools, the Ministry of Education works a bursary design at secondary school level of education to help the learners from poor households to proceed with secondary schools (Njeru & Orodho, 2003).

The contributions of training can be outlined as educators, learning materials, and school structures and therefore, these are collectively used to change the arrangement of the field (primary school leavers) into another arrangement of field (secondary school graduates) (Fafunwa, 2018). Gall (2002) likewise portrays interior productivity of the framework as concerns boosting the connection amongst information sources and yields. There must be a steady mission with respect to chiefs of the training framework to see whether the similar results as far as admissions, effective completions, or measurable learning accomplishment - can be accomplished with less money related or 'genuine asset' inputs; and whether more prominent yields can be accomplished by redeployment of the current level of sources of info.

Accordingly, the Kenyan Government and through the Ministry of Education has put in place strategies to enhance cooperation among education stakeholders. In which case, the schools must implement effective and efficient measures (Republic of Kenya, 2005, 2012a, 2012b). These are geared towards the advancement of a more effective secondary education to enhance access, value and nature of training at this level. These efforts will guarantee and assure the full use of the sit out of gear limit in secondary schools through

the increase of class enlistments to between 40-45 learners, including more classrooms, as reasonable, to the number of schools that exist with under three classrooms and propelling the establishment of more harambee schools 'day schools' as commonly referred to in Kenya to bring down the costs to parents and guardians. According to Ministry of Education (2005), a policy framework for instructive training and research Sessional Paper No. 1 of 2005, recognizes techniques to enhance access, quality and finish rates and responsibility regarding the accomplishment of the objectives of training for all by 2015.

The Republic of Kenya (2006) gives the strategic plan aiming at expanding access to educational opportunities. It said that the total resource requirement for the public education sector over that period was projected at Ksh 543.4 billion. Sponsored secondary education was executed on February 2008 by the coalition government. The objective was to bring down the cost of education at secondary school level and in addition increment progress rates from the elementary schools to that of secondary schools. The government of Kenya declared the arrival of 2.9 Billion shillings to subsidize secondary education (SSE) and allotted Kshs. 10,265 to each learner to take care of their educational cost and also for the operational expenses every year. This sum, in any case, does not provide food for shrouded examination expenses, the advancement of physical facilities and hidden costs of education such as transport, uniform, lunch and boarding fees. Parents are required to meet such costs which are still the uphill for learners from poor households who in most cases think that it's hard to keep up their kids in secondary schools.

According to the Republic of Kenya (2005), information from the Ministry of Education demonstrates that the elementary school to secondary school progression rates which has been surpassed, at 71%. Nevertheless, 30% of the learners who enrolls in the Kenyan secondary schools fall out of school before they completed the second cycle (the Republic

of Kenya, 2005a, 2012a, and 2012b).

Kinuthia (2008) alludes to this by saying that manifestations of poverty are seen in lack of basic requirements for example access to education, vocational training, and employment. Indeed, even with the presentation of Subsidized Secondary Education (SSE), the two guardians/parent and the schools' administrators have been left thinking about how free indeed it is! Asiago and Odipo (2000) propose that the government need to disclose to parents and guardians how free this education in secondary school is. The Parents and guardians expect a great deal from this program as far as value and nature of training which implies sufficient supply of learning resources like more educators, physical facilities and instructional materials. From the foregoing, it is arguable that sustainable provision of the quality subsidized secondary education is fraught with intertwined which incorporate limited facilities, lacking the number of trained teachers and the increasing government budgetary deficiencies. All these, therefore, leave schools with no option but to implement workable effective and efficient measures.

### 2.3 Access to Secondary Education and Students Attainment

The governing body of public secondary schools in South Africa took measures to supplement the resources supplied by the state (Masimbwa, 2010). This decision by the state has led to high completion rates in South Africa (Masimbwa, 2010). Muhindi (2012) noted that despite financial crisis and deficits, some governments in Sub-Saharan Africa (SSA) have recently extended free education from primary to include secondary schools. Rwanda and Uganda abolished lower secondary education fees in 2006 and 2007 respectively (Muhindi, 2012). The Government of Rwanda has a nine-year basic education of which primary to lower secondary is free (United Nations Educational Scientific and Cultural Organization, 2007). This policy was implemented to ensure high completion

rates. In most countries, governments remain the largest financiers and providers of education. This note examines the evidence on the extent to which public expenditure on education have been effective in reaching the poor. The distribution of educational expenditures is inequitable, especially at the post-primary levels, where poor income groups are under-represented as compared with higher income groups.

Access to and retention in secondary schools in Kenya is still low with a transition rate from primary to secondary school being 50% (Murray, 2007). Secondary schools education also suffers drop-out rates ranging from 10% to 50%. Completion rates have also been impacted negatively. According to Action Aid Kenya (2007) completion rates at secondary levels was 87.5% in 2006, the GER was 36.8% and up to 2.8 million children aged between 14 and 17 years who should be in secondary schools were not enrolled in 2006. Education is universally recognized as a form of investment in human capital that yields economic benefits and contributes to a country's future wealth by increasing the productive capacity of its people. United Nations Educational, Scientific and Cultural Organization [UNESCO] (2008) declared access to Education as a human right and recognizes possession of basic education to all citizens of a country as a human right. UNESCO (2008) further adds that education is a key development issue that is indispensable for human capacity development and poverty eradication.

In 1990 at the World Conference on Education for All in Jomtien, Thailand and again in April 2000 in Dakar, Senegal, most developing countries re-affirmed their commitment in providing their school age children with universal access to first cycle of education (Lewin & Calloids, 2001). Lewin & Calloids (2001) further adds that enrolment in primary schools has increased for many of these countries while secondary education has been quietly neglected. However, studies by World Bank (2002) indicate that many World

Bank client countries in Latin America and East Asia have shown an increasing interest in expanding and strengthening their secondary education systems though many challenges remain. These include lower completion rates for young people from lower income levels. Lack of private resources is a key determinant of access to and completion of secondary education. Direct costs of education represent 22% of per capita household income in Bolivia. According to Lewin (2008), of the World's 6 billion people, 2.8 billion (almost half) live on less than two dollars a day and 1.2 billion (a fifth), live in less than a dollar a day with 93% living in South Asia, East and Sub-Saharan Africa. Improved access to education can reduce income inequality and eradicate poverty (Torrance, 2003).

The Secondary Education in Africa (SEIA) initiative has conducted a participatory process of analysis, dialogue and reflection in Sub-Sahara Africa with a conclusion that countries need to address the triple challenge of expanding access, improving quality and ensuring equity in education (Veerspoor, 2007). SEIA also argues that governments in this region need to allocate on average nearly 6% of Gross National Products (GNP) to secondary schools to achieve Gross Enrolment Rate (GER) of 85%. Education is a profitable private investment yet many students cannot afford to finance it out of their own family resources (Psacharopolous & Woodhall, 1985). Governments therefore need to provide funds to support a broad base equitable expansion of secondary education with incentives for private provision and subsidies to disadvantaged students to ensure equity of opportunity and eventually eradicate poverty (Psacharopolous & Woodhall, 1985).

Ayot & Briggs (1992) identified various student aid policies. These include tuition-free schooling, scholarships and bursaries to needy students, student's loans and vouchers specifically for education. However, studies on effects of subsidies in Colombia, Malaysia, Kenya and Indonesia all suggest that the methods need to be re-appraised since they do not

achieve both efficiency and equity objectives (Psacharopolous & Woodhall, 1985). In U.K, Smith (2006, as cited by Olembe, 2007) argued that the complicated systems of bursaries, grants and fees is no doubt confusing many students and their parents and is clearly not working.

Hackett (2008) further adds that some €12 million in bursaries that should have gone to students from disadvantaged groups was left unclaimed since students were not aware its availability. In Malawi, the government bursary scheme does not sufficiently address students' needs at the secondary school levels as few Malawians and district level employees are aware of the program and the requirements of the bursary process. Bursary funding is extremely limited and varies by district (World Bank, 2002). Policy initiatives in Kenya have focused on the attainment of Education for All (EFA) and in particular, Universal Primary Education (UPE) and Millennium Development Goals (MDGs) (GOK, 2005). The key concerns are access, retention, equity, equality and relevance and internal and external efficiencies within education system. The Secondary Education Strategy (GOK, 2007), identifies the implementation of Free Primary Education (FPE), Free Day Secondary School Education (FDSE) and the secondary schools bursary scheme as critical to the realization of the EFA goals. Other measures that the Government is taking to strengthen secondary education include rationalizing and revising the curriculum to reduce the load on students and teachers and the consequent cost burden on the government and parents, provision of infrastructure, improvement grants and laboratory materials and equipment (GOK, 2007).

According to Republic of Kenya (2009), the number of public secondary schools rose from 3583 in 2003 to 3612 in 2007, while the government recurrent expenditure allocation to education rose from Kshs. 68.2 billion in 2003/04 financial year to Kshs. 95.8 billion in

2007/2008 financial year. These figures show that the government has continued to invest massively in secondary education and the impact is shown in the steady increase in enrolment. Republic of Kenya (1988) recommended the introduction of cost sharing in education. The government effected this policy through Sessional Paper No. 6 of 1988 (GOK, 1988). While previously the government met most of the costs of secondary education, the cost sharing policy resulted in most of the burden of financing secondary education being shifted to parents and local communities.

Apart from reducing access to secondary education by students from poor and vulnerable families, the policy of cost sharing led to reduced retention and completion rates. It also led to regional disparities and inequalities in the provision of secondary school education. Apart from increased poverty, the burden of financing secondary education on the poor and vulnerable families was made worse by high inflation rates and the effects of HIV/AIDS scourge. According to the Ministry of Education circular Ref. No. G9/11/VIII/101 dated 22/9/2003, the Secondary School Bursary Scheme was formalized to meet clear objectives including enhancing equity by allocating funds on the basis of poverty index and enrolment; increasing access to secondary education from children from poor and vulnerable households; ensuring retention of the poor who enter secondary schools; enhancing completion by those who enter secondary schools; reducing regional disparities and inequalities in access and provision of secondary school education; contributing to increase in transition rate from primary to secondary. Nevertheless, the Kenya Government has over the years instituted a number of measures to promote access to and completion of secondary education. One such measure was the issuance of fees guidelines for public secondary schools (MOE, 2005). According to these guidelines, national schools were to charge Kshs. 28,900. Other schools Kshs.22, 900 and day schools

Kshs. 10,500. However, this had been flouted in many schools with some schools charging between Kshs. 35,000 and Kshs.50, 000 (UNESCO, 2008).

The provision of government bursary scheme for poor students is another measure that has been taken to enhance participation of the poor in secondary education (Republic of Kenya, 2005). The Secondary Education Bursary Fund (SEBF) was introduced in 1993/1994 financial year as a safety net to cushion the poor and vulnerable groups against the adverse effects of cost sharing in education (Njeru & Orodho, 2003). From its inception up to 2003 the SEBF was disbursed directly to all public secondary schools in the country taking into consideration the school population. Head teachers and Board of Governors were charged with the responsibility of identifying the needy students and allocating them money. This however changed in 2003/2004 financial year when the management of the bursary funds was transferred from the schools to the Constituency Bursary Committee (CBC) in line with the government's policy on decentralization and Constituency Development Fund (C.D.F) Act (GOK, 2005).

There were also concerns that the school authorities were not the best placed to identify needy students and there was lack of transparency and accountability at the school levels with regard to administration of the bursary (Njeru & Orodho, 2003). Republic of Kenya (2005) gave the Revised Guidelines for Disbursement of secondary school bursary through the constituencies. However, recent studies by Institute of Policy Analysis and Research (IPAR 2008) indicate that only 42% of applicants for SEBF get the minimum Ksh.5, 000. The M.Ps' control the bursary money alongside CDF making it opens to political manipulation (Orlosky 1984). The objective of the bursary scheme includes increasing access to secondary schools; ensuring retention in secondary schools; promoting transition and completion rates; reduce disparities and inequalities in provision of secondary

education (MoE 2005).The guidelines indicate that the target groups are orphans; children from poor households; children from semi-arid areas and the girl child.

The wide gap in secondary enrolment rates between Sub-Saharan Africa and the rest of the world is raising concerns (Wambugu & Mokoena, 2013). In the 20th Century, both the US and the Soviet education policies led to secondary school education models aimed at the creation of massive systems that emphasize open access and universal coverage (Karanja, 2008). After 1945, what were later called comprehensive secondary schools began to spread from northern to southern Europe. Extension of compulsory education had entirely changed the concept as well as the duration of basic education to the point that the basic education usually included lower secondary schooling. Rising average schooling was as important as study objective and as a measure of the success of education reforms (Chimombo, 2010).

Many other countries have embraced the goal of extending and expanding the idea of basic education to include much of what used to be restricted access, elitist secondary education. In Japan, the government fiscal policy provided for free education to secondary school level. Those of school going age had no option other than attend school to acquire education that is fully funded by the government (Olembo, 2005). In the USA, the federal government supports public education. The government is empowered by the constitution welfare clause article 1 section 8 to levy and collect revenues for the support of education. The situation in Kenya is not different from that of Japan and USA. In Canada, school fees are an integral part of an education system. Parents are to contribute to their children's education through payment of fees (Olembo, 2005). The government recognizes that some parents are sincerely not in a position to pay, so the government makes provision to ensure that a child is not denied access to education because of an honest inability to pay fees.

The department of education in Canada works with school boards, parents, teachers and other partners to ensure that policies governing school fees are implemented consistently in all provinces.

The International community pledged to meet the targets of Education for All and the Millennium Development Goals by 2015 and as a result, many governments particularly in the Sub- Saharan Africa are considering abolishing school fees for secondary school education (Onyango, 2001). This is particularly due to domestic and international demand to achieve Education for All and sustainable Development Goals. Fees charged in secondary schools are indeed the major obstacles for some children to access secondary school education, resulting in low transition rates from primary to secondary. Thus many governments in SSA have planned to abolish secondary education school fees (Opdenakker, 2017). This is against the back drop that many governments in SSA are under severe budget constraints, especially after the global recession. Thus while the governments are intending to extend free education, they often allow public schools to levy fees for limited items such as sports fees, school meals, uniforms and photocopying papers etc. Even though officially most school fees are not sanctioned by the government, the fees are often used to make up for lost revenue due to delay in government subsidies. While asking many questions about access, evidence indicates that secondary enrolment rates in SSA continue to be the lowest in the world (Osei, 2006).

Approximately 104 million secondary school –age children in the region, only one in four (25%) were enrolled in secondary in 2006 (UNESCO, 2008). Of these, there were 83 girls only for every 100 boys. This figure is a critical challenge as compared to other regions. One of the challenges of gaining access to secondary education in Sub Saharan is user fees which are mentioned as a barrier in terms of affordability (Otieno, 2007). In SSA, user

fees are identified as a barrier to education (Veriava, 2002). The school budgets are funded by allocations from state revenue, school fees are required to supplement these budgets so that schools are able to run smoothly. The Sub Sahara Africa School act provides that a majority of parents at a public school may determine whether or not school fees are charged and the amount paid. There was however exemption from paying school fees for parents who could afford to meet the cost. Exemption is extended to parents whose income is less than 30 times, but more than 10 times the amount of fees (Veriava, 2002).

In Kenya, the government has a uniform allocation criterion for secondary tuition, meaning that education is accessible to every qualifying student graduating from primary school. Even in countries where public education has traditionally been free, private contributions to the financing of government schools are increasingly important. Lewin (2008) observed that in public schools in Uganda, Tanzania and Zambia, more than half of total costs per student are financed through fees and other parental contributions. In Kenya, the Board of Governors hire additional teachers paid from the income to fill teaching positions for which no government teachers have been assigned and virtually all physical facilities for the government secondary schools have been funded by parents (Republic of Kenya, 2005). Zambia established in 1996 education production units which enroll students who fail to find regular places in fee- paying afternoon sessions run by teachers who participate on voluntary basis to supplement their income in school premises.

In Rwanda 80% of students are enrolled in private schools, almost 40% of which receive no public subsidy have to rely on fee income (Verspoor, 2008). The initiative of Free Secondary Education was to ensure that every child could access secondary education by reducing the financial burden on parents. Unlike countries mentioned, that is, Zambia and

Rwanda ,the situation in Kenya is quite different because education should be free and compulsory up to secondary level according Basic Education Act, 2012 (Republic of Kenya, 2013). Lack of access was said to be due to inadequate number of schools in both rural, urban and especially Arid and Semi-Arid Land areas. Within the school also, the places available are not adequate to match demand. These inadequacies are more pressing at the secondary school level (Republic of Kenya, 1999).

Koech commission recommended a mechanism for the provision of Basic Education for all and the strengthening of co-ordination in mobilizing and encouraging education providers. At the same time, necessary changes should be instituted for making education affordable for the average Kenyan parent. The government to take necessary steps to plan and implement strategies for increasing access at the secondary school level to accommodate all primary school learners (Republic of Kenya, 1999). Gogo (2003) carried out a study in secondary schools in Rachuonyo District and concluded that enrolment in the district remained low because parents had found it difficult to raise the required fees with ease making it difficult for the poor and the needy to afford secondary education. However, this study was carried out before the implementation of Free Secondary Education policy in 2008 thus the scenario today is different.

The commission of enquiry into the education system in Kenya pointed out that as Kenya moved towards the 21st Century, the greatest challenge facing the nation is that of ensuring access to Basic Education For All, achieving equity by eliminating all existing disparities with particular reference to education of girls, women, children with special needs, children in disadvantaged regions such as Arid and Semi-Arid Lands and education of children in especially difficult circumstances both in urban and rural areas (Republic of Kenya, 1999). This finding calls for a different approach to the provision of, delivery,

management and financing of education to ensure improved access, equity and quality within the context of newly defined goals and targets. Further, the convention of rights of children of which Kenya is a party provides the basics for all-inclusive education system where no child is excluded or marginalized in special programs. Therefore, the obligation to ensure all children's rights to education lies with the government of Kenya.

However, the research will find out whether with the introduction of Free Secondary Education policy, access to secondary education has improved. Wambugu and Mokoena (2013) reported that education takes one of the largest shares of resources in public expenditures. In 2002/2003 Kenya's financial year, education accounted for 20% share of public expenditure. It was only second to Defence and Public administration 29% while debt service 17%, Economic services 13% and Health 6%. The minister further highlighted that in spite of this high expenditure, the following factors militates against access to education; About 57% of the population live in poverty, HIV and AIDS prevalence is 9.4%, malaria is costly and reduces productivity. There is limited access to development, that is, good health, education, clean water and poor infrastructure.

Despite various initiatives by the government, that is, providing support to poor and disadvantaged students through secondary school bursaries; providing targeted support for the development of infrastructure in areas where parents are not able to provide such support, working in partnership with parents, communities, private sector and other stakeholders in providing secondary education, the secondary sub-sector continues to face challenges particularly the low participation rates (Republic of Kenya, 2005). A report of the Task Force on Affordable Secondary Education (Ministry of Education, 2012) observed that despite the growth in number of schools and enrolment, the increase in the supply of secondary school places has been insufficient to improve participation rates.

In 2006, gross and net enrolment rates were recorded to be only 32% and 23% respectively having increased from the academic year 2002 level of 27% and 17% respectively. Some of the challenges facing secondary education includes; high dropout rates (21% do not complete school), poor infrastructure, limited spaces, cost of education, student/ teacher ratio is high, inadequate textbooks and other compliments, regional and gender disparities, limited opportunities for the handicapped population. Further, based on 1999 census data, a total of 2.8 million boys and girls aged 14 and 17 years who should have been in school were not enrolled; it was thought that policy measures were necessary ingredients to address the poor access to secondary education as a way of supporting the country's overall development goals (Republic of Kenya, 2010). There is a need to get more information on whether Free Secondary Education policy influences access, hence the purpose of the study.

Wiley (2016) carried out a study on the challenges of implementation of Free Secondary Education in public secondary schools in Kangundo district in Kenya. He applauded the initiative of starting Free Day Secondary School Education as a worthy cause because it enhanced access to education despite many challenges. The introduction of Free Day Secondary School Education in 2008 had an immediate impact on enrolment at secondary school level. The number of secondary schools increased from a total 6,566 secondary schools in 2008 to 7,308 in 2009. Enrolment grew from 1.18 million students in 2007 (639, 393 boys and 540, 874 girls) to 1328, 964 (735,680 boys and 593, 284 girls) in 2008 and further 1,500, 015 (804, 119 boys and 695, 896 girls) in 2009 (Ministry of Education, 2012).

However, it was disturbing to note that despite the introduction of Free Day Secondary Education, some areas were doing quite poorly in enrolment. A newspaper, Education News, reported that enrolment of pupils in public primary schools in Central province in Kenya was declining at an alarming rate. Some schools with well-established infrastructure had been left with empty classrooms and the number of pupils declined. In Maragua Primary School, the number reduced from 1,500 to 542 within a decade (Njoroge, 2011). The scenario calls for an evaluation of Free Day Secondary Education programmes to assess their impact on access.

Nyaegah (2011) carried out a study on education and millennium development goal challenges facing the management of Free Primary Education in Nyamira County in Kenya. He underscored the fact that the government policy of FPE would substantially contribute to meeting Millennium Development Goals goal of universal access to primary education by the year 2015. Equally, it was the aim of the government to improve access to secondary level with the introduction of Free Day Secondary School Education. However, Nyaegah reported that the education sector was faced with many challenges including finance, and lack of adequate teachers, insufficient learning facilities which hinder the government from achieving this goal, hence the need to evaluate the impact of Free Day Secondary Education on access, equity and quality of education in Kenya.

The task force on the re-alignment of the education sector to the constitution of Kenya expresses a similar fact. That is, access, equity, quality and relevance of education are fundamental characteristics that define and drive systems of education and training. They reported that governments worldwide pay special attention to the four characteristics (Ministry of Education, 2012). There are however, many challenges which threaten the

sustainability of a robust education regime in Kenya. The key challenges include low enrolment and retention rates, constricted access and equity at the higher levels, establishment and maintenance of quality and relevance, and myriad inefficiencies in managing the limited resources allocated to the education sector (Republic of Kenya, 2005).

However, our main concerns in the study are access and quality at secondary school level. As cited elsewhere, this level is important in any Education system because students are prepared for various fields of work at this level. Hence for sound planning, the government should pay keen attention on access and quality at secondary school level. Economic survey (Republic of Kenya, 2012b) reported that the continued implementation of Free Tuition Secondary Education policy together with other government initiatives such as Constituency Development Fund have increased access to secondary education. Enrolment in secondary schools by class and sex from 2007 to 2011 rose by 5.9% from 1.7 million in 2010 to 1.8 million in 2011. Girls enrolment increased by 4.1% from 767,847 in 2010 to 819,014 in 2011 while boys enrolment rose by 3.7% to 948,706 in 2011 (Republic of Kenya, 2012 b). However, a number of challenges reported still indicate that gender parity still exists and a number of challenges are undermining government policy on free secondary education.

Consortium for Research on Education Access, Transition and Equity (CREATE) carried out a study in rural Kenya to establish whether Free Secondary Education has enabled the poor to gain access to secondary education. The report indicated that free secondary education cannot solve the problem of access. Some parents interviewed said that while lowering school fees has enabled some to take their children to school, this does not mean

all children from poor households are assisted to gain access to secondary education. Household income for many families has not changed while most prices of food and other commodities have soared thus reducing their ability to pay fees even in a day school (Olembo, 2009). It was expected that the county records 90% access for both primary and secondary. However, this is not the case. Poverty, low income and HIV/and AIDS scourge has orphaned many children, leaving them destitute and unable to meet their housing, educational, health, food and clothing needs (Ngethe, Moon & Argwings Kodhek, 2005). The reviewed studies did not address access in Mbita and Suba sub-counties, the gap in knowledge this study sought to fill.

### 2.4 Financing Secondary Education and Bursary Schemes in Kenya

Introduction of the tuition waiver in 2008 by the government of Kenya improved the student enrolment in public secondary schools. Despite this improvement; students' progression was not researched on and documented. The Government of Kenya subsidization of Education is motivated by the desire to increase transition and retention rates leading to low dropout rates hence high completion rates (Masimbwa, 2010). Educational subsidies include; Free Day Secondary School Education (FDSE), Constituency Development Fund (CDF) bursary, scholarships, teaching and learning materials and grants (Republic of Kenya, 2008).

According to Lewin (2008) the two largest cost elements in most secondary school systems in Sub-Saharan Africa are boarding and teachers' salaries. However, the costs can be classified into teachers' salaries, non-teaching staff salaries and non-salary operating costs. Teachers' remuneration takes up half of or more of costs per pupil in most non-boarding secondary school systems. Non-teaching staff salary costs refer to the cost of remunerating the non-teaching staff which includes salaries of administrators, clerical

assistance, hostel wardens, maintenance staff and security. As boarding reduces with an increase in the proportion of day schools, non-teaching salary budgets should fall substantially. Non-salary costs are costs associated with building repairs, utility bills, and equipment and learning material and sometimes with transport, food and accommodation; they can be substantial and comparable to salary costs in residential boarding schools. It is desirable that these costs are managed efficiently in ways consistent with school objectives.

MoEST (2002) points out that the UCE in Kenya has not been established because expenditure per student has not been determined to enable one to properly calculate UCE. However, comparing data on spending per student can provide a starting point for evaluating the UCE of secondary education. Similar to secondary schools, limited studies have been done on UCE for primary schools. For instance, MoEST (2002) reveals that the recurrent UCE in the primary subsector in the period 1996/97-2000/1 rose from Kshs. 2,987 to Kshs. 4,753. Thus, the UCE of secondary education is likely to be higher than the primary UCE. Olembo and Asiago (2014) assert that there is need to come up with the unit cost of primary, secondary and higher education and training. This will assist in designing more appropriate policies on cost and financing of education and training. To come up with actual UCE requires that the real components of the costs be properly articulated and estimated.

MoEST (2002) observes that the UCE in secondary education was more than three times the cost of standard 1 primary school pupil and also double the cost sustaining a pupil in the final year of primary school. In addition, the cost of schooling varies with the location of the school although, on average, high quality institutions are more expensive than government and community schools. These revelations, however, do not give the real

UCE of secondary schools. MoEST (2002:119) report that, “the cost of financing of secondary education in public schools costs twice as much as in private schools and that education in boarding schools costs about twice as much as in day schools”. However, the unit costs of secondary schools particularly those in Gucha District are not yet known, necessitating this study to be carried out.

MoEST (2002), states that the UCE in secondary schools has been increasing. Between 1996 -97 and 2000 -2001 it rose by 60% based on household and GoK levels of spending which reached Ksh.33, 608. Yet in real terms, current levels of spending by the GoK and household are significantly lower and have remained almost constant since 1996/97. On the other hand, a projected household share of the UCE between 1994 and 2002 rose from Kshs. 9, 744 on 1994 to Kshs. 14, 756 in 2002. However, due to household data limitation emanating from survey methodology and subsequent limited analysis, it is likely that the costs as stated here will tend to under estimate the household contributions hence mask the degree of financial responsibility that households have to bear in meeting the educational needs of their children. This does not indicate the government UCE and therefore the real UCE for secondary education is not yet established. The MoEST (2002) report asserts that: indeed, observations of current fees in the country suggest that the share of boarding fees [fees demanded] from households is as high as 50% in some schools.....few if any in- ' depth studies in Kenya have been conducted in this topic [on UCE] to serve as a guide in planning for resource allocation at the various levels of education (p. 120).

Kenya is in the category of countries, which have chosen a capitalist path to development, but at the same time, subscribing in its policy statements commitments to socialist principals. The Sessional Paper No. 10 of 1965 (Republic of Kenya, 1965), which provides guidelines about the aims of Kenyan society, point out the most systematic policy

statements on Kenyan egalitarian principals to be pursued within the framework of African Socialism. In the Development Plan of 1979 - 1983, the government stated that during this period the educational opportunities would have to be substantially improved to reach target groups such as the pastoralists, small scale farmers, landless rural workers and urban poor (Republic of Kenya, 1979).

According to Asuga (2012), the amount of money allocated for recurrent expenditure in education in 1987/1988 was 55 times what it was in 1963/1964, and that for development expenditure in education during the year Report (Republic of Kenya, 1999), reveal that the high cost of learning and teaching facilities have proved unaffordable for students from poor families thus leading to low participation rates and high dropout rates for the poor. This contrasts with the government policy to direct bursary allocation to the poor but academically talented students commensurate with their academic achievements in order to enhance their access and participation rates in secondary school education (Republic of Kenya, 1997).

Although this was an indication that the government might not be achieving parity in secondary school participation, empirical studies have not been documented on the actual status of bursary schemes on retention of the recipients. Given the foregoing policy statements in regard to equalizing educational opportunities through bursary subsidies among children from poor households, there was need for an analysis of the concrete reality in which provision of bursaries influenced retention rates in public secondary schools.

Types of Government initiated Bursary schemes which actually does the same work though released from different ministries include; Constituency Bursary Fund (CBF -

CDF); The government of Kenya introduced the Constituency Bursary Fund in 2003 so as to enhance students access to and retention in secondary schools, by supporting the needy and bright cases. Through this scheme, the exchequer allocates money annually to each constituency to fund secondary education.

The constituency bursary fund was established by the National Rainbow Coalition (NARC) government of Kenya, through an act of parliament. The CBF strategy was in line with the government's policy on devolution, decentralization of power and empowerment of local communities (Kimani, 2008). Under this allocation to each constituency (parliamentary jurisdiction) new scheme, the central government makes an annual budgetary the following; annual provisions by the ministry of allocations to the constituencies vary depending on education, the number of students enrolled in secondary schools, total national secondary school enrolments and poverty indices. Consequently, the funds are channeled to schools through the constituencies. The CBF mandates members of the community, through a committee of officials to select recipients of the fund. The rationale for this arrangement is that, members of the community know best and those in their midst who deserve financial support.

The fund is administered under the guidelines of the Ministry of Education. These guidelines specify application procedures, evaluation criteria and allocation ceilings. In addition, the ministry has provided further guidelines as to the minimum amounts to be awarded to applicants from the various categories of secondary schools. The recommended amounts are; day secondary schools – Kshs. 5,000, boarding secondary schools- Kshs.10, 000 and national schools` – Kshs. 15,000. Contrary to the high expectations about the constituency bursary fund, complaints are bound about its effective. The CBF strategy was in line with the government's policy on devolution, decentralization

of power and empowerment. However according to reports in CDFs offices (Ngatia, Kamau & Kadaari, 2015) recipients receive an allocation of KES.3,000 for those in day schools and KES.5,000 for those in provincial boarding schools.

Secondary School Bursary Fund (SESBAF); the secondary school bursary scheme was introduced in 1993/94 financial year in order to increase access to secondary education. In view of the impact that it has in extending opportunities to the poorer households, the government is committed to maintaining its existence. The selection of bursary beneficiaries is made by the school BOG in consultation with teachers and principals. In FY 2003/2004 Kshs. 770 million was allocated for approximately 200,000 students. According to the plan, five percent of the bursary budget was earmarked for the national schools, another five percent was earmarked for girls' schools in needy areas, and the remaining amount was allocated for other schools – provincial and district – based on criteria including: (i) merit, (ii) poverty index; and (iii) good conduct. It is estimated that about two percent of the bursary budget is used for monitoring, evaluation and contingencies. The value of the bursary that each school receives is determined by a formula that takes into account the factors of school enrolment and the District Poverty Index. The current scheme has limitations in effectively and consistently ensuring that only students in genuine need actually benefit from these subsidies.

The CBFC is charged with the responsibility of issuing and receiving bursary a FORM A as well as vetting and considering bursary applicants using the established criteria in FORM D. In Form A, the applicant provides information on the amount of money required for fees and information on their family's socioeconomic status. This form provides for verification of the information by the Chief/ Sub-chief/Pastor and the head teacher. The applicants rating form [FORM D] gives the guidelines on how to rate a

bursary applicant based on the information provided in the application form [FORM A]. As provided for in the evaluation criteria, applicants who are classified as either complete orphan needy or partial orphan needy or with both parents but needy are given preference in that order. These two forms are aimed at reducing subjectivity in the identification of needy students and their evaluation and subsequent allocation of bursaries. The current process of targeting and identifying of beneficiaries involves: awareness creation on the scheme regarding the application process, evaluation and award process and communication of results. The management of the bursary scheme as is done at various levels (Republic of Kenya, 2008).

A lot of Government effort has gone into attempts to improve the implementation, management and performance of the fund. To improve the efficiency of the fund, the government has developed and circulated relevant guidelines in the form of circulars. Between 2003 and 2010, five such circulars had been issued by the Ministry of Education. However, these efforts are yet to yield the desired results in terms of improved efficiency in the performance and equity in the implementation of the fund.

Education has been seen as a critical factor in development especially with reference to the development of Gross Enrolment Rates for socio-economic development. In this regard, governments all over the world have dedicated a large share of public finances to the education sector including the financing of secondary education.

According to Moon (2013) OECD countries spend a great deal of resources on their secondary education such that at secondary schools, students cost an amount roughly equivalent to 24% of GDP per capita. To facilitate access to secondary education, no tuition fees are charged in government schools. Fast growing economies such as Korea,

Brazil, India and Indonesia spend 39-50% of their education budget on secondary education while developing economies spend relatively low percentages (Kenya Institute of Public Policy Research and Analysis (KIPPRA), 2012). Coleman and Bell (1996) found that, in South Africa a governing body of public schools must take all appropriate measures to complement the resources given by the government. The setting of fees in secondary schools is optional in the sense that a school can enact such fees only when approved by a majority of parents attending a budget meeting at the school. Students cannot be denied admission for failure to pay the fees, but schools can sue parents for non-payment. However, some parents with extreme low income are exempted from paying such fees.

According to Oyaya (2013), the Government of Kenya, introduced the Free Primary Education (FPE) policy in 2011 in order to universalize access to primary education and enhance educational achievement in the country. This policy was followed later with the Free Day secondary Education (FDSE) policy in 2008 which was also aimed at accelerating enrollment and quality of secondary education in Kenya (Onyango, 2001). These strategies had international support and credibility, as these was part of the Millennium Development Goals (MDGs), and other internationally agreed protocols that Kenya is a signatory (Orodho, Waweru, Ndichu & Nthinguri, 2013). This wide vision of education and the universal approach to education sector development was fully embraced by Kenya as a critical factor for attainment of Vision 2030 (Republic of Kenya/UNICEF, 2012).

The Constitution of Kenya 2010 gives all Kenyans an opportunity to capitalize on the advancement made thus far in order to achieve the full potential of education for each and every learner in Kenya (Republic of Kenya, 2010, 2012). In addition, the Basic Education

Act 2013 recaps the fact that basic education which has been made free and obligatory in Kenya should be made through the legal framework enshrined in the Act (Republic of Kenya, 2012). The Constitution of Kenya 2010 and Basic Education Act of 2013 guarantees and provides legal mechanisms of ensuring that every Kenyan citizen is accorded a chance to access basic education and other economic and social rights that center upon the citizens access to, and performance in, education, as much as on the application of knowledge, attitude and skills gained through the educational experience (UNESCO, 2012; World Banks, 2012; Republic of Kenya, 2013).

During the 2000s, Kenya's basic education underwent some reforms but the non-conducive political and economic conditions at the time were unable to support its enhancement. Having to depend on limited resources and donor funding, the government experienced difficulties maintaining educational standards. Subsequently the quality of education deteriorated and there was an increase in the numbers of out of school students. Figures for instance show that massive school dropouts was recorded and that out of about one million learners who enrolled in standard one in 2011 and in 2008, less than half a million went to standard eight, a trend that has persisted to date (Abdalla & Ngware, 2012; Orodho, Waweru, Ndichu & Nthinguri, 2013).

According to Onyango (2007), Kenya's secondary school population enrollment rose from 30,120 students in 151 schools at the dawn of independence (1963) to 620,000 students in 3,000 schools in the year 2000. They reported that the targeted enrollment by the end of 2008 was estimated at 1.4 million students. In 2008, the government introduced plans to offer free secondary education to all Kenyans. Mwenda (2009) pointed that with the adoption and implementation of Subsidized Secondary Education, enrollment was likely to increase. However, the Subsidized Secondary Education program has also created a lot of

challenges. With increased enrolment year after year, there is limited infrastructure coupled with lack of adequate teachers. An overcrowded classroom due to increased number of students is a common phenomenon in many secondary schools and the learning facilities available in many schools are inadequate. The student to teacher ratio has grown to such a high rate that it has resulted in a decline in the quality of education, mainly due to reduced interactivity between teachers and the students (Orodho et al., 2013).

The Secondary Education in Africa (SEIA) initiative has conducted a participatory process of analysis, dialogue and reflection in sub- Sahara Africa with conclusion that countries need to address the triple challenge of increasing access, enhancing quality and guaranteeing equity in education (Veerspoor, 2007). SEIA also argue that governments in this region need to allocate on average nearly 6% of Gross National Product (GNP) to secondary schools to achieve GER of 85%. Education is a profitable private investment yet many students cannot afford to finance it out of their own family resource (Psacharopolous & Woodhall, 1985). Therefore, governments need to provide funds to support a broad based equitable expansion of secondary education with incentives for private provision and subsidies to disadvantaged students to ensure equality of opportunity and eventually eradicate poverty (Veespoor, 2007; Psacharopolous & Woodhall, 1985).

Ary, Irvine & Walker (2018) further add that some 240 million in bursaries that should have gone to students from disadvantaged group was left unclaimed since students was simply not aware of what was available. In Malawi, the government bursary scheme does not sufficiently address students' needs at the secondary school level as few Malawians and Sub-County level employees are aware of the program and the requirement of the bursary process.

Bursary funding is extremely limited and varies by county (World Bank, 2002). Education has been recognized as a central element in social and economic development (Olembo, 2000). The benefits that occur from people investing in human capital are monetary, increased productivity and higher personal earnings. Justifying investment in human capital, Psacharopolous and Woodhall (1985) asserts that many studies have shown that the economic returns to primary and secondary education are at or above 10% a year making human capital a productive investment for the society. UNESCO (2012) further argued the case for equal opportunities in accessing education by indicating that economic barriers, should be removed and more places provided in upper secondary to increase access to the kind and amount of education sustainable to each individual's inborn capacity. Considerable evidence exists that improving education status of the poor, of women and indigenous people increases economic growth and reduces poverty. Investment in education of students from poor background sets off a process of intergenerational poverty reduction (UNESCO, 2007). The World Bank report (2002) asserts that education is a creator of human capital and that fairness in the provision of education is therefore paramount. The report further argues that failure for an individual to adequately get educated handicaps him or her in market economy.

The provision of the government funded scheme for poor students is measure that has been taken to enhance participation of the poor in secondary education (Republic of Kenya 2012). Head teachers and board of governors were charged with the responsibility of identifying the needy students and allocating them money. This however changed in 2011/12 financial year when the management of the bursary funds was transferred from the school to constituency bursary committee (CBC) in line with the government policy on decentralization and Constituency Development Fund (CDF) Act (Republic of Kenya

2011: Republic of Kenya, 2012). There was also concern that school authorities were not the best place to identify the needy students and there was lack of transparency and accountability at the school level with regard to administration of the bursary. Republic of Kenya (2012) gave the revise guidelines for disbursement of secondary school bursary through the constituencies.

However, recent studies by IPAR (2008) indicate that only 42% of applicants for SEBF get the minimum Kshs. 5,000. The objectives of the bursary scheme include increasing access to secondary schools, ensuring participation in secondary schools, promoting transition and completion rates, reduced disparities and inequalities in the provision of secondary education (MOE, 2012). The guideline indicates that the target groups are orphans, students from poor households, students from Arid and Semi-Arid Lands (ASAL) and the girl child. The C.D.F was created through an Act of parliament in 2011 to finance community base project through the local area Member of Parliament (M.P) with the overall goal of poverty alleviation (Republic of Kenya, 2013). However, the fund has experienced many challenges, which include failure by C.D.F committee to formulate disbursement guidelines and to create awareness of disbursement guidelines, mismanagement of funds, bursaries are given to students who do not deserve and frequently the CDF committee members grant bursary to relatives (Afonso, 2011).

The Republic of Kenya (2012) also indicate that the bursary scheme provides assistance to less than half of those who qualify hence there is need for extra funds. Afonso (2016) noted that delay in disbursement of bursary funds by treasury forces led students to lose crucial academic days. Achoka (2012) carried a study on inhibiting factors on access and equity of students in public secondary schools in Imenti North Sub-County. Study findings revealed that access and equity to secondary education is a critical issue in Africa.

However, in Kenya, although primary education sector enrolments over the past four decades have increased greatly, secondary school enrolments have shown only a slight increase coupled with low retention rates. Education reform efforts in undeveloped countries like Kenya have aimed at making education an effective vehicle for national development.

The Government of Kenya education policy makers and civil society have emphasized that developing countries need to invest more in education and ensure that systems of education are efficiently managed, that limited funds allocated to the sector have maximum influence and that costs improvement measures are adopted and implemented. Access and equity in the secondary education sector in Kenya is illustrated by a number of constraining factors namely affordability (cost), distance to school, adequacy of schools, household sizes, household income, curriculum, peer influence, parental education, among others (IPAR, 2008). The interplay of socio-economic factors, school-related factors, student-related aspects and community-related factors are to blame for the low access and equity of secondary school students. IPAR (2008) recommended that learners who dropped out due to financial constraints need to be encouraged to go back to school and apply for government subsidies; guidance and counseling programmes should be stepped up and the teachers responsible for guidance and counseling in-serviced to improve their performance; the curricula should be reviewed and made relevant; the students court services should be taken up by schools as an integral part of secondary school management; adult education programmes should be enhanced to boost parental education and child labour laws should be strictly enforced.

Abdalla, and Webber, (2008) conducted a study on Equity in the distribution of bursary to secondary school students in Busia Sub-County. The study established that bursary

allocation in Busia Sub-County was not equitably distributed among the recipients since Gini Co-efficient revealed concentration levels of over 0.5 for all the years studied. The study noted that the criteria set by the Ministry of Education to be used by school administrators to allocate bursary in the Sub-County bore some encumbrances that made it difficult for bursary to accurately target support to the needy students. The criteria according to school heads left room for a lot of discretion which could be subjective. The study established that some of the needy students ended up missing bursary support unfairly through the poor criteria. The next was orphaned and level of need where a resonate proportion of head teachers felt that they were used to deny needy students access to bursary. The study therefore concluded that the criteria was cumbersome and could not be effectively be used by the head teachers to identify the levels of need for differentiated bursary allocation.

In addition to the decentralization of secondary education bursary fund to the constituency level, and gradual increase in allocation and setting of higher minimum allocation per beneficially, Angrist, Bettinger and Kremer (2016) study opines that it is apparent that the current bursary provisions and cash transfers should be enhanced to sustain deserving students within the system. According to the Welfare Monitoring Survey (WMS) III of 2007, 30% of the population lived under the poverty line while 56% of the population lived below the absolute poverty level. In 2012, about 46% of the population lived below the poverty line. The bursary allocation should be improved to target deserving students leaving standard 8 (or eighth grade). Under the current system, identification of deserving cases covers only those students already admitted within the secondary education level.

Ball and Bedi (2010) conducted a study on access to secondary school education through Constituency Bursary Fund in Kanduyi Constituency. They observed that orphans and

good performers were the majority of bursary recipients, leading to confirming that the Kanduyi Constituency Bursary Fund committee determined the recipients based on their parentage and academic performance. The Gini Co-efficient Value 0.01 for the bursary allocations to the recipients implied that the allocations were done equitably in the constituency. As a matter of fact 80 % of the recipients noted that the criteria used by the committee to identify the beneficiaries were fair enough. The equity in the allocation can be attributed to fairness demonstrated in the criteria for identifying the bursary recipients and uniformly in the bursary amounts. However, the findings of the study revealed that there were problems encountered by the bursary fund committee. These included; inadequate bursary by the government, political interferences and delays in bursary disbursements. The study recommended that there is need for the government to establish a special management structure devoid of political manipulation to run Constituency Bursary Fund. KIPPRA (2012) carried out a study on accountability and performance of constituency funds. Majority (84.3%) of the respondents expressed high levels of distrust in the constituency bursary fund managers.

IPAR (2008) carried out a survey on public expenditure tracking of Secondary Education Bursary Fund in Nairobi province. Their findings established that the bursary scheme has limitations on governance, effectiveness and consistency. They observed that as a result of inconsistency in funding, the scheme has not achieved its main objective of retention. And due to low level of funding compared to demand, the survey posits that many stakeholders have negative perceptions about the operation of the scheme. This is because whereas the number of students applying for bursary funds has been on the increase, the amount being allocated to constituencies for bursary has remained static. As a proportion of the tuition fee requirements, the bursary fund hardly meets a quarter of the fee requirements. For

instance it was revealed that an estimated 84 % of the bursary beneficiaries got Kshs.5,000 as bursary. This is way below the government approved fee for day schools, boarding provincial secondary schools and national schools which is Ksh.10,500, Kshs. 22,900 and 28,900 respectively. Further, much of the allocated to Nairobi province benefited majority of students outside of Nairobi province. The survey estimated that only 29% of the funds allocated benefited students schooling in Nairobi province. From the number of applicants an estimated 57% of the demand is not met. School records indicate that 62% of bursary funds received by schools are from other bursary providers. Also, it was established that the allocation to and disbursement of funds from constituencies is not consistent with the school programmes. The allocation of funds from the Ministry of Education to constituencies and from constituencies to beneficiaries is not in tandem with school programme. This makes beneficiaries to receive money in the middle of terms after they have missed classes as they go about looking for financers to supplement the allocations they receive from CBF.

Mbwiria (2010) opines that a multiplicity of social and economic factors has locked out girls from the Constituency Bursary Fund that is meant to enable poor students finance secondary education. This has in turn led to a high dropout rate of girls from secondary schools and put them at an economic disadvantage in both current and future lives, a new report has said. A report released recently in Nairobi, however, showed that the constituency-based committees use skewed criteria in the selection of beneficiaries, a factor that had seen girls miss out on the kitty, regardless of their social economic background.

Enrolment is one measure of access to education. Major determinants of enrolment include; income, schooling costs, presence of schools, community involvement,

transportation, education quality and relevance (Raja & Burnett, 2004). Secondary school enrolment rates in Sub-Saharan Africa (SSA) continue to be the lowest in the world. UNESCO (2008) notes that only 25% of school age population was enrolled in secondary schools in 2013 in SSA, and that there was 83 girls only for every 100 boys compared to NER of 40% in secondary schools in Caribbean with 107 girls for every 100 boys. The statistics show that students, particularly girls, in SSA have the lowest opportunity to enroll in secondary schools at their official age. UNESCO (2010) adds that majority of adolescents in school are still enrolled in the primary level in SSA, a case of 39%. Research indicates that direct and indirect schooling costs are important factors in whether students enroll in and attend school (Hunt, 2008). Inability to pay direct costs of schooling was found to be one of significant causes of non-attendance in Ethiopia and Guinea (Meltzer cited in Lewin, 2008). The ability to buy exercise books, pens and the necessary clothing for schools also influence whether students enroll in schools or not (Lewin & Levin, 2018).

Several researchers have done studies on retention and access to education in sub-Saharan they include; Lewin (2009), UNESCO (2010), and Nyabanyaba among others. While Wanbugu (2010), Institute of Policy Analysis and Research (IPAR) (2009), World Bank (2009), Ngware et al (2013) conducted studies on critical education index access in Kenya. All asserted that government policies on education subsidies are aimed at expanding access among the needy and vulnerable students. Psacharopoulos and Woodhall (2005), Mushtaque et al., (2013), World Bank (2009), and Lewin and Caloids (2009) researched on equity to access education in selected countries worldwide. These studies found contradicting results on the relationship between the secondary education subsidies and the indicators of educational attainment such as access and equity. Whereas, Levin et al.,

(2018) revealed that bursary schemes influenced positively on access and equity on the other hand similar studies in Sub-Sahara and in particular Kenya found that Constituency Bursary Funds managed by area members of parliament had little impact contrary to the studies in developed world and Latin America where subsidies had the greatest impact on access and equity.

Much evidence concerning the abolition of school fees in the basic education has seen a massive increase in enrollments and completion of learners as a response to the removal of school fees. Uganda introduced USE in 2007 and experienced a 68% increase in overall enrollment from 3.4 million to 5.7 million. M'arimi (2013) shows a significant gain secondary school enrollments in the country was observed among rural, poor and girls. In 2002, less than 46% of students from the poorest quintile households were enrolled in secondary school education against 82% from the richest quintile. By 2007, about 78% of students from the poorest quintile was enrolled compared with 89% of students from the richest quintile. The gaps in the percentage of enrollment in Uganda between the poorest and richest quintile had reduced by 25% between 2002 and 2007. A substantial increase in learners' enrollments and completion of basic education was particular identified among girls from the poorest quintile. However, increased access and equity of learners to complete the basic education cycle is likely to be at the expense of other basic needs of households. A study of USE in Malawi shows that despite the abolition of fees and the non-enforcement of school uniforms, parents were still required to incur expenses for exercise books, pens and clothes. Mugo (2002), found that the sum of the costs was actually more than the amount formerly required for fees because poor households with many students started sending their students to schools offering free education, thus the allocation of household expenditure on education was eventually increased. Rose

estimated that the poorest household spent 13% of their household expenditure on education compared by 7.5% of household expenditure spent by the upper quintile. Other studies also show that although free education reduces households' direct costs, indirect costs remain as substantive deterrent from students form poor households to gain access and be retained to complete their basic education. Ghana is one of the countries that have been providing Free Basic Education since 2013.

Under the Free Compulsory Universal Basic Education (FCUBE), not only primary but also lower secondary education become free of charge. However as a result of abolition of school fees, some school introduced indirect fees to compensate the lost revenue which was in some cases an obligation for Sub-County authorities (MOE/GES, 2009 cited in Mugo, 2009). Thus, parents in primary and lower secondary school were still required to pay operational costs, Parents Teachers Association (PTA), textbooks, uniforms and other costs. It was not until 2013 that all these fees were abolished through the government's capitation grant scheme. In other examples, Nigeria provides tuition free secondary education, yet different forms of fees are imposed on parents to cover the cost of running the system. While Uganda introduced USE, parents are still required to pay boarding and medication costs (UNESCO, 2007). This study assessed the effects of Subsidized Free Day Secondary Education funds allocated to public secondary schools by the government on learners' retention. Studies on learners' access and equity to completion of basic education in Ghana show that although the FCUBE made an overall enrollment and completion rates increase, students from poor households continued to be underrepresented in enrollments and completion rates in their basic education.

Rolleston (2009), made it explicit that not only indirect costs hinder access and equity of the poor but also opportunity costs substantially affect the chances of poor students to

enroll and complete basic education. A study of access and equity patterns in Malawi also concludes that access and equity to education continues to reflect the household wealth (Chimombo, 2009). Thus, despite direct fees being abolished, the abolition of fees has been enough to ensure access and equity to education for the poor. Although the introduction of a Nine Year Basic Education Programme in Rwanda led to the Gross Enrollment Ratios (GERs) and Gross Completion Ratios (GCRs) from 16.6% in 2012 to 18.3% in 2013, girls remain underrepresented in the overall enrollments, showing 47.5% in 2013, compared to 47.2% in 2012. Free secondary education in this instance did not narrow gender disparities in access and equity to secondary education greatly in Ghana. This study will establish the same for FDSE in Kenya.

Lewin (2008) found that completion rates improved substantially in Bangladesh after the introduction bursary scheme to secondary school students. Keith (2008) study in UK on Effect of Government Bursary on Transition and Completion rates found that it led to high transition and completion rates. Munavu (2015) study in Mtito-Andei Division Kibwezi Sub-County Makueni County found that government bursaries helped poor students' access secondary education leading to high retention rates, consequently leading to high students completion rates. The study used descriptive survey design. The target population was 2,228 and the sample size was 228 respondents. It is on this basis this study sought to determine the extent to which government bursary influence completion rates in public day secondary schools in Kitui County.

A Study done by Olembo (2012) on Impact of Bursary Schemes on Retention of Students in Public Secondary Schools in Gem Sub-County, Kenya found that there was high retention rates in day secondary schools; this led to high completion rates. The study design was descriptive survey, the target population was 1,947 and the sample size was

358 respondents. The study concentrated on the impact of all bursary schemes on retention of students in public secondary schools. It is on this basis this study sought to determine the extent to which government bursary influence completion rates in public day secondary schools in Kitui County.

Bursary funds for secondary schools are channeled through the Constituency Bursary Fund. This fund is meant to supplement the effort of FDSE to meet the financing gap of needy students. The fund was initially operated through the Ministry of Education and operationalized by the school Board of Management (BOM) at school level as Secondary Education Bursary Fund (SEBF) (MoE, 2008). Provision of bursary is one of several strategies used by government to ensure that disadvantaged students have equal opportunity in accessing education at all levels. These have led to high completion rates among the disadvantaged students (RoK, 2008).

There is also County Bursary Fund provided by the County Government through County Ministry of Education and Youth Affairs. These bursaries are meant to those students from low socio-economic background to improve on their completion rates. A Study done by Njeru (2013) on Effect of Secondary Education Bursary Fund on Access and equity of Students in Public Secondary Schools in Juja Constituency, Kiambu County Kenya found that Secondary Education Bursary has led high retention rates in day secondary schools, this led to high completion rates. Following the changes in the allocation mechanisms since 2011, claims of misallocation of bursary funds, double awards to one student in two schools, awards to students not enrolled in any school, as well as excessive patronage by members of parliament have negatively affected effectiveness of the funds (Muhindi, 2012).

Cameron (2007) explained that in many developed nations such as United States America,

Canada, Australia, France, Britain and Sweden among others, secondary education is available for all in public schools and is run and funded by the government. The United Kingdom abolished fees for state secondary schools in 1944 through the Butler Act (Cameron, 2007).

A Study by Lewin (2008) on financing education in Mauritius explains that subsidized secondary schooling in Sub-Saharan Africa (SSA) has led to high completion rates. Rwanda and Uganda abolished lower secondary education fees in 2013 and 2007 respectively (Lewin, 2008). The Government of Rwanda was concerned that, high fees charged at secondary school level of education locked out those who completed primary education and qualified for secondary education World Bank (2008). While introducing Universal Secondary Education (USE) in Uganda there was a great concern that, only one in five students who completed primary school had access to secondary education, and the majority of them are those from wealthy households (UNESCO, 2007). A study done by Kinaro (2015) in secondary schools in Mvita Sub-County Mombasa County found that subsidized secondary education funds provided by the government has led to high completion rates in public day secondary schools. The study used descriptive survey design. The target population was 238 and the sample size was 88 respondents. It is on this basis this study sought to determine the extent to which FDSE influence completion rates in public day secondary schools in Kitui County.

Kenya government play very crucial role in financing of public secondary education especially through Free Day Secondary Education. In 2007, the government formed a taskforce to look into ways and means of reducing the cost of secondary education on households (Ministry of Education, 2008). The taskforce on Affordable Secondary Education was led by Dr. Eddah Gachukia and it recommended a Government monetary

subsidy of Kshs. 10 265 per child to meet the cost of instructional material and other support services (Gachukia, 2007). The disbursement of FDSE funds is in three batches; 50 per cent in first term, 30 per cent in second term and 20 per cent in third term. The FDSE funds were to be later revised through government circular No. MOE.DSEC/5/17 of 2015 to Kshs. 12,870 per child.

A Study done by Ngwili (2014) on factors influencing student's completion rates in public day and boarding secondary schools in Kibwezi Sub-County, Makueni County found that funds from FDSE are used to enhance educational facilities in day secondary schools, this has provided ideal environment for quality education, hence improved completion rates. The study design was descriptive survey, the target population was 632 and the sample size was 242 respondents. The study concentrated on the factors influencing students' completion rates in public day and boarding secondary schools.

Lockhead (2000) said that the intended curriculum cannot be easily implemented without the necessary materials. The quality and adequacy of resources affect the quality of education and how effectively the curriculum is implemented. These materials provide information, organize the scope of coverage and the sequence of information presented and provide opportunities for students to use what they have learnt. Such materials include textbooks, teachers' guides, computers, maps, chalk and exercise books among other teaching and learning aids. Asiago (2007) alludes that teachers cannot teach well without such supporting materials, no matter how qualified they are. Both the quantity and quality of books should be improved. Having to depend on limited resources and donor funding, the government experienced difficulties maintaining educational standards. Subsequently the quality of education deteriorated and there was an increase in the numbers of school-age students who were not receiving formal education. Figures for instance show that

massive school dropouts was recorded and that out of about one million students who enrolled in standard one in 2011 and in 2008, less than half a million got to standard eight, a trend that has persisted to date (Orodho, Waweru, Ndichu & Nthinguri, 2013).

Mwiria reported that the target enrollment by the end of 2008 was estimated at 1.4 million students in currently reported 4,478 secondary schools. In 2008, the government introduced plans to offer free secondary education to all Kenyans. Mwiria observed that with the introduction of Subsidized Secondary Education, enrollment is certain to climb higher. However, the Subsidized Secondary Education program has also created many problems. With increased enrollment year after year, the infrastructure is stretched to the limit and so is manpower. Overcrowded classrooms due to increased number of students are common issue in many secondary schools and the learning facilities available in many schools are inadequate. The pupils to teacher ratio has grown to such a high rate that it has resulted in a decline in the quality of education, mainly due to reduced interactivity between teachers and the pupils (Orodho *et al.,* 2013).

This situation has sometimes led to desperate and ineffectual attempts by the Kenyan government to hire partially trained or untrained teachers to seal the gap, but it has not borne any fruits. And even though the number of girls enrolling in secondary school increases every day, gender disparity is still a major concern especially in the marginalized communities. The inception of the Subsidized Secondary Education program has seen increased government spending in the sector but schools are still ill-equipped while classrooms are either dilapidated, congested or both. The worrying scenario for the country's poorest areas is the high costs they still bear in terms of development and boarding related costs. While the government has waived tuition fees and provides textbooks, other classroom materials such as exercise books, writing materials and other

stationery are still the parents' responsibility. This is because the government is facing budgetary constraints as it tries to strike a balance between funding the all-important education sector without compromising on other sectors which also need investment.

In 2008 the World Bank and International Monetary Fund (IMF) made recommendations to restructure public institutions to streamline efficiency. One change the government made was to reduce gross enrolment rates including a freeze on hiring new teachers by the TSC and this resulted in a significant shortage of teachers. Since 2011, the TSC has been working to retain teachers, and the first full recruitment of about 40,000 was proposed for the 2007 fiscal year. However, the education system still has a shortage of about 60,000 primary school teachers (Abdalla & Rolleston, 2007). Despite a sizable portion the budget being allocated to the education sector, the government still relies on donor-funding.

There are many cultural demands and practices that influence full participation in both the domestic and school environment as many students are also responsible for domestic chores. Although the initial enrollments have been higher in the last five years, there is still the danger of dropout rates not being fully under control (Abdalla & Rolleston, 2007; Orodho, 2013). One positive outcome of FPE, however, has been the significant increase in the number of girls in school. Maintaining the quality of education is a challenge that the government continues to address. With large class sizes and competing resources, parents with financial means pulled their students out of public schools and enrolled them in private schools.

To cope with the pressure arising from the increased primary school graduates, the MoE advised all public secondary schools to expand their capacities to a minimum of three streams. In addition, bursary funds targeted at needy secondary schools students was not

explicitly expressed in this year's budget. Despite the allocation of substantial funds earmarked for bursary to needy students, through many grassroots level funds such as Local Authority Transfer Fund (LATF), Constituency Development Fund (CDF), Constituency Bursary Fund (CBF), these funds may not reach many students given the high per student cost in the delivery of secondary education. PER (2010) notes that the annual per student cost in secondary education estimated at Kshs. 21,800 is too high compared to that in other low-income countries. This is perhaps because majority of the students are enrolled in secondary schools, which offer boarding facilities that tend to push the average cost of secondary education upwards (Cobbe, 2007).

The challenges in the Ministry of Education include the fact that growth in number of secondary schools has not matched that of primary schools leading to a lot of wastage of primary school graduates. The high cost of secondary education is another challenge and has led to high dropout rates. The pupil to text book ratio has been high especially in rural areas and urban slums and the HIV/AIDS pandemic has had negative effect on this sub sector (Cobbe, 2007) .

For Kenya it would be appropriate to refer to expansion of measures already in place as opposed to new measures. For instance the government made a modest increase in education programmes budgetary allocation in the 2009/2010 budget. This is meant to sustain the FPE programme and subsidized secondary education. More funds was used for programmes such as Most Vulnerable Students Grants (MVCG), support to early childhood education programmes, Home Grown School Feeding Initiative, Bursary and school infrastructural development. Significant amount of the money in the budget is allocated to devolved funds, mainly in the Constituency Development Fund (CDF). It is therefore anticipated that if spent as per plans, there would be influence on school access

and equity. The government hired 10,000 teachers on contract as a short term measure to address acute teacher shortage in primary and secondary schools in the country (Republic of Kenya, 2010). However, the Kenya National Union of Teachers (KNUT; 2010) estimates that Kenya has a shortage of 60,000 teachers. On its part, the government estimates the shortage at 30,000 teachers' countrywide (Republic of Kenya, 2010). The government has expanded funding on Cash Transfer Grants to an annual budget of Kshs. 300 million (USD 3.8M). However, the effect of this on education is yet to be ascertained.

**2.5 Bursary Funds Demand and Internal Efficiency**

Before 1988, secondary education was highly subsidized and parents were paying considerably less amounts thus many students had access and equity to secondary education. This was due to supplement by government effort. The annual fees of self-help secondary schools (Harambee schools) rarely exceed Kshs. 2,000 per student per year which was even far beyond the reach of ordinary peasants. Most schools were established through Harambee efforts and fundraising drives which resulted in the establishment of Harambee secondary schools. This improved access of many poor students to secondary education. The introduction of cost sharing as a way of financing education and training as from 1988 onwards as advocated by World Bank, made education relatively expensive, beyond the reach of many students. Cost sharing as a policy is contained in the report of the commission chaired by Kamunge, (Republic of Kenya, 1988) which recommends that Parents Associations be established for primary and secondary schools. The effects of cost sharing over the years has led to a decrease in access and equity in secondary education.

The education process of any given child should be continuous and cumulative from week to week and from year to year. Asiago (1974) says that academic time has been found to be strongly associated with learning achievement. It is important that time available for

learning is used to the maximum and distribution of teachers and student effort during available time is to maximize learning time. He adds that there is a general tendency for time related variable to correlate significantly with achievement.

According to Kamunge Report (Republic of Kenya, 1988), time available for educational institutions is an important resource that should be managed effectively to achieve the best possible result in teaching. Learning is continuous, cumulative and increases by steps of some specified size and each increment would be in some pattern of relationship to every other.

According to the National Development Plan (2002−2008), the following were cited as the challenges in education facing the government: (i) Cost of education and training. (ii) Inequality in access to education. (iii) High wastage rate. (iv) Under enrolment in school. The high cost of education is given as one of the explanations for lower Gross Enrolment Rate and wastage in secondary than primary. Bursaries though diminishing in importance in relation to other financing methods still play a role (Ayodo, 1989). However, it is restricted to needy students who perform well in schools. Regions that are poor have lagged behind over others thus increasing in equalities of educational opportunities and hindered uniform social development in the country. Poor financing and poor quality education is due to insufficient investment and poor sustainability.

Njeru and Orodho (2003) observe that the objective of the bursary scheme in secondary school had the objective of enhancing access to, and ensure high quality secondary education for all Kenyans particularly the poor and vulnerable groups as well as the girl child. MoEST was responsible for allocating bursaries through schools according to financial needs assessment. However, in the allocation, national schools were allocated

5% of the total bursary fund available in any given fiscal year, while the remaining was allocated to school proportionately depending on the school's size in terms of student enrolment regardless of the status of the school whether boarding, day or mixed status. The bursary was allocated using the formula: D = B x Se/Ne Whereby D = district bursary allocation B = Total MoE bursary for the fiscal year. Se = Total student enrolment in the district Ne = Total national student enrolment. The World Vision International spent Kshs. 807,600 to meet school expenses of 500 Maasai girls in Narossora location, Narok District from Nursery to secondary. Dishonesty hamper bursary scheme whereby lack of transparency and lack of honesty are to blame for needy students' failure to benefit from government bursary. It was noted that some heads struggle to keep bright children in school irrespective of their family background. Good head teachers use government bursary on all deserving cases and supplement effort by soliciting more funds.

The university introduced fees of Kshs. 6,000 of which parents accepted as part of SAPs to be met by student annually. Those with financial disabilities however, would automatically get the financial assistance. According to the bursary committee, the parents at the villages, chiefs and assistant chiefs were to ensure that information given was as accurate as possible and the university would use the report under a joint committee. Cross−check questions would also be used to establish whether the information given was true.

From 2002, the government has been channeling bursaries to Constituency Development Fund. The Constituency Bursary Committee is then required to consider the application from needy and vulnerable groups and distribute the bursary fund to the beneficiaries as per school applicants as identified by the committee. The share allocation to beneficiaries does not take into consideration the level of school and the outstanding fee balance of the

needy and vulnerable students. In the current allocation, MoEST places special emphasis on gender and no guideline on how much should be allocated to individual students and on how to identify needy students for bursary award remains questionable.

Allocation of bursaries to schools has not remained constant, it has been varying with time and funds have been noted to reach the beneficiaries at the time expected. The Constituency Bursary Fund committee comprises individuals or member appointed by existing members of parliament as the fund is closely tied to Constituency Development Fund that is greatly monitored by the members of parliament. Thus, allocation to the constituency is based on the poverty index of the constituency without due regard of the incidence of changing household income ability and emerging issues such as HIV/AIDS that renders the house hold without tangible breadwinner.

In recent study on Ministry of Education Bursary, Njeru, (2003) found out that there were no guidelines to individual schools on how to identify needy students for bursary awards. Guidelines simply instructed the schools to allocate bursary to the poor on bases of excellent academic record and discipline. The guidelines failed to give specific guidelines regarding the amount of bursary to be allocated per student for it to have any tangible impact. Therefore, due to absence of clear guidelines, various criteria and methods to allocate the bursary fund were used by schools: Class teacher to identify the needy; Head teachers unilaterally decide on who should be awarded bursary and amount to be allocated; Head teachers abused the bursary by allocating their kins and less deserving students; School bursary committee lacked transparency; Biased spread of MOEST bursary to as many as possible students has led to many poor students dropping out of schools.

A study done by Onyango (2012) on Impact of Bursary Schemes on Retention of Students in Public Secondary Schools in Gem District, Kenya was guided by four objectives. The study was guided by the theory of socialist economics of education. The study sample size was 322 students' beneficiaries, 24 senior teachers and 12 Principals. The respondents were drawn using a combination of random and purposive sampling procedures. The study adopted descriptive design. Data was analyzed using frequency distributions, cross tabulations with SPSS and MS-Excel software packages.

The study found that the total fees were too high as compared to the bursary that students get from the provider. This showed that bursary schemes were only supplementing students' fees and not generally paying school fees wholesomely. The study further revealed that significantly higher number of beneficiaries 63% got bursary from other bursary providers, well-wishers and parents to supplement government bursary. Further findings revealed that students were not assured of continuous funding and that the disbursements were not in line with the school calendar year. The study recommended for allocation of more funds to constituencies and financing of the beneficiaries adequately to completion their secondary education. The study also recommended that disbursement of funds to constituencies should be in line with the schools' calendar year. The study recommended for good governance and efficient management of Constituency Bursary Committees in relation to allocation of bursaries to beneficiaries in schools.

Njeru (2013) established that Secondary Education Bursary has led to high retention rates in public day secondary schools, this led to high completion rates. The study also found that SEBF was a critical source of funds for financing education as majority of parents did not have a stable source of income. Lack of the school fees was a major hindrance on access and retention of students in secondary schools. The study found that the level of

awareness on SEBF application and qualification criteria was very low in secondary schools in Juja constituency and therefore the deserving students did not apply for the SEBF. Further the study established that SEBF allocated to deserving students was inadequate to cater for all the educational costs. The study recommended increasing the SEBF allocations to the needy students, strict adherence to set guidelines, increasing the level of transparency in allocation and increasing the level of awareness to the targeted beneficiaries on the SEBF application procedures. The study also recommended that government should review the guidelines on allocation of SEBF to ensure that only the deserving students benefit from the funds. The study further recommended the SEBF management committee should conduct a countrywide campaign to create awareness on SEBF to increase the success rate of the fund.

First was Secondary Education Bursary Fund (SEBF) in 1993/1994 financial year which is money channeled by the government to help needy students. The second is Constituency Development Fund (CDF) in 2003 for generalized development with emphasis on health, education and social amenities. The third is bursaries from local authorities. There is a kitty for poor students in Local Authorities Transfer Funds (LATF) which was introduced in 1999. The SEBFs scheme objectives are to increase access to secondary schools, ensure retention of students in secondary schools, promote transition and completion rates and reduce disparities and inequalities in the provision of secondary school education.

Wambugu (2010) noted that secondary school education is very critical in any education system because of the crucial role it plays in catalyzing national development. Consequently, maintaining a high student enrolment at this level should be a priority for all countries. The Constituency Bursary Fund (CBF) was established by the government of Kenya through an act of parliament in 2003 to ensure that the needy students have access

to secondary education. This fund provides for the involvement of community members in identifying the bursary recipients. With the communal involvement in decision-making, it was anticipated that there would be fairness and efficiency in the bursary allocation process. However, contrary to the high expectations, cases of complaints about the implementation of the Constituency Bursary Fund are many. It is on the basis of these complaints that the study was conducted. This study was guided by the theory of socialist economics of education. A theory that emphasizes the need to create an economy that redistributes income from the rich to the poor, so as to create equality of wellbeing. The study population constituted of; high school bursary recipients in the 2007 fourth form cohort in Kanduyi constituency, their class teachers and committee members of the Kanduyi Constituency Bursary Fund (KCBF). The purposive sampling technique was used to select the population sample. Questionnaires and interview schedules were used to collect data, which was then coded and analyzed both descriptively and statistically. From the findings, it was established that; the applicant's parentage and academic performance were great determinants of eligibility for bursary allocation. And that the fund is equitably awarded to the recipients. The fund was found to experience the following set-backs namely; the amount of bursary disbursed to the constituency was insufficient and could not meet the demands of the high number of the needy applicants; there was political interference by the local parliamentarian; the government delays to disburse these funds, a condition that inconveniences many needy students. Based on these findings, the following recommendations were made; the Government of Kenya (GOK) treasury should allocate more money to the CBF if the applicants are to be served effectively. The government should also establish a management framework devoid of political manipulation to run the constituency bursary fund.

Not many studies have been conducted to find out the impact of Constituency Bursary Fund on retention. One of the studies identified was conducted by Kirigo (2008) to assess the effectiveness of bursaries in enhancing retention in secondary schools in Mombasa District. The study established that schools and constituency bursary committee in Mombasa District followed the laid down criteria by the Ministry of Education and that 42% of the deserving students received bursaries, 60% of who were female. Kirigo (2008) further established that bursary fund had no significant impact on the retention in Mombasa District, based on the fact that 53.3% of those who received bursaries were sent home over three times due to inadequacy of funds set aside for bursary and unpredictability of the funds.

In another related study, Wambugu (2008) set out to assess the impact of Constituency Bursary Fund on girl-child secondary education in Wundanyi Division of Taita District. The study established that the Constituency Bursary Fund did not have a significant impact on girl-child's access and retention in secondary school in Wundanyi Division of Taita District. The main reasons for this were that the bursary fund allocated to individual girls is not adequate to sustain girls in school, and as such most girls were still sent home for fees; poor academic performance of girls disqualifies most of them from accessing the fund; there is lack of information about the bursary fund as evidenced by students who reported that they did not know how to apply for the fund; and the attitude of the community towards education for the girl- child education was negative, as reported by 76.7% of the teachers, and thus girls were not encouraged to take advantage of existing opportunities.

Mishel (2006) conducted a study to examine strategies for improving access to secondary education in Kenya. They concluded that persistently low participation rates from low

income households indicates that the bursary fund has limited impact in ensuring that the beneficiaries are adequately supported for a full cycle. Consequently, they proposed that the government initiative in decentralizing and reviewing bursary funds management to constituency level should be closely monitored. Clear guidelines should be developed to ensure efficiency and effectiveness in order to increase access to secondary education. Further, they suggest that to address income inequalities in the society, a special assistance scheme and preferential policies should be developed to target vulnerable groups such as students from marginalized communities, those with special needs, and orphaned and vulnerable children.

Mishel (2004), in a study on the role of government bursary funds in enhancing girl participation in Nyamira District found that the Ministry of Education bursary had not sustained any girl for four years. She too noted that it had failed to meet the gender equity objective and that more boys received slightly higher bursaries than girls. Mwaura (2006) in his study on government bursary scheme and its role in enhancing secondary school participation of the poor and the vulnerable learners in Thika District found that the CBF was ineffective in that it was inadequate (thinly spread, unpredictable) and very few students had been retained by the fund up to Form Three in 2005. He also observed that the awarding criteria were not very clear especially on how to finally arrive at a student to be awarded a bursary in each category. On the other hand, the award criteria released by the government were not followed and it was not fair since it was said not to target the poor. He also noted that the government did not monitor the allocation procedure giving room for inefficiency.

## 2.6 Bursary Allocation and Internal Efficiency

It is widely believed that when funds are distributed to schools, and put into good use, the amount of money that students pay will always reduce. The reduction in amount of money payable by the student and/or parent will ultimately lead to increased attendance by the school and hence the participation rate will be ultimately affected. At least such utopic scenarios have played out so concisely in developed countries where there was direct linkage between amount of money provided to the schools and participation rates. In Kenya, such direct links have been studied in the past with varied outcomes with most of the studies indicating no such directly relationships between the amount of funds disbursed and participation rates. This prompts this research to further investigate the matter hence come with suggestions that is likely to benefit stakeholders. The findings of a by (IPAR, 2008) survey reveal that the bursary is experiencing a number of challenges, notably: inadequate funds disbursed from the Ministry of Education to the constituencies with more than 58 percent of the demand unmet (IPAR, 2008). Similarly there is poor use of allocation guidelines resulting in more than 84 percent of the beneficiaries getting the minimum allocation of Kshs. 5,000. A similar scenario could possibly be witnessed in Gem District the findings that are yet to be revealed.

Constituency Bursary Fund is not serving its purpose. They posit that, since the bursary fund is under the direct control of members of parliament, it has been transformed into a political instrument, thus compromising its effectiveness in the following number of ways: One, the parliamentarians give bursaries to friends and political supporters who are not necessarily needy: Two, the parliamentarians split the fund into tiny amounts so as to reach as many people as possible. This makes the fund inadequate hence lowers retention rate.

Bursary allocation is pegged to academic performance because it is expected that these bright but poor students will participate fully in secondary school education. These bursary schemes aim at giving these bright students from poor backgrounds a chance to access secondary education, reduce the cost burden on the poor household and thus reduce disparities in secondary education (Republic of Kenya, 2005). It is also hoped that the needy but bright students would get good grades, pursue good courses at the universities and in turn serve the country with the attained skills.

In Britain, London has symposium bursary schemes which have operated since 1993. This scheme enables young scientists from any country to attend symposium as active discussants and they spend up to twelve weeks in the laboratory of one of the participants. This has been a popular scheme and has attracted over 1,500 applications from 20 countries. In the UK receipt of 16-19 bursary funds is subject to the student meeting conditions set out and agreed with the bursary provider. For example, in Brandford Academy, students have to be on target for every subject to receive payment for their bursary. This includes achieving their predicted grade as well as a behavioral element. Individual circumstances such as illness or family problems are taken into Account Department of Education.

In India, the National scholarship scheme has been implemented since 1961. The objective of this scheme is to provide scholarship to the brilliant but poor students so that they can pursue their studies despite of poverty. The scholarship scheme for talented children from rural areas for class VI to XII is an on-going scheme with the objective to achieve equitation of educational opportunities and to provide a chance for development of talent from rural areas by educating talented rural children in good schools. In Burkina Faso students who have passed the entrance examination do not pay fees, but students who fail

have to pay fees to the parents' association. This helps the schools in buying materials or in paying the salary of temporary service teachers (Linden, 1999).

The Republic of Kenya (2007) said that the current bursary schemes have limitations with effectiveness and consistency in that there are concerns of inequitable accessibility and ineffectiveness of the scheme in enhancing completion of secondary education, especially for the very poor and vulnerable groups. There is evidence of inefficiency and irregularities in the system as delay in funds disbursements to beneficiaries lead to their absenteeism from school thus lowering their performance at school. It is difficulty to ensure that only students who are bright and in genuine need and orphans actually benefit from the bursaries. Generally the scheme seems to target children in secondary schools and fails to benefit those absent or those who failed to enroll in secondary schools due to poverty.

According to Mertens (2011) allocation of bursary was heavily dependent on academic performance in Kasarani constituency. Some students performed poorly because of absenteeism from school as a result of lack of fees. Awarding more poor students bursaries would improve their performance by keeping them in school and also to motivate them to work harder so as to continue to benefit. Boys benefited more than girls because boys apparently performed better in their academic work than girls.

Inconsistent and fluctuating funding allocations from the national level and inconsistent support to needy students disrupt the learning programme when students are sent home to collect fees. This makes many students supported by the scheme to drop from school altogether. A survey carried out in Nairobi Province (IPAR, 2008) revealed that except for Lang'ata constituency where beneficiaries are consistently financed, in other

constituencies, beneficiaries are not guaranteed continuous funding. The application procedures were found to be cumbersome and the allocation schedules not in line with the school calendars, forcing funded students to miss most learning lessons as they go about searching for fees.

Giving out money through the constituency is fraught with pitfalls. To him, students who deserve never get the money because of political interference. He further observes that, the process of sending money from the central government to the constituencies then to schools takes long. By the time students get the money, many would have been sent away from school or had wasted a lot of time trying to look for it. He concludes by asserting that, the constituency is not the best avenue for disbursing the funds to students. Further, the CBFC and the beneficiaries recommended that it is better for the government to finance a few students but guarantee them adequate four-year funding that to thinly fund many students without any assurance of continuity (IPAR, 2008).

Youth Initiative Kenya (2011) in a study titled Gender Responsive Budgeting assessed that there has been constant fluctuations in the amount of bursary finances allocated to the bursary fund, nationally, over time. Overall, there has been a general decline in the amounts allocated for the fund by the treasury since 2006. Notably, even after an initial allocation of Kshs. 1.3 billion to the fund during the 2011/12 FY, the treasury ended up reallocating Kshs. 0.4 billion away from the SEBF leaving only Kshs. 0.9 billion for the fund. These trends only intensify the demand and competition for the fund with the net result being that more and more children from poor received households seeking secondary education will remain excluded even after they have initial bursary resulting in low retention. It further states that for purely practical and circumstantial reasons, the constituency bursary committees have had to operate outside the policy guidelines. This

mode of operation has often distorted the intended retention outcomes of the fund. Based on timeliness of the allocation, a report by the MOEST (2003), Report of the National Conference on Education and Training documented that a new method or system of allocating bursary funds to deserving students should be devised as the current arrangement involving the constituency takes too long to reach the students and their respective schools.

Republic of Kenya (2005) contends that, the bursary application process is cumbersome. The beneficiaries are particularly unhappy with the requirements that a section of the application form has to be completed by their primary school heads, the local Chief or the pastor, who are not easy to access. According to Lewin (2003), information availed to beneficiaries is scanty leaving them confused especially regarding where to return the completed forms. This is because the beneficiaries' area of residence, place of worship and location of school are not necessarily in the same constituency in a District like Vihiga. He adds to say that students who wish to apply for bursary awards could get forms either from their schools, educational office or from the provincial administration offices. The bursary scheme program is aimed at enhancing access, equity and retention at secondary level. For these reasons, the bursary targets the vulnerable groups who include orphans, girls and children from poor families in slum areas, pockets of poverty in high potential areas, and Arid and Semi-Arid Land (ASAL) districts. For example, in Vihiga District, only 20 percent of eligible primary school learners proceed to secondary schools due to high poverty level (Mugenda, 1999). The objective of targeting secondary school boards is to ensure that the processes that are used are able to minimize exclusion errors, are cost efficient, transparent and accountable in reaching the most learners in need (Republic of Kenya, 2005). As a result instead of sending funds from headquarters direct to schools,

these funds go through constituencies causing unnecessary delay in reaching beneficiaries.

Njeru and Orodho (2003) investigated the impact of the bursary scheme in four districts namely: Kiambu, Kisumu, Bungoma and Garissa. The study results showed that the needy students in the study districts had varying amounts of outstanding fees, indicative of the bursary fund being insufficient to cushion their education needs. The study also showed that while the bursary scheme was meant to cushion the poor and vulnerable against the vagaries of falling economic indicators, it appeared not to have made any overwhelming impact on students' access to secondary education and had achieved little in maintaining increased retention and participation rates in secondary school education.

Munavu (2012) carried a study on inhibiting factors on access and retention of students in public secondary schools in Imenti North district. Study findings revealed that access and retention to secondary education is a critical issue in Africa. However, in Kenya, although primary education sector enrolments over the past four decades have increased greatly, secondary school enrolments have shown only a slight increase coupled with low retention rates. Education reform efforts in undeveloped countries like Kenya have aimed at making education an effective vehicle for national development. The Government of Kenya education policy makers and civil society have emphasized that developing countries need to invest more in education and ensure that systems of education are efficiently managed, that limited funds allocated to the sector have maximum influence and that costs improvement measures are adopted and implemented. Access and retention in the secondary education sector in Kenya is illustrated by a number of constraining factors namely affordability (cost), distance to school, adequacy of schools, household sizes, household income, curriculum, peer influence, parental education, among others (IPAR, 2008). The purpose of this study was to establish the effectiveness of inhibiting factors on

access and retention of students in public secondary schools. The study concludes that the interplay of socio-economic factors, school-related factors, student-related aspects and community-related factors are to blame for the low access and retention of secondary school students. The study recommended that learners who dropped out due to financial constraints need to be encouraged to go back to school and apply for government subsidies; guidance and counseling programmes should be stepped up and the teachers responsible for guidance and counseling in-serviced to improve their performance; the curricula should be reviewed and made relevant; the children court services should be taken up by schools an integral part of secondary school management; adult education programmes should be enhanced to boost parental education and child labour laws should be strictly enforced.

Studies on FPE show that there has been massive increase in enrolments in response to removal of school fees. For instance, following implementation of FPE in Kenya in 2003, the NER grew by 22.3% (Abdalla & Webber 2007). However, Afonso and Alston (2008) found that schools still collect fees and/or levies skillfully from parents for their survival and hence many children are unable to gain access to primary education despite the governments' intervention of abolishing fees. Ohba (2009) in a study of UPE in Malawi shows that despite the abolition of school levies and failure to insist on school uniforms, parents were still required to incur expenses for exercise books, pens and clothes. Also despite abolition of school fees in Ghana, some schools introduced indirect fees to compensate for the lost revenue. Indonesia Free Basic Education Policy introduced in 2005 provides incentives for schools to eliminate fees but allows them to opt out while in Sierra Leone, uniforms double the cost associated with fees (UNESCO, 2010). Onyango (2004) noted that fees abolition can bring large numbers of children into school, but

cannot keep them and that indirect cost can be an even greater obstacle than fees.

UNESCO, UNICEF, and other non-governmental organizations have conducted research aimed at improving female access to education (Buchmann & Hannum, 2001). Buchman reports that determinants of educational inequality are generally informed by three perspectives: economic, resource constraints and cultural perspectives. Each of these perspectives has been used to explain educational decision making in developing countries, and each predicts participation in formal schooling. In the case of Kenya, cultural norms and gender stereotypes do hinder girls' participation in school, where typically mathematics and science are seen as boys' subjects while home science is a girls' subject. Report by Orodho, (2014) in Onyango indicate that although Kenya has high levels of primary school enrollment, data show that as girls enter secondary school in their teenage years, their enrollment begins to fall compared to that of boys.

A study by Wiley (2016) showed that Kenya's secondary school enrollment had risen from 30,120 students in 151 schools in 1963 to 620,000 students in 3,000 schools in the year 2000. The study reported that the target secondary school enrollment by the end of 2008 was estimated to be 1.4 million students. In 2008, the government introduced Free Day Secondary Education to all Kenyans regardless of their socio-economic backgrounds. Mwiria observed that with the introduction of Subsidized Secondary Education, enrollment was certain to increase. Further, Abdalla and Wanbugu, (2012) and Orodho, 2013) reported that massive school dropouts were recorded and that out of about one million students who enrolled in standard one in 1993 and in 1998, less than half a million got to standard eight, a trend that has persisted to date. A study by Onyango (2014) on subsidy interventions; implementation challenges and successes in secondary schools, a case of selected counties in Kenya revealed that subsidy raised student enrolment.

According to Auty (2004), the political power of the middle and upper class group and elites and their determination to retain economic and educational privileges are motivating factors in the provision of education. It is imperative that politicians are controlled so as to ensure that they do not exploit the ordinary people in the education sector. There should be separation between politics and issues of national importance like bursaries. The fund is for the benefit of the community and politicians should not manipulate for gaining political support.

Onyango (2000) observed that those concerned with awarding bursaries use their positions to assist their undeserving relatives acquire the awards. This result in needy and deserving not getting the bursary moreover claims have been advanced on members of parliament that they influence on the composition of the committees by nominating their supporters. This is why most of the leaders associate themselves with the bursary scheme. Bursary should not be used for personal aggrandizement and selfish ends and perhaps this is what Woodhall & Beeby (2009) had in mind when they argued that rapid expansion in access to primary education in recent years in Kenya as in Uganda and Tanzania are linked to the re-introduction of democratic election in these countries, their point being that when leaders are subjected to competitive politics they tend to initiate polices that are popular with the electorate. This is purposely for outdoing one another in terms of gaining political popularity hence attracting more supporters.

### 2.7 Amount of Funds Allocated and Internal Efficiency

The Secondary Schools Bursary Scheme was introduced in the 1993/1994 financial year with the objective of cushioning the poor households from the impact of poverty, inflation and the effects of HIV/AIDS (MoE, 2003). At inception of the scheme, funds were disbursed directly to secondary schools from the Ministry Headquarters, based on the

school's student enrolment. Schools were expected to distribute the bursary funds in accordance with guidelines issued by Ministry of Education. The general MOE guidelines directed schools to allocate money to poor students on the basis of academic records and discipline. At the school level the management board with the help of teachers identified needy students to benefit from those funds. According to the guidelines students were required to fill a Form A which captured the student's bio data, economic background of the parents where applicable and some information on the student's performance in school.

Onyango (2010) on a study of Public Expenditure Tracking of Bursary Schemes in Uganda remarks that the major objective of the bursary scheme is to enable children from poor families' access education. However, there is no consistency in supporting children from poor families. This is because students seeking for bursary funding from the secondary education bursary fund are not guaranteed continuous funding to completion of high school education. It's because those seeking for funding are required to reapply for funding. Each time they reapply, they also are re-evaluated along with other applicants. Though 14 percent of the CBFC indicated that continuing students qualified for subsequent funding, they also indicated that this was based on their reapplication. The CBFC justifies this on the basis of the fact that no one is permanently poor because social and economic situation of individuals and families are bound to change over time.

As such one can always justify that they are still in need of further funding. Further findings reveal that the level of funding is also not consistent with the school fees requirements. An estimated 83 percent of the bursary beneficiaries got Kshs. 5,000 or less as bursary. This is way below the government approved fees for day schools, boarding provincial secondary schools and national schools which is Kshs. 10,500, Kshs.22, 900,

and Kshs. 28,900, respectively. As a result of the huge number of applicants who qualify for bursaries, students seldom get a bursary more than once a year to ensure a greater spread of the bursary fund in the constituency. This implies that the current level of bursary allocation hardly meets a quarter of the required fees.

This makes students miss learning classes as they go about looking for financiers to supplement the allocations they receive from the CBF (Onyango, 2010).Unlike the funding through the secondary education bursary fund that does not guarantee beneficiaries of continuous funding, other bursary providers, especially foundations guarantee beneficiaries of continuous funding to completion of secondary education. Discussion with the Jomo Kenyatta Foundation scholarship providers revealed that the application requirements for bursary funding are the same with those required under the Secondary Education Bursary Fund. The only difference is that beneficiaries are awarded the maximum required fee and are guaranteed for funding for a period of four years to enable them complete secondary education. Low level funding only keep students in school for a while before they are sent away from schools to find other ways of clearing their fees.

According to the CBFC, because the applicants are too many, one can only receive a bursary once in an academic year and the bursary is spread thinly so that majority of the applicants evaluated as poor and needy can benefit. Further, the CBFC notes that the bursary is only meant to assist the children from poor families and this should not be misinterpreted to mean that the government is financing the education of all children from poor families.

To complement the government initiative on ensuring that bright children from poor

families are retained in schools, various schools have their own initiatives. From the survey data, 81 percent of the schools surveyed indicated that they have come up with various modalities of ensuring that students are retained in school. With the introduction of cost sharing policy, the burden of secondary education shifted to the parents entirely. This fee paying secondary education impacts negatively on the poor households as they cannot afford to educate their children. These cost of education leads to poor participation of children from marginalized and disadvantaged groups in secondary education (Republic of Kenya, 1999). It is in this regard that the government introduced three types of bursaries at constituency level.

Mwembi, (2012) conducted a study on challenges on the disbursement of Constituency Bursary Fund (CBF) to secondary school students in Bobasi constituency Kenya. The main objective of the study was to find out the extent to which the established strategy of bursary allocation was adhered to in allocating the bursaries to learners, challenges of bursary fund inadequacy, distribution and fairness in allocation, leakages and if any, whether there were mechanisms in place to address grievances and questions raised on allocating the bursary fund. The study was guided by the Human Capital Theory. Where, it emphasizes on social mobility being promoted by equal opportunity on education. Mwembi's, (2012) study concluded that the strategies of determining the disadvantaged students had challenges both on governance, efficacy, success and consistence in support. The fund also established that there was no equity in award government subsidies to boys and girls in secondary schools. Further, the fund was found to experience the following challenges: low and inadequate funds from the government that could not meet the demands of the high number of the needy applicants, political interference, untimely disburse of the funds which inconvenienced many needy students and mechanisms of

addressing bursary related complaints which were somewhat ineffective. The study recommended that the government need to increase budgetary allocations, the Constituency Bursary Fund for it to have any influence on the student applicants who expected to be served effectively; it should have a reform mechanism devoid of political manipulation to run the fund. Lastly, the study recommended that policy makers should ensure that bursary awarding process should stress on the secondary school teachers' assessment of students' need for financial assistance. This study investigated the relationship between the adequacy of government subsidies and access and retention of students in secondary schools.

Despite the establishment of bursary schemes some students still discontinue their schooling due lack of school fees (Ngethe, 2006). A study by Onyango (2007) on equity in distribution of bursary to secondary school students in Busia District found that bursary recipients got less than a half of the bursary they were supposed to receive leading to low participation rate. Hart Andrew and Baxter (2005) on a study on bursaries and student success compared the student experience of those with and those without bursary award in UK. The study found that students with bursaries were more likely to be retained and to perform well in schools than those without bursaries. The findings also indicated that education bursary providers should consider the timing of the bursary payments.

**2.8 Bursary Allocations and Student Characteristics**

Before 1988, secondary education was highly subsidized and parents were paying considerably less amounts thus many students had access and equity to secondary education. This was due to supplement by government effort. The annual fees of self-help secondary schools (Harambee schools) rarely exceed Kshs. 2,000 per student per year (Mark 1987) which was even far beyond the reach of ordinary peasants. Most schools

were established through Harambee efforts and fundraising drives which resulted in the establishment of Harambee secondary schools (Asiago, 1989). This improved access of many poor students to secondary education. The introduction of cost sharing as a way of financing education and training as from 1988 onwards as advocated by World Bank, made education relatively expensive, beyond the reach of many students. Cost sharing as a policy is contained in the report of the commission chaired by Kamunge, (Republic of Kenya, 1988) which recommends that Parents Associations be established for primary and secondary schools. The effects of cost sharing over the years have led to a decrease in access and equity in secondary education.

According to Ngethe (1989), home environment conditions can positively or negatively influence a child's participation in school. Lack of father figure as instinctive leader in a family makes children suffer psychologically, which leads them to have behavioral problems, hence failing to fit well in social set ups and end up dropping out of school. Njeru (1980), points out that the quality and quantity of education attained by a child is closely associated to the parents' own education attainment levels as well as their economic status in society. Fry (2003) says that HIV/AIDS has adversely affected sectors such as health, education and others. This may have adverse effects on students' education. It has led to increased number of orphans, leading to increased dropout, due to lack of fees following death of parent or guardian. Some may dropout to cater for their siblings. According to Lewin (2008) of the world's 6 billion people, 2.8 billion (almost half) live on less than two dollars a day and 1.2 billion (a fifth) live in less than a dollar a day with 93% living in South Asia, East Asia and sub-Saharan Africa. Awarding bursaries to the poor can improve access to education which will in turn reduce income inequality and eradicate poverty (Okumbe, 2003).

In UK, Edusave Bursary Scheme which is initiated by the government through MOE states categorically that for a student to qualify for bursary the gross monthly household income should be below $4000. Set rules are put in place to ensure that this is adhered to. The scheme ensures that the beneficiaries are retained in school. Any student who discontinues does so under his/her own will (MOE, 2012). Still in UK, there is what is called 16-19 Bursary fund. The bursary fund guidance for 2012/2013 re-emphasizes the importance of ensuring available funds are targeted at those students experiencing the greatest financial disadvantages, that the amounts allocated are sufficient to enable those students to participate in education and that the availability of funding is effectively communicated to prospective and actual students both before and when they enroll. Different bursary providers have set out to achieve this. For example in Brandford academy eligibility to the funds is based on the household income being below 16,100 pounds or the students' parents being in receipt of jobseekers allowance income support or an equivalent benefit.

According to Okumbe (2007) in China and Philippines bursaries eligibility was pegged on official poverty line. However, the eligibility ceiling is an income level above the official poverty line which gave eligibility to many students who were not drawn from the ranks of the very poor. In Thailand, eligibility based on family income fails to take into account a number of factors such as the number of other dependents in a given household. In Rwanda the chances of being in school are higher among children with both parents alive than among those who have lost at least one parent.

According to findings of World Bank (2007) children who had lost their mothers even if they had not lost their fathers were most at risk of not attending school. Social-economic disparities widen substantially at post primary level. The government set up the Rwanda

Genocide Fund (RGF) which targets this level of Education. The orphaned children are the beneficiaries of such funds and funding continues for as long as such students are present in the system. Orphans are therefore relatively well represented in secondary Education. According to Conseil Protestant du Rwanda (CPR) which is an umbrella organization of schools run by various churches, their data on participation of children in secondary level revealed that participation in secondary education of orphans rose to 41% owing to the fact that these children have been specifically targeted for assistance under Rwanda Genocide Fund (RGF).

The provision of quality education in Kenya has been a central policy issue since we attained independence. This has been due to government's commitment to provision of quality education and training as a basic human right for all Kenyans in accordance with the new constitution and the international conventions. Secondary education policies have evolved over time with the government addressing challenges facing education sector through several commissions, committees and task forces. Immediately after independence, the first commission chaired by Ominde, in 1964 sought to reform the education system inherited from the colonial government to make it more responsive to the needs of the country. The Report of The presidential Working Party on the Second University chaired by Mackey, led to the replacement of A- Level secondary education with the current 8-4-4 education system (GOK, 1964; 1981 & 2005 and IPAR, 2008).

In the recent past, Kenya's education sector has undergone accelerated reforms in order to address the overall goals of economic recovery strategy for employment and wealth creation 2003-2007 (ERS) as well as meeting the international development commitments, including the Millennium Development Goals (MDGs) and Education for All (EFA). The major reforms include: launch and implementation of the Free Primary Education (FPE) in

January 2003, development of the Sessional paper No. 1 of 2005 on policy framework, which advocate that the government is already implementing measures on how to improve access and retention in secondary education and introduction of Free Day Secondary Education in January 2008. In addition to these reforms, the government has also been implanting several strategies to ensure that disadvantaged children have equal opportunity in accessing education at all levels. One such reform is secondary school bursary scheme.

Oketch and Ngware (2012) notes that bursary allocation is severely faulted for there are unfairness of awarding undeserving students. Onyango et al., (2007) study confirms these sentiments by asserting that bursary allocation is not equitably distributed among the recipients. Munavu (2006) posits that the process of sending money from central government to constituencies then to schools take a long time. By the time recipients get the money, many would have been sent away from school. This affects students' retention at secondary school. A study by Wanbugu (2010) in Kanduyi constituency established that there were incidences whereby local Member of Parliament allocated bursaries to supporters and relatives though they did not deserve it. They also observed that there was delay in disbursement of funds. In two constituencies of Nairobi County, the area members of parliament are said to have taken control of the fund deciding who gets the bursaries and they keep the records as well (IPAR, 2008).

Oketch (2010) in a study of Public Expenditure Tracking of Bursary schemes in Kenya observes that the major objective of the bursary scheme is to enable children from poor families' access education. According to him there is no consistency in supporting children from poor families. Such students are not guaranteed continuous funding to completion of high school education. Student who need funding have to apply and reapply

for funding. When they reapply they are re-evaluated along with other applicants. A substantial percentage of continuing students qualify for subsequent funding but this is based on re-application. Transition and completion rates in secondary schools remained below 50% essentially due to worsening poverty and increasing costs of education (Republic of Kenya, 2003).

According to Wambugu (2010) in a study on access to Secondary School Education through the constituency bursary fund in Kanduyi constituency, in an effort to enhance transition from the primary schools to secondary schools, the government of Kenya introduced the bursary scheme for secondary schools during 1993/1994 financial year. The bursary targeted the vulnerable groups namely the orphans, girls, children from slums and the poor in high potential areas and in Arid and Semi-Arid Lands. However, the study found that the method of bursary allocation was highly faulted for inordinate bureaucracy and for perpetuating unfairness by giving bursaries to the undeserving students and to those that were well connected. Recipients from high socio-economic backgrounds received more bursary support than their counterparts from the humble backgrounds. This anomaly was attributed to the flawed criteria of selecting the bursary recipients and therefore the transition rates remained low in the area.

In a study carried out by IPAR (2003) on education financing in Kenya, results indicated that the Ministry of Education had not given adequate guidelines to schools on how to identify needy students for the bursary awards. The general guidelines from the Ministry simply instructed the schools to allocate the money to the poor, bright and well-disciplined students, failing to give specific guidelines regarding the amounts of bursary funding to be allocated per student, in order to have meaningful impact. Without clear guidelines, schools used various criteria and methods to allocate the bursaries. As a result, most head

teachers abused the facility by awarding the bursaries to their kin, some from less deserving backgrounds. In other cases, the DEOs and politicians are said to have put undue pressure on head teachers to allocate bursaries to their relatives, thereby denying needy students access to the facility.

From 2002, the government has been channeling bursaries to Constituency Development Fund. The Constituency Bursary Committee is then required to consider the application from needy and vulnerable groups and distribute the bursary fund to the beneficiaries as per school applicants as identified by the committee. The share allocation to beneficiaries does not take into consideration the level of school and the outstanding fee balance of the needy and vulnerable students. In the current allocation, MoE places special emphasis on gender and no guideline on how much should be allocated to individual students and on how to identify needy students for bursary award remains questionable.

A study by Okumbe (2008) states that guidelines from Ministry of Education stipulates that there are factors to be borne in mind by Constituency Bursary Fund Committee when they allocate bursaries to students. The main factors considered during the award of bursaries included whether the applicant was a total orphan and whether the applicant was a needy child of poor parents. This study therefore attempted to find out if the criteria stipulated by the national and county governments are being adhered to in the disbursement of government subsidies.

Otieno (2000) noted that bursary allocation is severely affected due to inequalities in awarding students. Onyango *et al.,* (2007) further pointed out that bursary allocation was not equitably allocated to the recipients. On the other hand, Munavu (2006) asserted that the process of remitting finances from central government to constituencies then to

schools took a long time. By the time student receive the bursaries, most of them would have been sent away from school for school fees. This affects negatively students' retention at secondary school. Wanbugu (2010) in a study in Kanduyi constituency established that there were incidences whereby members of parliament allocated constituency bursaries to supporters and relatives. They also noted that there was delay in distribution of the bursaries. In two constituencies of Nairobi County, the area members of parliament were said to have taken control of the fund and therefore gave themselves the mandate of deciding on the beneficiaries (IPAR, 2008).

Given the magnitude and complexity of the challenges for secondary education in developing countries, the diversity of contexts, and the urgent need to improve outcomes, the evidence base is disappointingly sparse. A number of studies have shown that cash transfer programs can boost participation in secondary education, but little is known about strategies for overcoming nonfinancial barriers to participation. For youth who do enroll, the literature offers little guidance on how to optimize conditions for student learning. Finally, we found no studies on approaches to enhancing the relevance of secondary education, including curricular and pedagogical reforms that emphasize skills youth will need for employment or civic participation. Several studies have shown that informational interventions that provide students and/or their parents with more accurate information about the returns to education can lead to at least short-term increases in enrollment but not necessarily in learning outcomes.

Given these advances, there is a renewed focus on the next step of transitioning students to secondary school as well as retaining them through graduation and ensuring that they receive the high quality and relevant education that positions them for success after school

(Open Working Group 2014; Center for Universal Education at Brookings 2011; UNESCO undated). These are formidable tasks, given the low levels of educational access and retention at the secondary level. For instance, in Uganda, 88 percent of children were enrolled in primary education, but only 22 percent enrolled in secondary school in 2010, the last year for which data are available at both levels (UNESCO Institute for Statistics 2015). Even if they enroll, few students complete secondary school. In Malawi, the cumulative drop-out rate through the last grade of lower secondary education was 69 percent in 2011 (UNESCO Institute for Statistics 2015).

The evidence on eliminating secondary school fees is mixed. By comparing schools in South Africa that barely qualified for the fee elimination versus those that barely missed qualifying, Oyaya (2012) and Onkoba (2013) both find that the elimination of secondary school fees led to small increases (less than 3 percentage points) in enrollment at most; these gains were concentrated in the poorest schools. A more recent paper that relies on differences in distance to fee reduction schools and the timing of the roll-out using data from the National Income Dynamics Study also finds that the policy had no effect on enrollment among 16-19 year olds, educational attainment, or completion of secondary school (Branson & Lam 2017). It is worth noting, however, that school fees were already fairly low prior to the introduction of the fee elimination policy, comprising roughly 1.5% of household income per child (Orodho, 2013), and the real problem in South Africa was not that students didn't enter secondary school (95% ), but that they dropped out before graduation (Orodho & Oketch, 2013).

Perhaps because building secondary schools to increase accessibility seems like such an obvious proposition, there is actually very little evidence to substantiate it. Olembo et al. (2013) found that the construction of a girls' secondary school in Pakistani villages more

than doubled the stock of educated women in the median village. The state of Bihar, India, implemented an innovative and less costly approach to reducing the time and safety costs of school attendance by providing bicycles to girls who enrolled in grade 9. An evaluation of the program found that that this targeted in-kind transfer reduced the gender gap by 40 percent and increased girls' age appropriate enrollment, their participation in a state exam, and the passing rate on that exam (Muralidharan and Prakash forthcoming). In any case, the relationship between distance to school and enrollment is likely to be highly context-specific, so it is not advisable to generalize from the few studies that tackle this question. We found no rigorous studies based in violent or conflict areas that assessed the impacts of reducing the time or danger associated with traveling to school. Similarly, we found no rigorous studies on the potential of online programs or other forms of distance learning to bring secondary education closer to students.

A study by Njeru and Orodho (2003) on the bursary scheme found that despite having needy students' beneficiaries this had no significant effect on enrolment and retention of the poor students. They concluded that because the scheme targeted students already enrolled in secondary school, it missed out on students who had failed to raise the initial school fees, so the scheme overlooked students who had not already been able to gain access to secondary education, despite their academic qualifications. IPAR (2003) conducted a study on education financing in Kenya through secondary school bursary scheme. It was revealed that despite the basis for the introduction of Constituency Bursary Fund, there were increasing concerns regarding their ability and sensitivity in cushioning the poor and vulnerable groups against adverse negative effects of the escalating costs of secondary education. Major concerns were in regard to the MOEST bursary scheme inadequate finances to meet the demand of the applicants. According to Oketch (2007),

despite the increase over the years of Secondary School Bursary Fund, the fund remained inadequate to the large number of students who were in need. The implication here is that for the objective of bursary to be achieved, the government is supposed to allocate enough funds for it to have an impact.

According to Verger *et al.,* (2006), there has been lack of monitoring mechanism; this has given room for systematic flaws that mitigate against smooth implementation of the fund. The prevailing situation has translated into the flaws of the right procedure of awarding bursary funds by bursary committees. Consequently, this has led to needy and deserving cases to miss bursary funds. At the constituency level, the data collected by the survey established that area members of parliament have taken control of the fund, deciding who gets the bursaries and they keep the records. The application procedures were also noted to be cumbersome and hence time wasting.

Ball, (2009) conducted a study on Effectiveness of Constituency Bursary Funds in enhancing retention of students in secondary schools in Manyatta Constituency, Embu West District**.** The purpose of the study was to assess the effectiveness of the Constituency Bursary Fund in enhancing retention in secondary schools. The study was conducted in Manyatta Constituency of Embu District. The study established that despite the fact that students demanded for bursary funds, not all deserving cases benefited from the funds. This was mostly because the funds allocated to schools were not enough to meet the needs of all the deserving students. The study established that bursary schemes slightly improved secondary school retention rates, which means that there may be other factors affecting retention rates other than the availability of funds.

The study also found out that the most common challenges faced in the allocation of bursary funds were lack of transparency, non-adherence to the set procedures, corruption

and that the process was slow and cumbersome. The study recommended that there should be fair distribution of funds to schools, as girls tend to have more needs than boys, and this should be taken into consideration when distributing funds; the process has been known to be slow and cumbersome, so it should be done expeditiously so that the purpose the funds were intended for are realized in good time and also the categories and procedures for distribution of bursaries should be clearly stipulated.

Oketch and Bruno (2006) carried out a survey on financing secondary education in Nairobi Province through the Constituency Bursary Fund. The study found that the CBF played the greatest role in financing secondary education. However, the potential of the scheme was undermined by inadequacy of funds, ineffective committees, lack of appropriate institutional linkages, delayed disbursement of funds and financial malpractices among other issues. The study recommended the need to: refurbish the bursary kitty; strengthen monitoring and evaluation frameworks; spearhead resource mobilization; develop strategic plans; improve record keeping; empower households, especially women and initiate Income Generating Activities in schools, among others.

**2.9 Summary of Literature Reviewed**

In Kenya, the government introduced the bursary scheme for secondary schools during 1993/1994 financial year. The bursary targets the vulnerable groups namely; orphans, girls, children from slums and poor in high potential areas and in Arid and Semi-Arid Lands (ASAL) districts (Republic of Kenya 1992, 1994, 1997). The prime purpose of bursary at this time was to cushion households from rising impact of poverty, unstable economy and the devastating effects of H.I.V/AIDS pandemic (Nduva, 2004). This portrays that the Kenyan government is committed to ensuring that students from less privileged families access and complete their education through bursary scheme .On

contrary, many students from poor families drop out of school even when they had performed exemplarily well in primary school .i.e. Scoring high on the KCPE (Odebero *et al,* 2008).

The challenge that most parents from poor backgrounds face is the fact that secondary schools are not actually free of charge. The drop out problem has caused a negative economic development and resulted into wasted talents (Gachathi Report, 1976). This is supported by (Todaro, 1987) who stated that the major problem facing developing countries is high rate of school dropout. School enrolment and retention in public secondary education are directly related to family income (Central Bureau of Statistics et al, 2004). That is, only rich families can afford to send their children to secondary school. It's against this backdrop that bursary schemes should address reasons behind their conception that is to support needy students to stay in school. The sources of government initiated bursary schemes in Kenya for secondary education are SESBAF and CBF.

This chapter reviewed works related to the financing of education and how safety nets such as bursary have influenced secondary school education. Emphasis was however, laid on bursary as a supplement for financing secondary education alongside with the other means of financing such as government, parents, and community. Literature was reviewed under the following headings; rationale on education, cost of education, financing of education in the world, financing of education in Africa, financing of secondary education in Kenya, finances and continuity in learning, problems in financing public secondary schools in Kenya, Bursary schemes in Kenya before 2002 and after 2002, disbursement of MOEST bursary funds.

# CHAPTER THREE

# RESEARCH DESIGN AND METHODOLOGY

## 3.0 Introduction

This chapter deals with procedures and methods the study used in order to obtain data. Methodology is the study and analysis of how research does and should proceed. It is the plan of action that shapes the choice and application of particular methods and links them to desired outcomes (Kothari, 2004). The chapter entails; the research paradigm, the research design, the description of the study area, the target population, sample size and sampling procedures, the research instruments, the data collection procedures, the validity and reliability of research instrument and methods of data analysis presentation.

## 3.1 Area of study

The study was carried out in Bungoma County. Bungoma County is located in the former Western Province of Kenya, Bungoma county has 9 sub-counties (Mt. Elgon, Kimilili, Webuye East, Webuye West, Sirisia, Kabuchai, Kanduyi, Tongareni and Bumula, Bungoma North, Bungoma East, Bungoma West, Bungoma South and Mt. Elgon were mapped to this county for the purposes of generating county estimates. It has a Total Population of 3,375,063 and covers an area of 3,032.2 Sq. Km (KNBS, 2017). The Population density is 453.5 people per Sq. Km and 53% of the population lives below the poverty line.

## 3.2 Research Paradigm

The study adopted the pragmatism research paradigm. Pragmatism is a deconstructive paradigm that advocates the use of mixed methods in research, sidesteps the contentious issues of truth and reality and focuses instead on ‘what works’ as the truth regarding the research questions under investigation (Yvonne Feilzer, 2010). In that sense, pragmatism

rejects a position between the two opposing viewpoints. In other words, it rejects the choice associated with the paradigm wars. Most of the researches are associated with positivism, interpretivism and not much with criticism. Pragmatism looks relatively new.

One of the most important features of Pragmatism is that it rejects the distinction between realism and anti-realism, which has been the core of debates about positivism versus interpretivism in the social sciences. For pragmatists, there is indeed such a thing as reality, but it is ever changing, based on our actions. So attempts to find an enduring, external reality are doomed to failure. Dewey called this attempt to find a reality outside of ourselves a spectator theory of knowledge (Dewey, 2006). The emphasis on actions and their consequences creates a gap between pragmatism and most versions of interpretivism because it does away with the idea that we are free to interpret our experiences in whatever way one sees fit. Instead, peoples' actions have outcomes that are often quite predictable, and that they build their lives around experiences that link actions and their outcomes.

Research methodology describes the overall approach to research design, Creswell (2011) is of the view that methodology is a strategy or a plan of action that links methods to outcomes and governs the choice and use of methods. A research methodology forms the overall paradigm/approach that shapes research approach to the study. This study used a mixed approach. The study has the positivist assumption of a fixed, measurable reality external to people. Positivism is based on the assumption that there are universal laws that govern social events, and uncovering these laws enables study to describe, predict, and control social phenomena. Ontological questions in social science research are related to the nature of reality that holds that there is an independent reality.

A study with a positivist orientation regards reality as being 'out there' in the world and needing to be discovered using conventional scientific methodologies (Lawson, 2011). In this study, the study investigated stakeholder perception on the relationship between bursary allocations and student participation rates in secondary schools. In this study the study as a positivist is not regarded as an important variable in the research and therefore remained detached from what was researched. The philosophical basis is that the world exists and is knowable and study can use quantitative methodology to discover it (Cohen, Manion & Morrison, 2007). Through this orientation, knowledge is given and must be studied using objective ways. In this study, knowledge about stakeholder perception on the relationship between bursary allocations and the student participation rates in secondary schools was out there and the study therefore studied it objectively and made generalization from the findings.

Qualitative approach generally holds an interpretivism view of reality. Interpretivism see reality as a human construct (Creswell, 2011). The interpretive research paradigm views reality and meaning making as socially constructed and it holds that people make their own sense of social realities. Qualitative approach was used so that an understanding could be gained of the constructions held by people that are time and context dependent (Otte, Tivana, Phinney, Bernardo & Davidsson, 2018). Interpretive study uses qualitative research methodologies to investigate interpret and describe social realities. The aim of adapting qualitative approach in this research is for the study to gain an understanding into stakeholder perception on bursary allocations on student participation rates in secondary schools. However, the use of qualitative approach provides a detailed narrative description, analysis and interpretation of phenomena (Karuti 2007). Data can be tracked

to its sources and the logic used to assemble interpretations can be made explicit in the narrative.

The ontological assumption associated with the interpretive paradigm is that multiple realities exist that are time and context dependent. An interpretivism or constructivist paradigm portrays the world as socially constructed, complex and ever changing. In this study, qualitative approach operated under different ontological assumptions about the world that there is no single unitary reality apart from our perceptions. Qualitative approach attempts to understand the world of human experiences (Jones, 2007).

Qualitative research study views things in their natural settings, attempting to make sense and to interpret phenomena in terms of the meanings people bring to them. The use of qualitative approach in this study was appropriate because it answered questions about process on why or how some things happen (Kosgei, 2009). The kind of knowledge that the methodology aims to produce depends on its epistemological position. Further that it gives accounts that tend to be marginalized or discounted. The study is a central figure in the research process because it is the study which constructs the findings. The study was deeply involved in constructing findings by conducting in-depth interviews.

### 3.2.1 Research Design

This study employed a mixed method approach. Mixed method research approach is defined as research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches and methods in a single study or a program of inquiry to understand a research problem (Teddlie & Tashakkori, 2009). The philosophical foundations underpinning a mixed method research design are embedded in pragmatism. Kathuri (2003) remarked that pragmatism is the best paradigm for mixed methods research. Most basically pragmatic

perspective stems from the fact that inquiry can make a practical difference in the world. Pragmatism in research comes down to expectations about methodology and epistemology. A pragmatic conception of research defines the epistemic values of research results practically. A theory or set of measurements should be able to address the needs of the problem, rather than aspiring to an abstract notion of perfect precision. As Jones (2018) observes, a pragmatic perspective draws on employing what works, using diverse approaches, giving primacy to the importance of the research problem and question, and valuing both objective and subjective knowledge.

According to Ary et al., (2009), mixed method design is appropriate when both quantitative and qualitative data together provide a better understanding of a research problem than either type by itself. Harrison & Reilly (2011) further contend that, mixed methods investigations may be used to enhance a better understanding of a research problem by converging numeric trends from quantitative data and specific details from qualitative data, identify variables/constructs that may be measured subsequently through the use of existing instruments or the development of new ones and obtain statistical, quantitative data and results from a sample of a population and use them to identify individuals who may expand on the results through qualitative data. Thus, the study on stakeholder perception on bursary funds distribution and student participation rates in secondary schools utilized a mixed method design in which qualitative and quantitative data was concurrently triangulated.

### 3.3 Target Population

Target population is defined as all the members of a real or hypothetical set of people, events or objects to which a study wishes to generalize the results of the research study (Gall, Borg and Gall, 2003). Target population is defined as all the members of a real or

hypothetical set of people, events or objects to which a study wishes to generalize the results of the research study (Kothari, 2008). The population of the study was 206 principals from secondary schools, 9 CDF managers, 5 banks managers (banks offering bursaries) and 88,343 students in Bungoma County as tabulated in Table 3.1.

**Table 3. 1: Target Population**

| | Bursary Administrators | | | |
|---|---|---|---|---|
| **Sub County** | Principals | CDF Managers | Bank manager | Students |
| Kimilili | 28 | 1 | 1 | 12,012 |
| Tongaren | 31 | 1 | 0 | 13,299 |
| Webuye East | 25 | 1 | 1 | 10,725 |
| Webuye West | 18 | 1 | 0 | 7,722 |
| Kanduyi | 25 | 1 | 1 | 10,701 |
| Bumula | 18 | 1 | 0 | 7,746 |
| Sirisia | 20 | 1 | 1 | 8,580 |
| Kabuchai | 19 | 1 | 0 | 8,151 |
| Mt. Elgon | 22 | 1 | 1 | 9,348 |
| **Total** | **206** | **9** | **5** | **88,843** |

Source: Bungoma County (2014)

### 3.3.1 Sampling Procedures and Sample Size

Sample size refers to the number of observations or replicates to include in a statistical sample (Orodho, 2012). The sample size is an important feature of any empirical study in which the goal is to make inferences about a population from a sample. Sampling technique refers to a procedure of selecting a part of population on which research can be conducted, which ensures that conclusions from the study can be generalized to the entire population. According to Mugenda (2003), for a population of less than 100, 100% of the population is taken to calculate the sample size, for a population of between 100 to 1000, 30% of the population is taken, for a population of 1000 – 10,000, 10% of the population is taken to represent the target population and finally for any population above 10,000, 1% is taken to calculate the sample size.

**Table 3. 2: Sampling Procedure and Sample Size**

| | Bursary Administrators | | | |
|---|---|---|---|---|
| Sub County | Principals | CDF Managers | Bank manager | Students |
| Kimilili | 5 | 1 | 1 | 119 |
| Tongaren | 6 | 1 | 0 | 132 |
| Webuye East | 6 | 1 | 1 | 107 |
| Webuye West | 5 | 1 | 0 | 77 |
| Kanduyi | 6 | 1 | 1 | 106 |
| Bumula | 5 | 1 | 0 | 77 |
| Sirisia | 5 | 1 | 1 | 85 |
| Kabuchai | 5 | 1 | 0 | 81 |
| Mt. Elgon | 5 | 1 | 1 | 93 |
| Total | 48 | 9 | 5 | 883 |

The sample size was 48 principals, 9 CDF managers, 5 bank managers and 883 students. The study sampled 9 CDF managers and 5 bank managers using purposive sampling and simple random sampling to select 48 principals and 883 students.

### 3.4 Data Collection Instruments

The study used questionnaires and document analysis as the main tools for data collection. The selection of these tools was guided by the nature of the data to be collected as well as the objectives of the study.

#### 3.4.1 Questionnaires

The study used self-administered questionnaires. The questionnaires were preferred tools for this study because they enabled the study get views from a larger number of respondents within a short time, thus making it easier to collect relevant information. The questionnaires contained both open-ended and closed-ended questions. The closed-ended questions were designed to get the exact information while the open-ended items were used to get opinion and views of respondents. Matrix questions that utilized the likert scale were used. Questionnaires were used to obtain information about equity in distribution of

the bursaries from the students and some aspect of student participation rates of schools. Questionnaires were used to collect data from principals, CDF managers, bank managers and students (**See Appendix I & II**).

### 3.4.3 Document Analysis

The amounts of bursary allocations and student participation rates assessment in the school were sought from the existing documents kept in offices of the relevant bursary allocation units respectively. This included records of overall amounts of disbursement, tuition fees, amounts of money students have paid, dropout rates, absenteeism, academic performance and fees default among the students. Amount of CDF provided was obtained from the CDF managers. The same information on the amount of bursaries from the constituency was obtained from CDF managers. Bursaries information from the banks were obtained from documents analysis of the banks.

## 3.5 Validity and Reliability of the Research Instruments

### 3.5.1 Validity of the Research Instruments

According to Bashir, Afzal and Azeem (2008), validity denotes the degree to which data collection instrument measures what it intends to measures. Validity clarifies whether the research accurately measure that which it was intended to measure or how correct the research findings are. Construct validity involves a test to be interpreted as a measure of some attribute or quality that is operationally defined. Content validity deals with the representativeness of the items in a data collection instrument. In order to improve content validity and face validity of the study, the researcher read a wide range of literature on the research topic to be able to have an all-inclusive item related to the study in the research instrument. The data collection instrument was piloted upon approval from the supervisors. The pilot study was conducted in Busia County.

External validity deals with the generalization of the results to the settings and population. In conclusion, validity should show if there is a relationship between the variables under study. External validity seeks to establish the extent to which results of research can be generalized to the study population. To enhance external validity there is need to be explicit rather than implicit about the population to be generalized. The population of this study is specific and to enhance generalization one has to select a sample that is similar as possible to the population as a whole. This was done by choosing the respondents from the study population that was representative.

### 3.5.2 Reliability of the Research Instruments

From the words of Cohen, Manion and Morison (2007), reliability relates to the degree of consistency of findings, the dependability over time and the resemblance within a given time period. Reliability is founded on the scores and performance of any variable generated score. Further, Bashir, Afzal and Azeem (2008), pointed out that reliability refers to the extent to which results are consistent over time and an accurate representation of the total population under study. If the findings of a study can be replicated under similar methodology, the research instruments are considered to be reliable. This indicates that reliability has to do with consistency, dependability and resemblance of research findings from various areas using the same approaches.

Furthermore, the consistency of the questionnaire items score can be determined using the Cronbanch alpha and the degree of stability is positively correlated with the degree of reliability (Terwee, Bot, de Boer, van der Windt, Knol, Dekker, & de Vet, 2007). Because reliability is consistency of measurement over time or stability of measurement over a variety of conditions, the most commonly used technique to estimate reliability is with a measure of association, Cronbanch alpha. The reliability co-efficient is the correlation

between variables or items which measure the same thing in a research instrument. The Cronbanch alpha was used to determine reliability for purposes of generalizing the research findings. The correlation values that are closer to 1 indicate higher reliability of the instrument. In this study, an alpha correlation value of 0.70 and above was held as reliable (Onwuegbuzie & Collins, 2007). Reliability was improved in this study by writing items clearly and making the scoring as explicit as possible. Construct reliability tests were conducted using Cronbanch alpha co-efficient test. This was aimed at establishing internal consistency of the items. The values of this test usually lie between 0 and 1. A Cronbanch alpha value of 1.0 is indicative of perfect reliability, that of above 0.70 is regarded as being indicative of good reliability while that of below ≤0.70 may be considered as being low. A summary of the Cronbanch alpha tests of this study is shown on Table 3.3.

**Table 3. 3: Summary of Reliability Results**

| Constructs | No. of Items | Alpha Coefficient |
|---|---|---|
| Bursary demand | 6 | 0.880 |
| Amounts disbursed | 8 | 0.768 |
| Bursary allocations | 7 | 0.882 |
| Student Characteristics | 8 | 0.705 |
| Internal Efficiency in Schools | 6 | 0.711 |

Source: Research Data (2019)

The results indicate that all the constructs were reliable since they all had Cronbanch alpha values of above 0.70. This indicates that the items had a high level of internal consistency as shown in Table 3.3.

**Table 3. 4: Overall Model**

| Reliability Statistics | |
|---|---|
| Cronbach Alpha | No. of Items |
| 0.835 | 35 |

Source: Research Data (2019)

### 3.6 Data Collection Procedures

Upon successful defense of the research proposal, the researcher sought a permit to conduct the research from National Council of Science, Technology and Innovation (NACOSTI). Upon receiving the permit, the study reported to the County Commissioner and the County Director of Education office for letters of permission and introduction to the schools. The study established a rapport with the relevant respondents and personally conducted interview and administered the questionnaires and thereafter analyzed the data. The respondents were assured that strict confidentiality would be maintained in dealing with the responses. The respondents were given about one week to fill in the questionnaires after which the filled-in questionnaires were collected.

### 3.7 Data Analysis Techniques

In order to examine the data collected from the field with a view to making deductions and inferences, data collected was classified, categorized and analyzed in accordance with the objectives of the study. Both qualitative and quantitative data analysis techniques were used.

Quantitative data analysis methods can be categorized as descriptive and inferential statistics. Whereas descriptive statistics summarize how variables of interest are distributed in the sample by describing what the data show, inferential statistics were used to make conclusions about the data. In this study, descriptive statistics included frequencies, percentages, mean and standard deviation. With the aid of Statistical Package

for the Social Sciences (SPSS) descriptive (percentage, frequency, means, standard deviation) and inferential statistical methods (Pearson Correlation Coefficient) were used to analyze and present the results.

Multiple regression was utilized in the analysis of the relationship and prediction between the dependent and independent variables. Multiple regression analysis was used to predict the specific value of one variable when the values of the other variables are known and is often useful to calculate the effects of two or more independent variables on a dependent variable. Multiple regression analysis in this study was used to predict and evaluate the relationship between two or more explanatory (independent) variables and an explained (dependent) variable. The Beta weighting (β) gives an indication of how many standard deviation units were changed in the dependent variable for each standard deviation unit of change in each of the independent variables.

Multiple linear regression has several key assumptions. First is the linearity which requires the relationship between the independent and dependent variables to be linear. The linearity assumption was tested with scatter diagram and correlation. Linearity assumption was checked under the threshold of negative 1 and positive 1 on correlation test. On scatter plot, a curving pattern suggests that a linear model may not be the best fit and that a more complex model (for example, a quadratic term) may need to be added (Wadsworth, 2016).

A normality test was performed under the null hypothesis that data follows the normal distribution. Normality test was checked by taking a gander at a histogram or a Predicted Probability (P-P) Plot. P-P plot was checked whether the residuals at centered or revolve around the normal distribution line. Ordinariness was checked with a decency of fit test

(e.g., the Kolmogorov-Smirnov test); however this test must be led on the residuals themselves (Lind, Marchal & Wathen, 2012).

Multicollinearity or excessive correlation amount exploratory variables can complicate or prevent the identification of an optimal set of exploratory variables for a statistical mode. Cohen *et al.,* (2007) definition of variance inflation factor (VIF) is that it provides an index of the amount that the variance of each regression coefficient is increased relative to a situation in which all of the predictor variables are uncontrolled" and suggest VIF to be too large hence not suitable. The commonly used cut-off points for determining the presence of multicollinearity are (tolerance value of less than 0.10, or a VIF value of above 10).

Homoscedasticity was tested using the Durbin Watson test. This tested whether there is a (linear) correlation between the error term for one observation and the next which is 2.00 when there is no correlation among residuals hence getting close to 0 when there is positive autocorrelation and beyond 2 when there is negative autocorrelation. A scatterplot of residuals versus anticipated qualities is great approach to check for homoscedasticity. There ought to be no reasonable example in the dissemination; if there is a cone-molded example (as appeared as follows), the information is heteroscedastic.

Methods of qualitative data analysis include thematic coding and narrative analysis was used. Qualitative data analysis aims at making sense of the text by searching for themes and patterns in the data (Creswell, 2011). In this study, qualitative data was created in a single comprehensive data set to identify themes (Driscol, Afua, Salib & Rupert, 2007). Thereafter, the study findings were presented based on the triangulation approach where the quantitative and qualitative results were presented to support each other. The qualitative data collected from the interview was analyzed thematically. Triangulation was

intended to reduce the weakness of each approach in the study. The summary of specific analysis for each objective is shown in Table 3.5

**Table 3. 5: Data Analysis Techniques**

| Objectives | Independent Variable | Dependent Variable | Statistical Test |
|---|---|---|---|
| 1. To determine the relationship between Bursary demand and amount disbursed to secondary school students in Bungoma County of Kenya | Bursary demand | Internal Efficiency | Descriptive Statistics Computation of frequencies, percentages Correlation |
| 2. To investigate the relationship between bursary allocation and student participation rates in secondary schools in Bungoma County | Amount of Bursary | Internal Efficiency | Descriptive Statistics Computation of frequencies, percentages Correlation |
| 3. To establish the relationship between bursary allocation and student Performance in secondary schools in Bungoma County | Bursary allocation | Internal Efficiency | Descriptive Statistics Computation of frequencies, percentages Correlation |
| 4. To determine if there is any significant difference in Bursary disbursements by tuition fees charged in Bungoma County secondary schools | Bursary disbursement | Internal Efficiency | Descriptive Statistics Computation of frequencies, percentages Correlation |
| 5. Determine the relationship between selected students characteristics and bursary allocation to secondary school students in Bungoma County of Kenya. | Student characteristics | Internal Efficiency | Pearson correlation and regression model |

### 3.8 Ethical Considerations

The ethical considerations addressed the following aspects: participants' consent, willingness to participate, confidentiality and anonymity, and integrity as regards plagiarism (Creswell, 2012). Since the study embraced mixed methods, ethical considerations attended to typical issues that surface in both forms of inquiry. Quantitative issues relate to obtaining permissions, protecting anonymity respondents, not disrupting sites, and communicating the purpose of the study. The researcher acquired a research permit from the National Council of Science and Technology to collect data from the participating universities. Voluntary participation of all categories of respondents was solicited through the signing of Informed Consent Forms.

In qualitative research these issues related to carrying the purpose of the study, avoiding deceptive practices, respecting institutional cultures, not disclosing sensitive information and masking identities of participants. Information obtained from respondents was kept in utmost confidence by the study. In a convergent design, the quantitative and qualitative sample size may be different. Care needs to be taken to not minimize the importance of a sample because of its size.

### 3.9 Summary of the Chapter

This chapter gave an overall view of how the study was conducted, the study area and study target population described. The research philosophy adopted for the study was based on pragmatism which guided the methodology and ethical considerations of the study, purposive and simple random sampling techniques were used to select the sample and sample size of the study. Data was collected using questionnaires and document analysis. Data was analyzed based on descriptive statistics and inferential statistics with the aid of SPSS. Ethical issues adopted regarding the study were also highlighted in the chapter.

# CHAPTER FOUR

# RESEARCH FINDINGS AND DISCUSSIONS

## 4.1 Introduction

This chapter presents the results of the study on Equity in Bursary Allocation in Relation to Internal Efficiency of Secondary Schools in Bungoma County of Kenya. The chapter will first present and discuss the background information of the respondents including; gender distribution, age distribution, class/form, as well as the socio-economic status of the respondents. The rest of the findings are presented in order of objectives of the study which were to:

i. To determine the relationship between Bursary demand and amount disbursed to secondary school students in Bungoma County of Kenya.
ii. To investigate the relationship between bursary allocation and student participation rates in secondary schools in Bungoma County.
iii. To establish the relationship between bursary allocation and student Performance in secondary schools in Bungoma County.
iv. To determine if there is any significant difference in Bursary disbursements by tuition fees charged in Bungoma County secondary schools.
v. Determine the relationship between selected students\ characteristics (gender, school categories and socio-economic status) and bursary allocation to secondary school students in Bungoma County of Kenya.

Tables, figures and charts were used to summarize and illustrate the findings of the study.

### 4.1.1 Response Rate

The study adopted two sets of questionnaires. There was the students' questionnaire for Bursary recipients and the questionnaire for Bursary administrators. The response to the questionnaire for Bursary administrators was 55 out of 62 giving a response rate of 88.7%.

However the response rate for Bursary recipients was 596 out of 600 giving a response rate of 99.3%. The Bursary administrators' questionnaire was answer by CDF managers, banks managers and some principals in selected schools. These response rates were adequate as conceded by Mugenda & Mugenda, (2003) who considers response rate of above 50 percent as adequate for analysis to proceed. Hence both questionnaires attracted adequate responses.

### 4.1.2 Characteristics of the Respondents

This study sought to establish Equity in Bursary Allocation in Relation to Internal Efficiency of Secondary Schools in Bungoma County of Kenya. To bring out equity issues as they relate to internal efficiency of operation of schools the study delved into the description of the respondents' characteristics as defined by gender, age, type of school attended and SES of the respondents as follows.

### 4.1.3 Gender Distributions of the Respondents

Respondents in the students' questionnaire were asked to state their gender as either male or female. In the questionnaire the Male respondents were coded as 1 while female respondents were coded 2. Respondents' gender is presented in Table 4.1.

**Table 4. 1: Gender Distributions of the Respondents n =596**

| Gender | Frequency | Percent |
|---|---|---|
| Male | 376 | 63.1 |
| Female | 220 | 36.9 |
| Total | 596 | 100 |

Table 4.1 indicates that out of 596 students sampled and who responded, 63.1 percent were male while 36.9 were female. Given that respondents were proportionately sampled; the implication is that more male students than female received various bursaries in Bungoma County. The questionnaire for Bursary administrators however, did not seek

information on demographic information for the simple reason that the unit of analysis was the students.

### 4.1.4 Type of School of the respondents

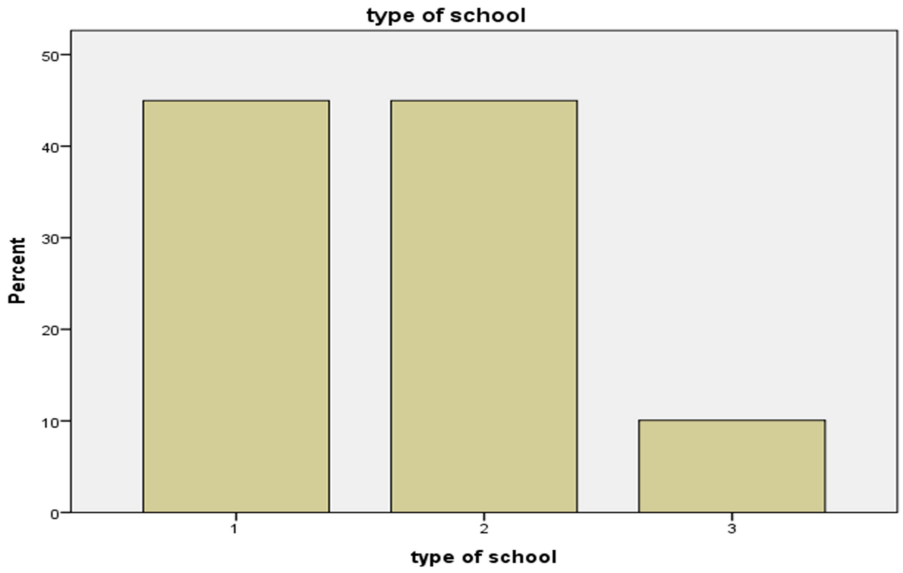
The study also sought to establish the type of school of respondents. This was coded into three identities where 1 represented extra county schools, 2 was for County schools while 3 was coded to represent Sub County Schools. The categorization of schools into Extra County, County and Sub-County schools was because school categories determine the amount of fees charged. Extra county schools are expected to charge more fees and are considered high cost schools followed by County, and Sub-County categories in that order. The study intended to establish if bursary disbursements from various county sources puts into consideration the type of school categories which have effect on amount of fees charged. The results are shown in the table as follows.

**Table 4. 2: Type of School of the respondents**

| Type of School | Frequency | Percent |
|---|---|---|
| Extra-County Schools | 268 | 45 |
| County Schools | 268 | 45 |
| Sub-County Schools | 60 | 10.1 |
| **Total** | **596** | **100** |

The findings in Table 4.2 reveal that about 268 bursary recipients represnting 45 percent attended Extra County Schools a similar number and percentage went to county school while only 10 percent went to sub-county schools. This could be indicative of the bursary recipients in the country as most sub county schools are day schools hence it is likely that because of Free Tuition Secondary education most students in sub county schools don't apply for busrsaries as they benefit from Free Tuition Secondary education.

**Figure 4. 1: Depicts a birds eye view of the findings**




*Source: Field Data (2019)*

**Figure 4.2: Bar Graph showing bursary recipients by Type of school**

### 4.1.5 Socio-economic Status of the respondents

The study further sought to categorize the distribution of bursary recipients of bursary by Socio-economic status. This was necessary as it sought to identify which of the income groupings had the lion's share of the recipients. To arrive at the income group of the recipient, bursary recipients were asked in the questionnaire to respond to four questions on socio-economic background information. Each question raised four points hence on 16-point continuum, respondents who scored 0-5 were categorized in Low income group, 6-10 went to the middle income group while 11-16 was placed in high income group. 1,2, and 3 represented LSES, MSES and HSES respectively. The results are as shown in the table below.

**Table 4. 3: Distribution of respondents by SES**

**n=596**

| SES | Frequency | Percent |
|---|---|---|
| **LSES** | 14 | 2.3 |
| **MSES** | 122 | 20.5 |
| **HSES** | 460 | 77.2 |
| **Total** | 596 | 100 |

Table 4.3 indicates that majority of the bursary recipients (77.2) percent fell within HSES while a smaller majority 20.5 percent were within MSES. A paltry 2.3 percent fell within LSES. This could indicate that bursary in Bungoma County is accessed more by students from High income groups. It also implies that very few students from LSES are able to access Bursaries because most likely they rarely access good extra county and county schools where the tuition fees is high. In terms of social connections that make the students access bursaries, it's the children of the rich that will get information and support to access the loans. According to Psacharopoulos and Woodhall (1985) family social connections are important determinant of getting financial support through friends, workmates.

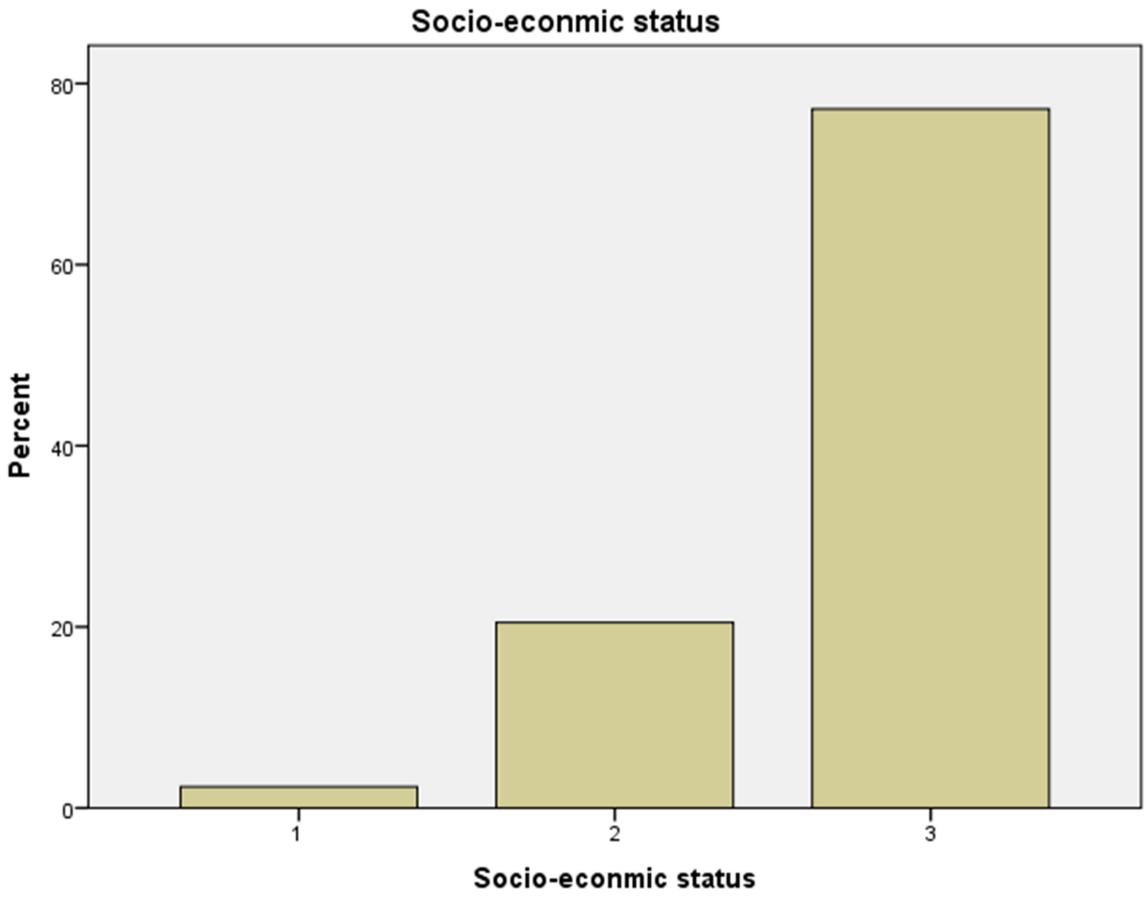



**Figure 4. 2: gives a pectoral view of the bursary recipients.**

Finally, the work duration of the respondents is shown in figure 4.3.

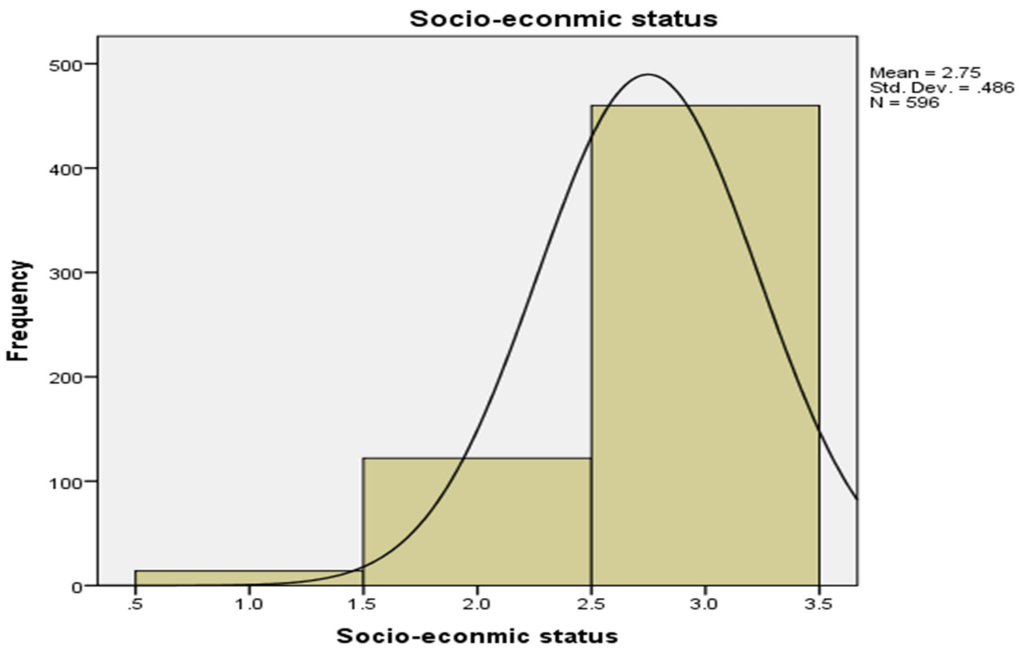



**Figure 4. 3: work duration of the respondents**

The study also sought to identify the age categories of the respondents. The categories were between 15-17 (1), 18-19 (2), 20-21 (3) and above 22 (4). The age categories of the respondents was meant to show cases of under-age, optimal and over age students who receive bursaries. Given that bursary financing

**Table 4.4: Age of the respondents**

| Age of the Students | Frequency | Percent |
|---|---|---|
| 15-17 | 240 | 40.3 |
| 18-19 | 316 | 53 |
| 20-21 | 32 | 5.4 |
| Above 22 | 8 | 1.3 |
| **Total** | **596** | **100** |

Results in Table 4.4 indicate that majority of the bursary recipients (53) percent fall within 18-19 years of age. Since this is the optimal age categories. A big percentage 40.3 percent were within 15-17 years of age. However, a small percentage 5.4 percent were within 20-21 years of age which is considered over age. The implication is that there could be cases

of repetition in schools that makes over age students remain in school beyond the stipulated age of 18 years.

This prompted a cross tabulation analysis to establish the counts within various categories that fell within forms 4, 3 and 1. The findings are shown in the table.

**Table 4.5: Cross tabulation Table of Age and Form of Bursary recipients**

**N=296**

| | | Form | | | Total |
|---|---|---|---|---|---|
| | | 1 | 3 | 4 | |
| Age | 15-17 | 16 | 46 | 58 | 120 |
| | 18-19 | 0 | 12 | 144 | 156 |
| | 20-21 | 0 | 0 | 16 | 16 |
| | Above 22 | 0 | 0 | 4 | 4 |
| Total | | 16 | 58 | 222 | 296 |

The table 4.5 indicates that majority of the bursary recipients aged between ages 15-17 were in Form Four at 58. A slightly lower majority of similar age are in Form 3 at 46. However, most of those aged 18-19 are in Form 4 at 144. The minority of those aged between 20-21 and above 22 are also in Form 4. This implies that although the bulk of students receiving bursary are attending school at the correct ages, there are cases of over age students receiving bursary of over 20 students. This could also imply wastage of resources as they may have repeated classes several times so as to remain in school beyond the stipulated period and age. It could also imply late enrollment in school.

**Table 4. 6: Form, Age and Socio-Economic Status Cross tabulation**

| Socio-economic status | | | Age | | | | Total |
|---|---|---|---|---|---|---|---|
| | | | 15-18 | 18-19 | 20-21 | Above 22 | |
| **LSES** | Form | 3 | 2 | 0 | | | 2 |
| | | 4 | 4 | 8 | | | 12 |
| | Total | | 6 | 8 | | | 14 |
| **MSES** | Form | 1 | 8 | 0 | 0 | 0 | 8 |
| | | 3 | 18 | 16 | 0 | 0 | 34 |
| | | 4 | 12 | 56 | 8 | 4 | 80 |
| | Total | | 38 | 72 | 8 | 4 | 122 |
| **HSES** | Form | 1 | 24 | 0 | 0 | 0 | 24 |
| | | 3 | 72 | 8 | 0 | 0 | 80 |
| | | 4 | 100 | 224 | 24 | 4 | 352 |
| | Total | | 196 | 232 | 24 | 4 | 456 |
| **Total** | Form | 1 | 32 | 0 | 0 | 0 | 32 |
| | | 3 | 92 | 24 | 0 | 0 | 116 |
| | | 4 | 116 | 288 | 32 | 8 | 444 |
| | Total | | 240 | 312 | 32 | 8 | 592 |

### 4.1.6 Student's family background

The student's family background status in any institution was crucial to the bursary allocation to students in secondary schools. The results regarding this were presented in Figure 4.1

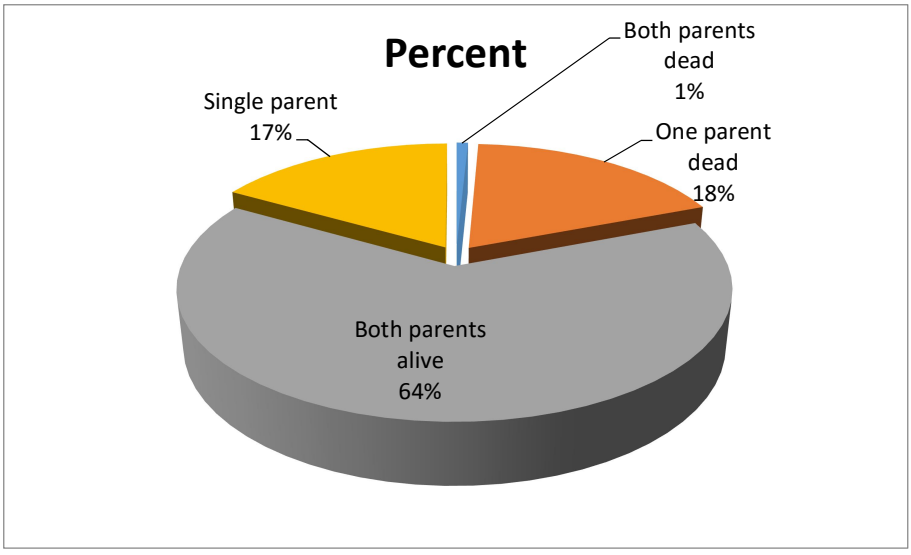



**Figure 4. 4: Family background status**

Regarding the student's family background status, Figure 4.4 point out that 0.8% indicated that both parents were dead, nevertheless 18.4% indicated that one parent is dead, 64% had both parents alive, while 16.8% had single parent. These results point out that majority student of the Bungoma County have both parents alive while a least number of students that have lost either one or both parents.

The study also sought to establish the parental or the guardian occupation. This would point out the level of commitment of not only the community, but also the parents in ensuring that the enrolment levels are enhanced. The results in relation to this were presented in Figure 4.2.

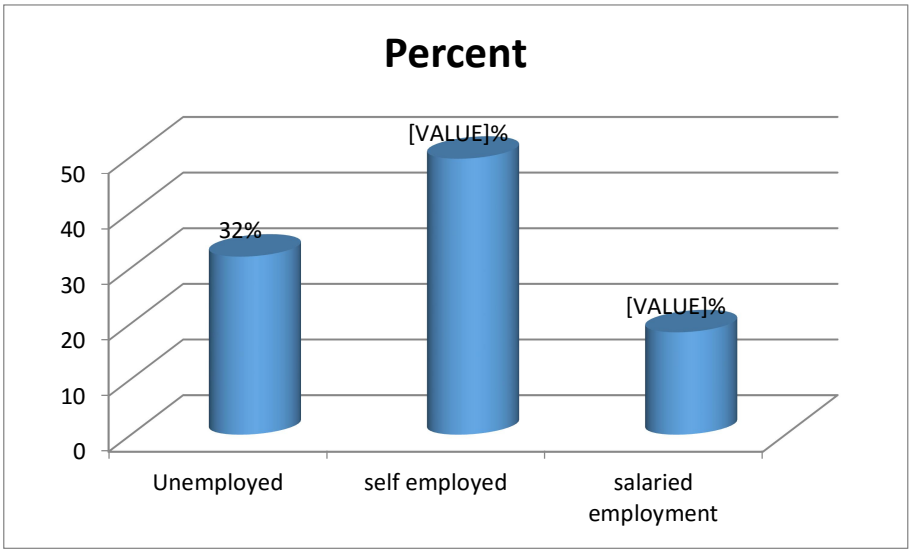



**Figure 4.5: Parental/Guardian occupation**

The Figure 4.5 shows that 32.0% of the respondents are unemployed, 49.6% of them were self employed and 18.4% were salary employed. This implies that most parents were unempolyed or self employed which suggests that they require the help of the bursary to subsidize them with the burden of school fees so that education of their children is not interfered with due to lack of fees.

### 4.2.1 Results as per the Analysis of the Specific Objectives

In this section, the study sought to answer the specific objectives and test the hypotheses of the study. The study objectives were analyzed and presented chronologically as outlined in the objectives. The interpretation and discussions of the findings was inbuilt in the presentation of the research findings.

### 4.2.2 Relationship between Bursary demand and amount disbursed to students

The first objective was to determine the relationship between the amount of bursary demanded and the amount disbursed to secondary school students in Bungoma county of Kenya. The hypothesis tested was that:

> **$Ho_1$** There is no significant relationship between amount of bursary demanded and the amount disbursed to secondary school students in Bungoma County of Kenya.

The purpose of this objective was to establish if the various sources of bursary consider the needs of the students in their bursary disbursements. It was assumed that in determining the amount of bursary to apply for the bursary applicants consider their various needs such as the amount of fees charged in schools they are admitted, the cost of transport, their other needs such as cost of books and stationary among other indirect costs. In order to arrive at the bursary demand, respondents were asked to indicate the amount they had demanded for spanning all the years they had been admitted in the school. The table also required the respondents to indicate the amount they had received for every year. The figures indicated were entered in the computer SPSS version 20.0 as absolute values. The correlations analysis was the Pearson's Correlation Coefficient (SPSS, 2011). This was a non-parametric test meant to compute how variables are related. The statistic assumed a linear relationship. The level of significance was declared at 0.05 level in a two tailed significance test. A two tailed test was preferred in order for

the study to take care of negative values in the relationships. However, before the variables were correlated the data was screened for possible outliers and errors.

According to Ogolla-Onyango and Odebero (2009) Pearson's correlation coefficient helps to measure relationships between two or more variables and is used when both the predictor and outcome variable are continuous in nature. For this study, the predictor variable was amount of bursary demanded measured in Ksh and ranged from 0, 1, 1.1, 2, 2.5…n while the outcome variable was the amount disbursed as measured in ksh. The values ranged from 0, 1, 2.5, …n. According to Mugenda and Mugenda (2003), in Pearson's correlation coefficient, use of pure numbers does not change the coefficient value. The findings are as shown below.

**Table 4. 7: Descriptive Analysis of Bursary Demand**

| Descriptive Statistics | | | |
|---|---|---|---|
| | Mean | Std. Deviation | N |
| **Bursary amount demanded** | 14402.08 | 14762.66 | 560 |
| **Bursary Amount received** | 7595.89 | 9197.55 | 580 |

**Table 4.7: Correlations between Bursary demand and supply n=580**

| | | Bursary amount demanded | Bursary Amount awarded |
|---|---|---|---|
| **Bursary amount demanded** | Pearson Correlation | 1 | .567** |
| | Sig. (2-tailed) | | 0.000 |
| | Sum of Squares and Cross-products | 1.22E+11 | 3.68E+10 |
| | Covariance | 2.18E+08 | 66304869 |
| | N | 560 | 556 |
| **Bursary Amount demanded** | Pearson Correlation | .567** | 1 |
| | Sig. (2-tailed) | 0.000 | |
| | Sum of Squares and Cross-products | 3.68E+10 | 4.9E+10 |
| | Covariance | 66304869 | 84594934 |
| | N | 556 | 580 |

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

The findings reveal that bursary amount demanded had a mean of 14,402.08, standard deviation of 14762.659 while the bursary amount received had a mean of 7,595.89 and a standard deviation of 9197.550. This would imply that the total amount disbursed was only half the amount demanded. The implication is that the county should step up efforts to increase the sources of funding as the demand is higher than the supply. This finding is echoed by Odebero (2008), Odebero et al, (2007) who found that HeLB loan demand by university students in Kenya was much higher than the supply and urged HELB to diversify the sources of funding to increase capitation to meet the demand. Bursary sources in the county can be increased through increased capitation by banks, CDF and county governments. The Pearson correlation reveal that there was a strong significant relationship between Bursary amount demanded and amount received $P<0.05$, $r=0.567$. Thus the null hypothesis stating that **$Ho_1$**: There is no significant relationship between bursary demand and amount disbursed to secondary school students in Bungoma County was rejected. This would imply that as the amount of bursary demand increased so did the supply. The findings could be an indicator that the bursary sources could be aware of the factors that increase demand for bursary such as the type of school, location of school and gender among others and are considered in the decisions on the amount of loan to disburse.

### 4.2.3: Relationship between bursary allocation and student participation

The second objective of this study sought to investigate the relationship between Bursary amount received and the students' participation rates. The hypothesis tested was:

> **$Ho_2$** There is no significant relationship between bursary allocation and student participation rates in secondary schools in Bungoma County.

The purpose was to investigate the possibility that the amount of bursary amount awarded

had any relationship with students' attendance in schools. The bursary amount was entered as absolute figures. Students were asked to fill in the questionnaire the amount of bursary disbursed to them from Form one to Form 4 and per annum. This was entered in the SPSS program as absolute figures. The data was measured as a nominal scale. On the other hand, the students participation rates was measured in terms of the number of days missed per annum. The data was filled in a table with columns for year, Number of days missed and the reasons for missing. The number of days missed was also entered in the SPPS data sheet as absolute figures.

Non parametric test were used to test the association between bursary amount received and non-attendance rates. Specifically, Pearson Correlation coefficient was used. The results are as shown.

**Table 4. 8: Relationship between bursary allocation and students' non-attendance rates**

**n=596**

| | | Bursary Amount received | Days Absent |
|---|---|---|---|
| **Bursary Amount received** | Pearson Correlation | 1 | -.097* |
| | Sig. (2-tailed) | | 0.02 |
| | Sum of Squares and Cross-products | 4.9E+10 | -8161460 |
| | Covariance | 84594934 | -14095.8 |
| | N | 580 | 580 |
| **Days Absent** | Pearson Correlation | -.097* | 1 |
| | Sig. (2-tailed) | 0.02 | |
| | Sum of Squares and Cross-products | -8161460 | 146020.2 |
| | Covariance | -14095.8 | 245.412 |
| | N | 580 | 596 |

***. Correlation is significant at the 0.05 level (2-tailed).**

The results indicate that there was a weak but significant negative relationship between Bursary allocation and students non-attendance rates r= -0.097, P< 0.05. This implies that as the students' school non-attendance decreases, bursary disbursements tended to increase. The implication is that amount of Bursary disbursement had an effect on school attendance. Students who were allocated small amounts of bursary tended to be more absent from school due to school fees compared to those who received higher amounts of bursary. Thus bursary disbursement has a role to play in improving the internal efficiency in schools through reduced non-attendance rates. Most of the county sources of bursaries include County Bursary, Constituency Development Bursary (CDF-Bursary), ward bursary, bank bursary and school bursary. There has been hue and cry that in most instances county sources of bursary are controlled by politicians who believe in numbers for their own political survival. They tend to give very small amounts of money so as to

reach many people and such small amounts as confirmed by this study may not affect the non-attendance rates in schools. The country may need policies that depoliticize bursary awards so that reasonable amounts can be disbursed in order to have an effect on reduced non-attendance rates. However, this may mean that only fewer students would benefit from such policies. On the other hand, the county political class could lobby for increased capitation to the bursary kitty in the county so as to cover needier cases and with reasonable amounts that could have an effect on reduced non-attendance rates.

### 4.2.4: Relationship between bursary allocation and students' Performance

The third objective of this study was to investigate the relationship between Bursary amount received and the students' performance. The hypothesis tested was that:

i) **$Ho_3$** There is no significant relationship between bursary allocation and student Performance in secondary schools in Bungoma County.

The purpose was to find out whether the amounts of cash received in bursary awards was related to students' performance measured in terms of mean score. As pointed out earlier, bursary awards was entered into the SPSS version 20.0 as absolute values of the amount received per annum. Performance was measured by the mean score attained in class through the overall mean score per year. The students were asked to indicate their overall mean score in Form 1,2,3,4 and the students indicated the grades ranging from Grade A-E. The mean scores were then converted from the grades where Grade A=12, A-=11, B+10, B=09, B-=08, C+= 07, C=06, C-=05,D+=04, D=03, D-=02, E=01. Every student had one mean score entered into the SPSS programme as a variable for the current class.

Pearson's Correlation coefficient was then used to compute the relationship between Bursary amount disbursed and the students mean score where the findings were as follows:

**Table 4. 9: Relationship between bursary amount received and students' mean score**

**n=592**

| | | Bursary Amount awarded | Mean score |
|---|---|---|---|
| **Bursary Amount awarded** | Pearson Correlation | 1 | .174** |
| | Sig. (2-tailed) | | 0.000 |
| | Sum of Squares and Cross-products | 4.9E+10 | 3330574 |
| | Covariance | 84594934 | 5792.303 |
| | N | 580 | 576 |
| **Mean score** | Pearson Correlation | .174** | 1 |
| | Sig. (2-tailed) | 0.000 | |
| | Sum of Squares and Cross-products | 3330574 | 8496.108 |
| | Covariance | 5792.303 | 14.376 |
| | N | 576 | 592 |

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

The results reveal that there was a weak but significant positive relationship between the two variables ($r=0.174$, $P<0.05$). A positive relationship implies that as the amount of bursary allocation to recipients increased so did the students' performance in mean score. This finding was expected as it is believed that higher bursary awards enables students to remain in school and attend lessons and they are more likely to perform better.

### 4.2.5 Relationship between bursary disbursements and students characteristics

The fourth objective of this study was aimed at investigating the relationship between Bursary disbursements and students characteristics. Because of the many variables within students characteristics, the study derived more sub-hypothesis from the main hypothesis. The objective was to find difference in bursary allocation and students characteristics such as gender, SES, and type of school attended. The following sub-hypotheses were tested under this objective:

**$Ho_{4\ (i)}$**: There is no significant difference in bursary disbursements between male and female secondary school students in Bungoma County.

**$Ho_{4\ (ii)}$** There is no significant difference in bursary disbursements to secondary school students in Extra County, County and Sub- County categories of schools in Bungoma County of Kenya

**$Ho_{4\ (iii)}$**: There is no significant difference in bursary disbursements by students' socio-economic status in Bungoma County.

#### 4.2.5.1 Difference in Disbursements between Male and Female Students

Under this sub-hypothesis, the study sought to investigate the disbursement of bursaries between the male and female students enrolled in secondary schools in Bungoma County. The following hypothesis was tested.

**$Ho_{4\ (i)}$**: There is no significant difference in bursary disbursements between male and female secondary school students in Bungoma County.

The study employed difference in means to establish the difference in means of the bursaries disbursed to male and female students. In the SPSS, the mean procedure calculates sub group means for dependent variables. The predictor variable was gender while the outcome variable were the means of bursary disbursed to recipients. The findings are as follows:

**Table 4. 10: Mean Difference in Bursary Amount Received by Gender**

| Gender | Mean | N | Std. Deviation | Sum | % of Total Sum |
|---|---|---|---|---|---|
| Male | 8027.78 | 360 | 10078.35 | 2890000 | 65.60% |
| Female | 6889.16 | 220 | 7506.075 | 1515616 | 34.40% |
| Total | 7595.89 | 580 | 9197.55 | 4405616 | 100.00% |

**Table 4. 11: Significant Difference Bursary Amount Received by Gender**

| ANOVA | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Bursary Amount received * Gender | Between (Combined) Groups | 1.77E+08 | 1 | 1.77E+08 | 2.097 | 0.148 |
| | Within Groups | 4.88E+10 | 578 | 84435010 | | |
| | Total | 4.9E+10 | 579 | | | |

a. With fewer than three groups, linearity measures for Bursary Amount received * Gender cannot be computed.

The findings reveal that the mean bursary disbursement to male was higher at 8027.78 and was allocated to 36 recipients representing 65.6 percent while the mean allocation to female students was 6889.89 and this went to 220 students representing 34 percent of the recipients. The ANOVA table indicates that the differences within the combined groups were not significant ($P<0.148$, $df =1$) hence the independent sample t-test could not be computed. Therefore, the null hypothesis stating that there is no significant difference in bursary disbursements between male and female secondary school students in Bungoma County was accepted. This implies that the Bursary disbursements were more or less the same between male and female students. This could be because of the government directive on fees where fees guidelines are the same for all public schools (Republic of Kenya, 2014). Stake holders had complained that School Boards tended to cover charge parents in school fees. Some school boards had put unrealistic school fees charges prompting government to set up a task force to review school fees for all government secondary schools. Led by Dr. Kilemi Mwiria, the task force established a fee guideline for all schools that had no gender considerations (Ibid).

#### 4.2.5.2 Difference in Disbursements between School Categories

Under this sub-hypothesis, the study sought to investigate the disbursement of bursaries between the extra county, County and sib-county categories of schools in Bungoma County. The following hypothesis was tested.

**Ho$_4$** (ii) There is no significant difference in bursary disbursements to secondary school students in Extra County, County and Sub- County categories of schools in Bungoma County, Kenya

The analysis of variance (ANOVA) was used to find the difference in disbursements between school categories. This was used to test the hypothesis that several means are equal in the disbursement of bursaries between all categories of schools in the County.

The ANOVA model tested was stated as follows:

**Ho$_4$** (ii) $\mu_1 = \mu_2 = \mu_3$

Where:

$\mu_1 - \mu_3$ *represented the different categories of schools*

The Table presents the findings.

**Table 4. 12: Difference in Disbursements between School Categories**

| ANOVA | | | | | |
|---|---|---|---|---|---|
| Bursary Amount received | | | | | |
| | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | 2E+09 | 2 | 1E+09 | 12.303 | 0.000 |
| Within Groups | 4.7E+10 | 577 | 81416061 | | |
| Total | 4.9E+10 | 579 | | | |

The results indicate that there were significant differences in means in the allocation of bursaries in different categories of schools ($P<0.05$, df=2, f=12.303). Consequently, the there was no evidence to support the null hypothesis that stated no significant differences existed in the bursary disbursements according to different categories of schools. However, in addition to determining whether differences indeed exist in the disbursement of bursaries to different school categories, the study sought to establish where the

differences lie. Multiple comparison test that included the Scheffe's tests, Tukey HSD and HSD were computed as shown in the table below.

**Table 4. 13: Multiple Comparisons test for bursary disbursement by School Categories**

| | (I) type of school | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| Tukey HSD | Extra County | 3708.665* | 791.471 | 0 | 1848.89 | 5568.44 |
| | | 3885.671* | 1294.205 | 0.008 | 844.58 | 6926.76 |
| | County | -3708.665* | 791.471 | 0 | -5568.44 | -1848.89 |
| | | 177.006 | 1290.476 | 0.99 | -2855.32 | 3209.33 |
| | Sub County | -3885.671* | 1294.205 | 0.008 | -6926.76 | -844.58 |
| | | -177.006 | 1290.476 | 0.99 | -3209.33 | 2855.32 |
| Scheffe | Extra County | 3708.665* | 791.471 | 0 | 1766.31 | 5651.02 |
| | | 3885.671* | 1294.205 | 0.011 | 709.54 | 7061.8 |
| | County | -3708.665* | 791.471 | 0 | -5651.02 | -1766.31 |
| | | 177.006 | 1290.476 | 0.991 | -2989.97 | 3343.98 |
| | Sub County | -3885.671* | 1294.205 | 0.011 | -7061.8 | -709.54 |
| | | -177.006 | 1290.476 | 0.991 | -3343.98 | 2989.97 |
| LSD | Extra County | 3708.665* | 791.471 | 0 | 2154.15 | 5263.18 |
| | | 3885.671* | 1294.205 | 0.003 | 1343.74 | 6427.6 |
| | County | -3708.665* | 791.471 | 0 | -5263.18 | -2154.15 |
| | | 177.006 | 1290.476 | 0.891 | -2357.6 | 2711.61 |
| | Sub County | -3885.671* | 1294.205 | 0.003 | -6427.6 | -1343.74 |
| | | -177.006 | 1290.476 | 0.891 | -2711.61 | 2357.6 |

The findings indicate that from I to J there were significant means between extra county schools coded (1), County Schools Coded 2 and Sub county schools Coded (3) ($P<0.05$,i-j=3708.7, 3885.7). The implication is that extra county schools received more bursaries than County and sub-county schools. However, the mean difference between County and sub county schools were not significant ($P>0.05$, I-J=177.006). Extra county schools are dominated by boarding schools and hence are likely to be more expensive. According to the Report released by KNEC (2019) the sub county schools are mainly day schools and hence their fees is likely to be much lower.

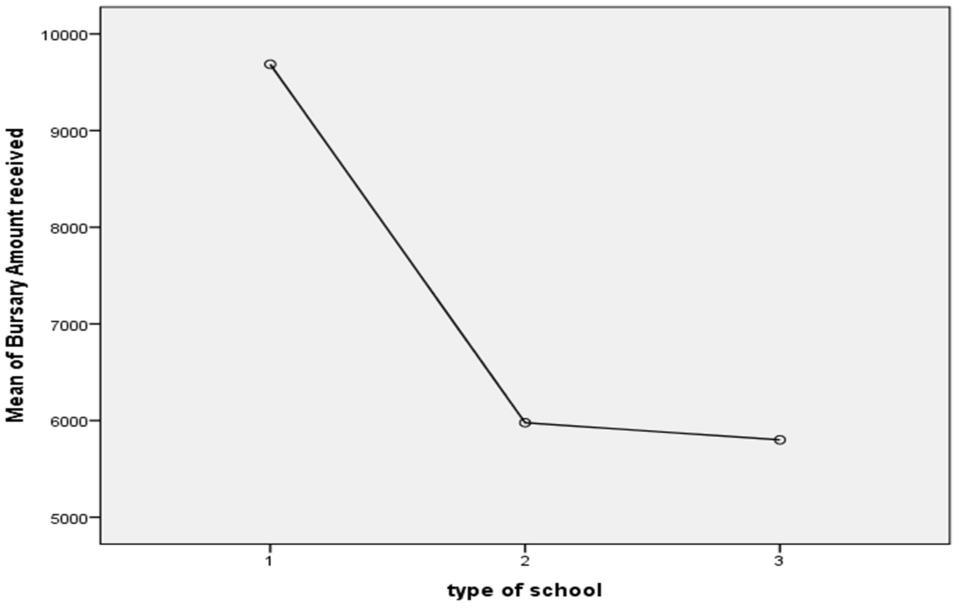



**Figure 4. 6: Mean difference in bursary disbursements by school categories**

The figure, the bird's eye view perspective indicates that the school category 1 (Extra county schools) has the highest concentration of school bursaries at a mean of 9900. The mean concentration of the county schools is at 6000 and 5900 for the sub-county schools.

### 4.2.6. Relationship between Bursary disbursements and socio-economic status

Another student's characteristic was the socio-economic status. Under this sub-hypothesis, the study sought to investigate the disbursement of bursaries between Low, Medium and High socio-economic income groupings of the students. The following hypothesis was tested.

**$Ho_4$** (ii) There is no significant difference in bursary disbursements to secondary school students in low socio-economic status, medium socio-economic status and high socio-economic status in Bungoma County, Kenya

The analysis of variance (ANOVA) was used to find the difference in disbursements between students of various income groups. This was used to test the hypothesis that

several means are equal in the disbursement of bursaries between all students in different categories of socio-economic status.

The ANOVA model tested was stated as follows:

**Ho$_{4\,(ii)}$** $\mu_1 = \mu_2 = \mu_3$

*Where:*

$\mu_1$ - $\mu_3$ *represented the different income groups of the Bursary recipients in Bungoma County.*

The Table presents the findings.

**Table 4. 14: Relationship between Bursary disbursements and socio-economic status**

| ANOVA | | | | | |
|---|---|---|---|---|---|
| **Bursary Amount received** | | | | | |
| | Sum of Squares | df | Mean Square | F | Sig. |
| **Between Groups** | 6.08E+09 | 2 | 3.04E+09 | 40.914 | 0.000 |
| **Within Groups** | 4.29E+10 | 577 | 74344751 | | |
| **Total** | 4.9E+10 | 579 | | | |

The results indicate that there were significant differences in means in the allocation of bursaries to students in different income groups ($P<0.05$, df=2, f=40.914). Consequently, there was no evidence to support the null hypothesis that stated no significant differences existed in the bursary disbursements to students in different income groups. However, in addition to determining that differences indeed exist in the disbursement of bursaries to students in different income groups, the study sought to establish where the differences lie. Multiple comparison test that included the Scheffe's tests, Tukey HSD and HSD were computed as shown in the table below.

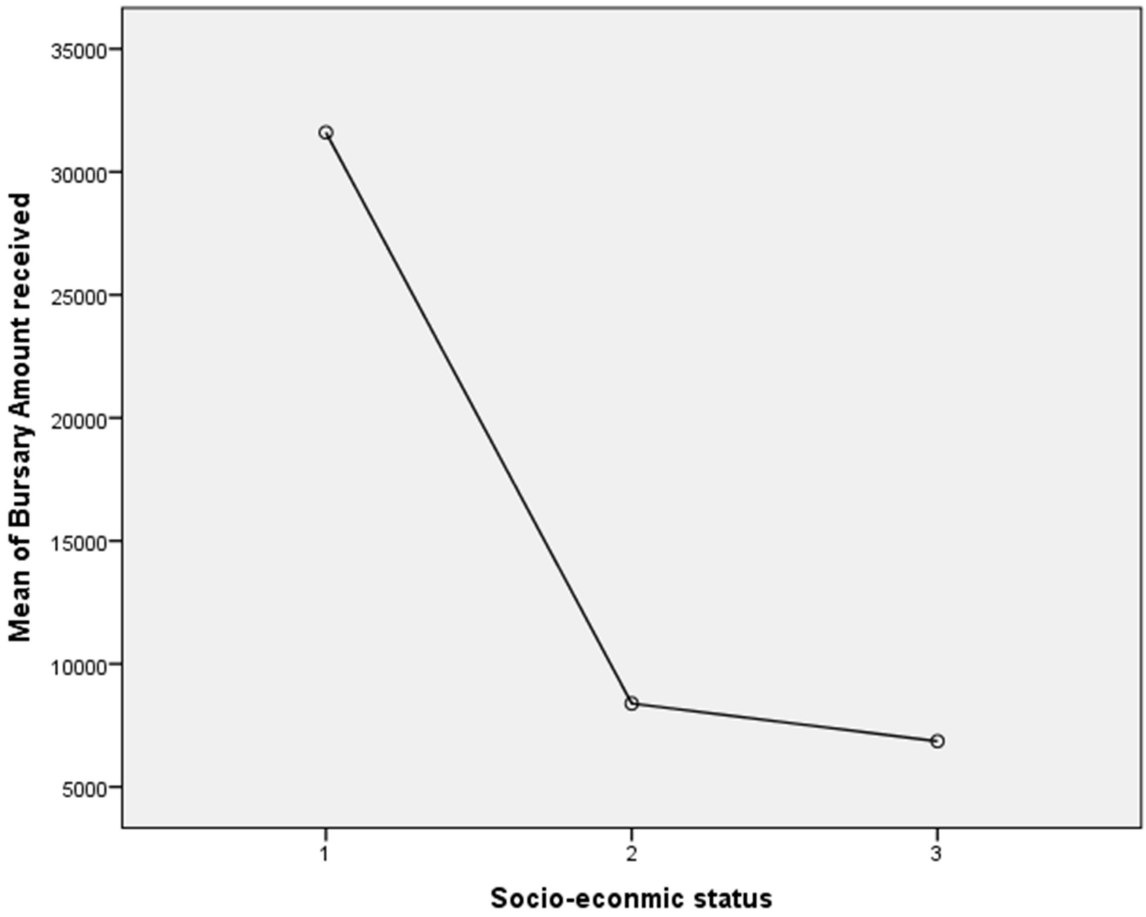
**Table 4. 15: Bursary disbursement to students in different socio-economic status n= 596**

| Dependent Variable: Amount received | Bursary | | | | | |
|---|---|---|---|---|---|---|
| | (I) Socio-econmic status | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
| | | | | | Lower Bound | Upper Bound |
| **Tukey HSD** | LSES | 23211.769* | 2839.809 | 0 | 16538.86 | 29884.68 |
| | | 24744.078* | 2756.62 | 0 | 18266.64 | 31221.51 |
| | MSES | -23211.769* | 2839.809 | 0 | -29884.7 | -16538.9 |
| | | 1532.308 | 891.358 | 0.199 | -562.18 | 3626.8 |
| | HSES | -24744.078* | 2756.62 | 0 | -31221.5 | -18266.6 |
| | | -1532.31 | 891.358 | 0.199 | -3626.8 | 562.18 |
| **Scheffe** | LSES | 23211.769* | 2839.809 | 0 | 16242.55 | 30180.99 |
| | | 24744.078* | 2756.62 | 0 | 17979.02 | 31509.14 |
| | MSES | -23211.769* | 2839.809 | 0 | -30181 | -16242.6 |
| | | 1532.308 | 891.358 | 0.229 | -655.19 | 3719.8 |
| | HSES | -24744.078* | 2756.62 | 0 | -31509.1 | -17979 |
| | | -1532.31 | 891.358 | 0.229 | -3719.8 | 655.19 |
| **LSD** | LSES | 23211.769* | 2839.809 | 0 | 17634.15 | 28789.39 |
| | | 24744.078* | 2756.62 | 0 | 19329.84 | 30158.31 |
| | MSES | -23211.769* | 2839.809 | 0 | -28789.4 | -17634.2 |
| | | 1532.308 | 891.358 | 0.086 | -218.39 | 3283.01 |
| | HSES | -24744.078* | 2756.62 | 0 | -30158.3 | -19329.8 |
| | | -1532.31 | 891.358 | 0.086 | -3283.01 | 218.39 |
| **Bonferroni** | LSES | 23211.769* | 2839.809 | 0 | 16393.44 | 30030.1 |
| | | 24744.078* | 2756.62 | 0 | 18125.48 | 31362.67 |
| | MSES | -23211.769* | 2839.809 | 0 | -30030.1 | -16393.4 |
| | | 1532.308 | 891.358 | 0.258 | -607.83 | 3672.44 |
| | HSES | -24744.078* | 2756.62 | 0 | -31362.7 | -18125.5 |
| | | -1532.31 | 891.358 | 0.258 | -3672.44 | 607.83 |
| **Sidak** | LSES | 23211.769* | 2839.809 | 0 | 16411.31 | 30012.23 |
| | | 24744.078* | 2756.62 | 0 | 18142.83 | 31345.33 |
| | MSES | -23211.769* | 2839.809 | 0 | -30012.2 | -16411.3 |
| | | 1532.308 | 891.358 | 0.237 | -602.22 | 3666.84 |
| | HSES | -24744.078* | 2756.62 | 0 | -31345.3 | -18142.8 |
| | | -1532.31 | 891.358 | 0.237 | -3666.84 | 602.22 |
| **Gabriel** | LSES | 23211.769* | 2839.809 | 0 | 17251.3 | 29172.24 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 24744.078* | 2756.62 | 0 | 19440.87 | 30047.29 |
| | MSES | -23211.769* | 2839.809 | 0 | -29172.2 | -17251.3 |
| | | 1532.308 | 891.358 | 0.199 | -498.29 | 3562.9 |
| | HSES | -24744.078* | 2756.62 | 0 | -30047.3 | -19440.9 |
| | | -1532.31 | 891.358 | 0.199 | -3562.9 | 498.29 |
| **Hochberg** | LSES | 23211.769* | 2839.809 | 0 | 16411.98 | 30011.56 |
| | | 24744.078* | 2756.62 | 0 | 18143.48 | 31344.68 |
| | MSES | -23211.769* | 2839.809 | 0 | -30011.6 | -16412 |
| | | 1532.308 | 891.358 | 0.237 | -602.01 | 3666.63 |
| | HSES | -24744.078* | 2756.62 | 0 | -31344.7 | -18143.5 |
| | | -1532.31 | 891.358 | 0.237 | -3666.63 | 602.01 |
| **Tamhane** | LSES | 23211.769* | 6715.777 | 0.02 | 3781.37 | 42642.17 |
| | | 24744.078* | 6644.685 | 0.014 | 5345.27 | 44142.88 |
| | MSES | -23211.769* | 6715.777 | 0.02 | -42642.2 | -3781.37 |
| | | 1532.308 | 1089.533 | 0.411 | -1099.82 | 4164.44 |
| | HSES | -24744.078* | 6644.685 | 0.014 | -44142.9 | -5345.27 |
| | | -1532.31 | 1089.533 | 0.411 | -4164.44 | 1099.82 |
| **Dunnett T3** | LSES | 23211.769* | 6715.777 | 0.019 | 4013.63 | 42409.91 |
| | | 24744.078* | 6644.685 | 0.013 | 5592.98 | 43895.18 |
| | MSES | -23211.769* | 6715.777 | 0.019 | -42409.9 | -4013.63 |
| | | 1532.308 | 1089.533 | 0.409 | -1098.74 | 4163.36 |
| | HSES | -24744.078* | 6644.685 | 0.013 | -43895.2 | -5592.98 |
| | | -1532.31 | 1089.533 | 0.409 | -4163.36 | 1098.74 |
| **Games-Howell** | LSES | 23211.769* | 6715.777 | 0.017 | 4621.78 | 41801.76 |
| | | 24744.078* | 6644.685 | 0.012 | 6210.4 | 43277.75 |
| | MSES | -23211.769* | 6715.777 | 0.017 | -41801.8 | -4621.78 |
| | | 1532.308 | 1089.533 | 0.34 | -1047.93 | 4112.55 |
| | HSES | -24744.078* | 6644.685 | 0.012 | -43277.8 | -6210.4 |
| | | -1532.31 | 1089.533 | 0.34 | -4112.55 | 1047.93 |
| **Dunnett C** | LSES | 23211.769* | 6715.777 | | 4527.8 | 41895.74 |
| | | 24744.078* | 6644.685 | | 6199.94 | 43288.21 |
| | MSES | -23211.769* | 6715.777 | | -41895.7 | -4527.8 |
| | | 1532.308 | 1089.533 | | -1051.7 | 4116.32 |
| | HSES | -24744.078* | 6644.685 | | -43288.2 | -6199.94 |
| | | -1532.31 | 1089.533 | | -4116.32 | 1051.7 |
| **Dunnett t (2-sided)[b]** | LSES | 24744.078* | 2756.62 | 0 | 18564.35 | 30923.81 |
| | MSES | 1532.308 | 891.358 | 0.165 | -465.92 | 3530.54 |

Results for the multiple comparison tests for Bursary disbursements to different categories of recipients in different income groups showed that there existed a statistically significant difference in bursary disbursements between recipients in low income group and the medium income group in favour of low income group ($P< 0.05$, I-J=23311.8). There was also a statistically significant difference in bursary allocation to recipients in the low income group and high income group in favour of Low income group ($P<0.05$, I-J=24744.1). However, the mean difference in Bursary disbursements between recipients in medium income group and high income group were not significant ($P>0.05$, I-J=1532.3). The results imply that the means testing tool used by bursary administrators in the county could not effectively discriminate students' socio-economic status. Many studies have confirmed the difficulty in socio-economic determination of the means testing tool (Merisotis and Wolanin, 2002) as cited in Odebero, (2008). Whereas students in low income groupings were effectively identified, those in medium and high income groupings could not be effectively discriminated.

The bird's eye view of the bursary disbursements to students of different income groups is shown in the subsequent line graph.




The bird's eye-view line graph indicates that the mean bursary disbursements to students in low income group were much higher at 32000. The mean bursary disbursements to students in medium and high income groups were low at 10000 and 9000 respectively.

i) **$Ho_4$**: There is no significant difference in Bursary disbursements by tuition fees charged in Bungoma County secondary schools.

**Table 4. 16: Relationship between Bursary awarded and total fees charged**

| Correlations | | | |
|---|---|---|---|
| | | Bursary Amount received | Total Fees Charged |
| **Bursary Amount received** | Pearson Correlation | 1 | .156** |
| | Sig. (2-tailed) | | 0 |
| | Sum of Squares and Cross-products | 4.9E+10 | 7.15E+09 |
| | Covariance | 84594934 | 12344803 |
| | N | 580 | 580 |
| **Total Fees Charged** | Pearson Correlation | .156** | 1 |
| | Sig. (2-tailed) | 0 | |
| | Sum of Squares and Cross-products | 7.15E+09 | 4.3E+10 |
| | Covariance | 12344803 | 72225308 |
| | N | 580 | 596 |
| ****. Correlation is significant at the 0.01 level (2-tailed).** | | | |

**ii)** **$Ho_4$**: There is no significant difference in bursary recipients' responses on sufficiency in allocations by students' socio-economic status in Bungoma County.

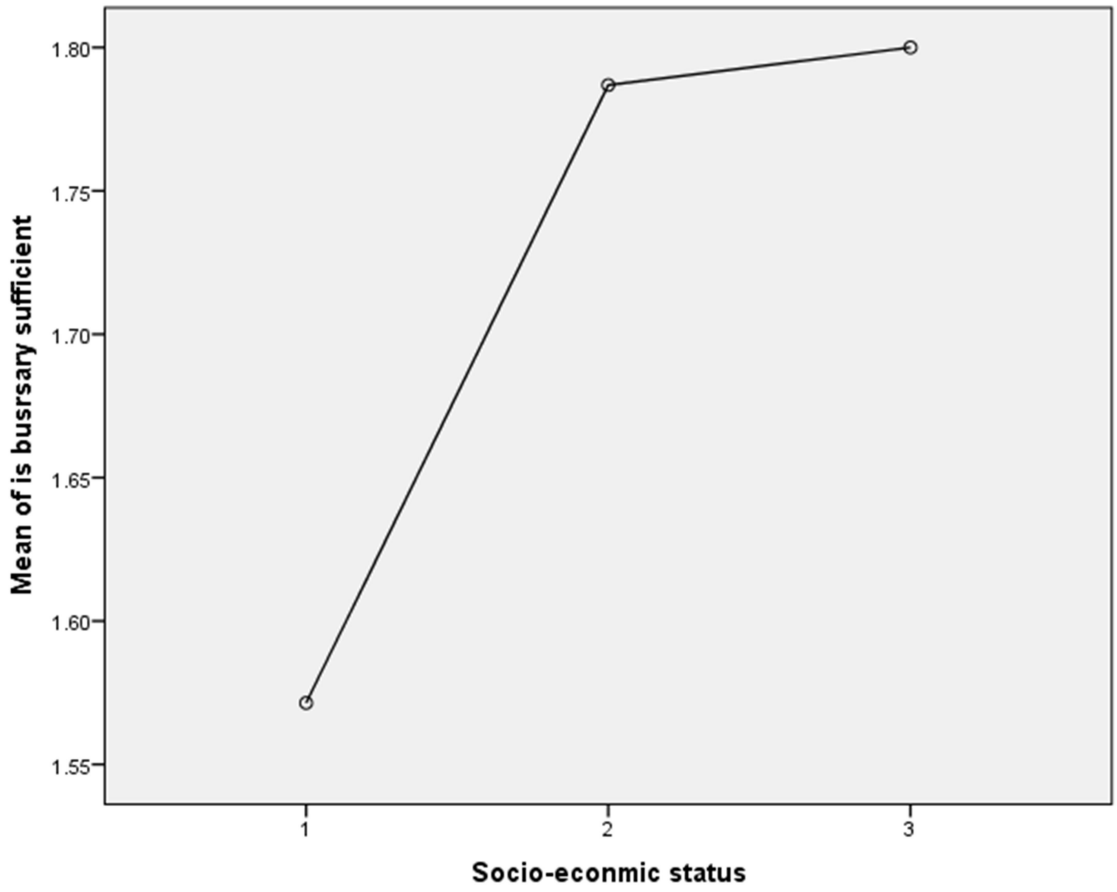
**Table 4.17: Difference in bursary sufficiency by students' socio-economic status**

| ANOVA | | | | | |
|---|---|---|---|---|---|
| **Is bursary sufficient** | | | | | |
| | Sum of Squares | df | Mean Square | F | Sig. |
| **Between Groups** | 0.714 | 2 | 0.357 | 2.171 | 0.115 |
| **Within Groups** | 97.488 | 593 | 0.164 | | |
| **Total** | 98.201 | 595 | | | |

**Table 4. 18: Comparison between Bursary Sufficiency and Socio-economic status**

| Multiple Comparisons | | | | | | |
|---|---|---|---|---|---|---|
| **Dependent Variable: is busrsary sufficient** | | | | | | |
| | (I) Socio-econmic status | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
| | | | | | Lower Bound | Upper Bound |
| **Tukey HSD** | LSES | -0.215 | 0.114 | 0.144 | -0.48 | 0.05 |
| | | -0.229 | 0.11 | 0.095 | -0.49 | 0.03 |
| | MSES | 0.215 | 0.114 | 0.144 | -0.05 | 0.48 |
| | | -0.013 | 0.041 | 0.946 | -0.11 | 0.08 |
| | HSES | 0.229 | 0.11 | 0.095 | -0.03 | 0.49 |
| | | 0.013 | 0.041 | 0.946 | -0.08 | 0.11 |
| **Scheffe** | LSES | -0.215 | 0.114 | 0.171 | -0.5 | 0.07 |
| | | -0.229 | 0.11 | 0.116 | -0.5 | 0.04 |
| | MSES | 0.215 | 0.114 | 0.171 | -0.07 | 0.5 |
| | | -0.013 | 0.041 | 0.951 | -0.11 | 0.09 |
| | HSES | 0.229 | 0.11 | 0.116 | -0.04 | 0.5 |
| | | 0.013 | 0.041 | 0.951 | -0.09 | 0.11 |
| **LSD** | LSES | -0.215 | 0.114 | 0.06 | -0.44 | 0.01 |
| | | -.229* | 0.11 | 0.038 | -0.44 | -0.01 |
| | MSES | 0.215 | 0.114 | 0.06 | -0.01 | 0.44 |
| | | -0.013 | 0.041 | 0.751 | -0.09 | 0.07 |
| | HSES | .229* | 0.11 | 0.038 | 0.01 | 0.44 |
| | | 0.013 | 0.041 | 0.751 | -0.07 | 0.09 |
| **Bonferroni** | LSES | -0.215 | 0.114 | 0.181 | -0.49 | 0.06 |
| | | -0.229 | 0.11 | 0.114 | -0.49 | 0.04 |
| | MSES | 0.215 | 0.114 | 0.181 | -0.06 | 0.49 |
| | | -0.013 | 0.041 | 1 | -0.11 | 0.09 |
| | HSES | 0.229 | 0.11 | 0.114 | -0.04 | 0.49 |
| | | 0.013 | 0.041 | 1 | -0.09 | 0.11 |
| **Sidak** | LSES | -0.215 | 0.114 | 0.17 | -0.49 | 0.06 |
| | | -0.229 | 0.11 | 0.11 | -0.49 | 0.03 |
| | MSES | 0.215 | 0.114 | 0.17 | -0.06 | 0.49 |
| | | -0.013 | 0.041 | 0.985 | -0.11 | 0.09 |
| | HSES | 0.229 | 0.11 | 0.11 | -0.03 | 0.49 |
| | | 0.013 | 0.041 | 0.985 | -0.09 | 0.11 |
| **Gabriel** | LSES | -0.215 | 0.114 | 0.104 | -0.46 | 0.03 |
| | | -.229* | 0.11 | 0.034 | -0.44 | -0.01 |
| | MSES | 0.215 | 0.114 | 0.104 | -0.03 | 0.46 |
| | | -0.013 | 0.041 | 0.982 | -0.11 | 0.08 |
| | HSES | .229* | 0.11 | 0.034 | 0.01 | 0.44 |
| | | 0.013 | 0.041 | 0.982 | -0.08 | 0.11 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Hochberg** | LSES | -0.215 | 0.114 | 0.17 | -0.49 | 0.06 |
| | | -0.229 | 0.11 | 0.11 | -0.49 | 0.03 |
| | MSES | 0.215 | 0.114 | 0.17 | -0.06 | 0.49 |
| | | -0.013 | 0.041 | 0.985 | -0.11 | 0.09 |
| | HSES | 0.229 | 0.11 | 0.11 | -0.03 | 0.49 |
| | | 0.013 | 0.041 | 0.985 | -0.09 | 0.11 |
| **Tamhane** | LSES | -0.215 | 0.142 | 0.387 | -0.6 | 0.17 |
| | | -0.229 | 0.139 | 0.323 | -0.61 | 0.15 |
| | MSES | 0.215 | 0.142 | 0.387 | -0.17 | 0.6 |
| | | -0.013 | 0.042 | 0.985 | -0.11 | 0.09 |
| | HSES | 0.229 | 0.139 | 0.323 | -0.15 | 0.61 |
| | | 0.013 | 0.042 | 0.985 | -0.09 | 0.11 |
| **Dunnett T3** | LSES | -0.215 | 0.142 | 0.373 | -0.6 | 0.16 |
| | | -0.229 | 0.139 | 0.31 | -0.6 | 0.15 |
| | MSES | 0.215 | 0.142 | 0.373 | -0.16 | 0.6 |
| | | -0.013 | 0.042 | 0.985 | -0.11 | 0.09 |
| | HSES | 0.229 | 0.139 | 0.31 | -0.15 | 0.6 |
| | | 0.013 | 0.042 | 0.985 | -0.09 | 0.11 |
| **Games-Howell** | LSES | -0.215 | 0.142 | 0.312 | -0.58 | 0.15 |
| | | -0.229 | 0.139 | 0.26 | -0.59 | 0.14 |
| | MSES | 0.215 | 0.142 | 0.312 | -0.15 | 0.58 |
| | | -0.013 | 0.042 | 0.947 | -0.11 | 0.09 |
| | HSES | 0.229 | 0.139 | 0.26 | -0.14 | 0.59 |
| | | 0.013 | 0.042 | 0.947 | -0.09 | 0.11 |
| **Dunnett C** | LSES | -0.215 | 0.142 | | -0.59 | 0.16 |
| | | -0.229 | 0.139 | | -0.59 | 0.14 |
| | MSES | 0.215 | 0.142 | | -0.16 | 0.59 |
| | | -0.013 | 0.042 | | -0.11 | 0.09 |
| | HSES | 0.229 | 0.139 | | -0.14 | 0.59 |
| | | 0.013 | 0.042 | | -0.09 | 0.11 |
| **Dunnett t (2-sided)[b]** | LSES | -0.229 | 0.11 | 0.075 | -0.48 | 0.02 |
| | MSES | -0.013 | 0.041 | 0.938 | -0.11 | 0.08 |




### 4.2.7 Determinants of Bursary Allocation in Bungoma County

This study aimed at establishing equity in bursary allocation in relation to internal efficiency of secondary schools in Bungoma County, Kenya. In order to accurately estimate the extent of equitable allocation of bursaries, the study sought to estimate the relative influence of selected factors on bursary allocation to secondary school students. The selected factors influencing bursary allocation became the determinants of bursary allocation or the explanatory variables/predictor variables. These were mainly the independent variables. The outcome variable was ye variations in bursary disbursements.

#### 4.2.7.1 Multi-Collinearity diagnostics test

Independent variables were first correlated using the correlation statistics to establish the extent of their collinearity. The interrelation that shot beyond 0.8 was deemed to be

collinear (Ngware, 2000, Hair et al, 2004, Odebero 2008). In the case of variables that were collinear only one of them was used as the other was dropped. The findings were as follows.

**Table 4. 19: Multi-Collinearity diagnostics test**

| Correlations | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Form | Gender | age | Socio-economic status | Sources of Bursary | Bursary Amount received | Indirect cost of sec education | Absenteeism from school | Mean score | Total Fees Charged |
| **Form** | Pearson Correlation | 1 | -.194** | .423** | 0.039 | -.088* | 0.002 | -.294** | -.131** | 0.055 | .099* |
| | Sig. (2-tailed) | | 0 | 0 | 0.348 | 0.032 | 0.961 | 0 | 0.001 | 0.182 | 0.015 |
| | N | 592 | 592 | 592 | 592 | 592 | 576 | 584 | 590 | 588 | 592 |
| **Gender** | Pearson Correlation | -.194** | 1 | -.159** | 0.01 | 0.001 | -0.06 | .161** | -0.025 | -.166** | .198** |
| | Sig. (2-tailed) | 0 | | 0 | 0.811 | 0.972 | 0.148 | 0 | 0.539 | 0 | 0 |
| | N | 592 | 596 | 596 | 596 | 596 | 580 | 588 | 594 | 592 | 596 |
| **Age** | Pearson Correlation | .423** | -.159** | 1 | -0.078 | -0.076 | 0.073 | -0.05 | -.094* | .134** | 0.045 |
| | Sig. (2-tailed) | 0 | 0 | | 0.058 | 0.064 | 0.078 | 0.224 | 0.022 | 0.001 | 0.27 |
| | N | 592 | 596 | 596 | 596 | 596 | 580 | 588 | 594 | 592 | 596 |
| **Socio-econmic status** | Pearson Correlation | 0.039 | 0.01 | -0.078 | 1 | -0.009 | -.232** | -0.037 | -0.056 | -0.015 | .164** |
| | Sig. (2-tailed) | 0.348 | 0.811 | 0.058 | | 0.829 | 0 | 0.365 | 0.17 | 0.708 | 0 |
| | N | 592 | 596 | 596 | 596 | 596 | 580 | 588 | 594 | 592 | 596 |
| **Sources of Busary** | Pearson Correlation | -.088* | 0.001 | -0.076 | -0.009 | 1 | -0.08 | 0.023 | 0.062 | -0.057 | -0.077 |
| | Sig. (2-tailed) | 0.032 | 0.972 | 0.064 | 0.829 | | 0.054 | 0.578 | 0.129 | 0.169 | 0.059 |
| | N | 592 | 596 | 596 | 596 | 596 | 580 | 588 | 594 | 592 | 596 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bursary Amount received** | Pearson Correlation | 0.002 | -0.06 | 0.073 | -.232** | -0.08 | 1 | 0.07 | .213** | .174** | .156** |
| | Sig. (2-tailed) | 0.961 | 0.148 | 0.078 | 0 | 0.054 | | 0.095 | 0 | 0 | 0 |
| | N | 576 | 580 | 580 | 580 | 580 | 580 | 572 | 578 | 576 | 580 |
| **Indirect cost of sec education** | Pearson Correlation | -.294** | .161** | -0.05 | -0.037 | 0.023 | 0.07 | 1 | -0.04 | -0.03 | -0.045 |
| | Sig. (2-tailed) | 0 | 0 | 0.224 | 0.365 | 0.578 | 0.095 | | 0.335 | 0.462 | 0.275 |
| | N | 584 | 588 | 588 | 588 | 588 | 572 | 588 | 586 | 584 | 588 |
| **Absetee ism from school** | Pearson Correlation | -.131** | -0.025 | -.094* | -0.056 | 0.062 | .213** | -0.04 | 1 | -0.079 | 0.057 |
| | Sig. (2-tailed) | 0.001 | 0.539 | 0.022 | 0.17 | 0.129 | 0 | 0.335 | | 0.056 | 0.168 |
| | N | 590 | 594 | 594 | 594 | 594 | 578 | 586 | 594 | 590 | 594 |
| **Meanscore** | Pearson Correlation | 0.055 | -.166** | .134** | -0.015 | -0.057 | .174** | -0.03 | -0.079 | 1 | -0.039 |
| | Sig. (2-tailed) | 0.182 | 0 | 0.001 | 0.708 | 0.169 | 0 | 0.462 | 0.056 | | 0.342 |
| | N | 588 | 592 | 592 | 592 | 592 | 576 | 584 | 590 | 592 | 592 |
| **Total Fees Charged** | Pearson Correlation | .099* | .198** | 0.045 | .164** | -0.077 | .156** | -0.045 | 0.057 | -0.039 | 1 |
| | Sig. (2-tailed) | 0.015 | 0 | 0.27 | 0 | 0.059 | 0 | 0.275 | 0.168 | 0.342 | |
| | N | 592 | 596 | 596 | 596 | 596 | 580 | 588 | 594 | 592 | 596 |
| ****. Correlation is significant at the 0.01 level (2-tailed).** | | | | | | | | | | | |
| ***. Correlation is significant at the 0.05 level (2-tailed).** | | | | | | | | | | | |

The correlation matrix depicts that most independent variables were not collinear because there was no correlation above 0.8. This means no variable was dropped.

### 4.3.1 Multiple Regression analysis

Multiple regressions analysis is a statistic that determines whether a group of variables (called predictor variables) can predict a given outcome variable (bursary disbursements). For this study, the predictor variables were: Total fees charged, indirect cost of education,

age, source of bursary, socio-economic status, gender and form and were considered as predictors of bursary disbursement.

The model tested was stated as follows:

**$Ho_5$** $Y=f(X_1, X_2, X_3, X_4, X_5, X_6, X_7)$

Where:

i) $X_1, X_2, X_3, X_4, X_5, X_6, X_7$ represented the outcome variable

ii) *Y=The output variable or the bursary disbursement*

The specific model tested was of the form.

$$Y= \beta_0 + \beta_1 X_1 + \beta 2_1 X_2 + \ldots \beta_7 X_7 + e$$

Where:

$\beta_0$ ***is the constant***

$\beta_1 - \beta_7$ are the regression coefficients or the changes induced in Y by each change in X

$X_1 - X_7$ are the predictor variables

Y=is the predictor variable

$e$= is the error factor. This included errors in specifying the systematic relationship between the predictors and outcome variable (Odebero, et al 2007, Odebero 2008, Odebero, 2012, Chepchieng, 2004, Bosire 2000, Ngware, 2000).

**The Regression Findings**

In order to predict the outcome variable, a total of seven variables were entered as the explanatory variables for a linear relationship with the outcome variable such as total fees charged, indirect cost of education, age, source of bursary, socio-economic status, gender and form or class enrolled. The findings were as follows.

**Table 4. 20: Predictor Model of Bursary disbursements in Bungoma County**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 5.95E+09 | 7 | 8.5E+08 | 11.078 | .000[b] |
| | Residual | 4.3E+10 | 560 | 76708371 | | |
| | Total | 4.89E+10 | 567 | | | |

a. Dependent Variable: Bursary Amount received

b. Predictors: (Constant), Total Fees Charged , Indirect cost of sec education, age, Sources of Busary, Socio-econmic status , Gender, Form

Model Summary[b]

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | .349[a] | 0.122 | 0.111 | 8758.332 | 0.122 | 11.078 | 7 | 560 | 0 | 1.818 |

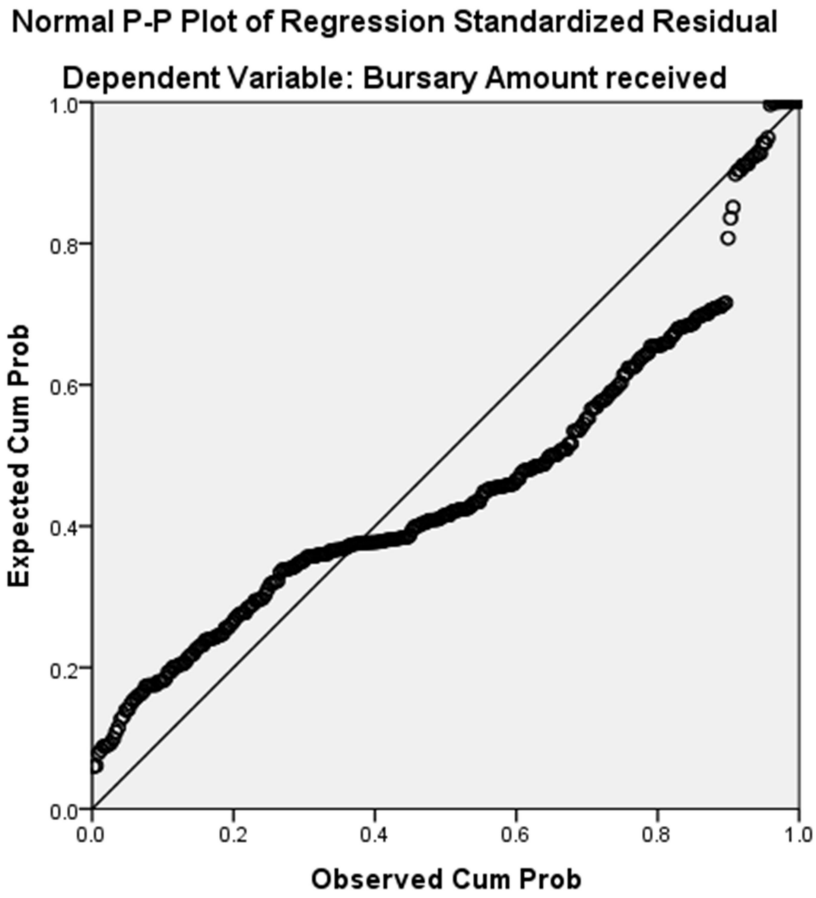
a. Predictors: (Constant), Total Fees Charged , Indirect cost of sec education, age, Sources of Bursary, Socio-economic status , Gender, Form

b. Dependent Variable: Bursary Amount received

Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Lower Bound | Upper Bound | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | 18914.4 | 3736.65 | | 5.062 | 0 | 11574.83 | 26253.96 | | | | | |
| | Gender | -2479.94 | 802.953 | -0.129 | -3.089 | 0.002 | -4057.11 | -902.772 | -0.065 | -0.129 | -0.122 | 0.895 | 1.117 |
| | Form | -179.944 | 572.773 | -0.015 | -0.314 | 0.754 | -1304.99 | 945.102 | 0.004 | -0.013 | -0.012 | 0.724 | 1.38 |
| | age | 276.907 | 648.213 | 0.019 | 0.427 | 0.669 | -996.319 | 1550.133 | 0.077 | 0.018 | 0.017 | 0.782 | 1.279 |
| | Socio-econmic status | -5431.13 | 809.413 | -0.274 | -6.71 | 0 | -7020.98 | -3841.27 | -0.232 | -0.273 | -0.266 | 0.941 | 1.063 |
| | Sources of Busary | -762.687 | 385.846 | -0.079 | -1.977 | 0.049 | -1520.57 | -4.805 | -0.08 | -0.083 | -0.078 | 0.98 | 1.02 |
| | Indirect cost of sec education | 0.082 | 0.039 | 0.09 | 2.132 | 0.033 | 0.006 | 0.158 | 0.069 | 0.09 | 0.084 | 0.89 | 1.124 |
| | Total Fees Charged | 0.245 | 0.045 | 0.228 | 5.46 | 0 | 0.157 | 0.333 | 0.156 | 0.225 | 0.216 | 0.9 | 1.111 |

a. Dependent Variable: Bursary Amount received




The findings reveal that the ANOVA model adopted had a strong explanatory power and the $R^2$ statistic was significant and could be relied upon ($P<0.05$, F-ratio 11.078). The study further shows through the model summary that the coefficient of determination had an $R^2$.of 0.111. The implication is that 11.1 of the variations in Bursary disbursements could be explained by the predictor factors entered in the model. The results of the regression analysis depicts negative standardized beta coefficients for four variables while three variables yielded positive values. All the values were significant apart from two, namely, the Form/class the recipient was enrolled in and the age of the recipient. Hence all the variables entered could predict the bursary disbursement apart from Form/Class.

From the Findings as expressed by the standardized beta coefficients, it turns out that Socio-economic status of bursary recipients was the biggest predictor of bursary

disbursements with a standardized beta coefficient of 0.274. This implies that SES of bursary recipients could predict up to 27.4 percent of the variations in bursary disbursements. This was followed at a distance with gender of the recipients with a standardized beta coefficient of 0,129 implying that gender of the recipient accounted for 12.9 Percent in explaining bursary disbursements.

Both coefficients had negative values and this implies that students in lower income groups tended to receive more bursary consideration than their counterparts in medium and high income groups. Similarly, the negative values for gender implies that male students who were coded 1 tended to receive more bursary than their female counterparts coded 2. The other predictors are bursary sources with a standardized beta coefficient of 0.079 and total fees charged with a coefficient of 0.045 translating into 7.9 percent and 4.5 percent of the explanatory power. By implication, since the SES turns out to be the most significant predictor, the implication is that it ought to be accurately means tested so as to identify the neediest cases. Similarly, since gender turns out to be the second most important predictor, the female students should be allowed to access more bursary than their male counterparts given their physiological needs that tend to impact on the bursary/financial support.

# CHAPTER FIVE

# SUMMARY, CONCLUSION AND RECOMMENDATIONS

## 5.0 Introduction

The purpose of this study was to determine equity in bursary allocation in relation to internal efficiency of secondary schools in Bungoma County, Kenya. Therefore, the study examined the extent to which bursary award has enhanced access and participation in secondary education. This chapter presents the summary of findings, conclusions and recommendations of the study.

## 5.1 Summary of Findings

### 5.1.1: Relationship between Bursary demand and Amount Disbursed

The first objective was to determine the relationship between the amount of bursary demanded and the amount disbursed to secondary school students in Bungoma county of Kenya. The findings reveal that bursary amount demanded had a mean of 14,402.08, standard deviation of 14762.659 while the bursary amount received had a mean of 7,595.89 and a standard deviation of 9197.550. The Pearson correlation reveal that there was a strong significant relationship between bursary amount demanded and amount received P& lt; 0.05, r=0.567. Thus, the null hypothesis was rejected.

### 5.1.2: Relationship between Bursary Allocation and Student Participation

The second objective of this study sought to investigate the relationship between Bursary amount received and the students' participation rates. The results indicated that there was a weak but significant negative relationship between Bursary allocation and students non-attendance rates r= -0.097, P<0.05. This implies that as the students' school non-attendance decreases, bursary disbursements tended to increase. The implication is that amount of bursary disbursement had an effect on school attendance.

### 5.1.3: Relationship between Bursary Allocation and Students' Performance

The third objective of this study was to investigate the relationship between Bursary

amount received and the students' performance. The purpose was to find out whether the amounts of cash received in bursary awards was related to students' performance measured in terms of mean score. The results reveal that There was a weak but significant positive relationship between the two variables (r=0.174, P<0.05). A positive relationship implies that as the amount of bursary allocation to recipients increased so did the students' performance in mean score.

### 5.1.4 Relationship between Bursary Disbursements and Students Characteristics

The fourth objective of this study was aimed at investigating the relationship between Bursary disbursements and students characteristics. Because of the many variables within students characteristics, the study derived more sub-hypothesis from the main hypothesis. The objective was to find difference in bursary allocation and students characteristics such as gender, SES, and type of school attended.

### 5.1.5 Difference in Disbursements between Male and Female Students

Under this sub-hypothesis, the study sought to investigate the disbursement of bursaries between the male and female students enrolled in secondary schools in Bungoma County. The following hypothesis was tested. The findings reveal that the mean bursary disbursement to male was higher at 8027.78 and was allocated to 36 recipients representing 65.6 percent while the mean allocation to female students was 6889.89 and this went to 220 students representing 34 percent of the recipients. The ANOVA table indicates that the differences within the combined groups were not significant (P<0.148, df =1) hence the independent sample t-test could not be computed. Therefore, the null hypothesis was accepted. The results indicated that there were significant differences in means in the allocation of bursaries in different categories of schools (P<0.05, df=2, f=12.303). Consequently, the there was no evidence to support the null hypothesis that stated no significant differences existed in the bursary disbursements according to

different categories of schools.

The findings indicate that from I to J there were significant means between extra county schools coded (1), County Schools Coded 2 and Sub county schools Coded (3) (P<0.05,i-j=3708.7, 3885.7). The implication is that extra county schools received more bursaries than County and sub-county schools. However, the mean difference= between County and sub county schools were not significant (P>0.05, I-J=177.006).

The results indicated that there were significant differences in means in the allocation of bursaries to students in different income groups (P< 0.05, df =2, f=40.914). Consequently, there was no evidence to support the null hypothesis that stated no significant differences existed in the bursary disbursements to students in different income groups. Results for the multiple comparison tests for bursary disbursements to different categories of recipients in different income groups showed that there existed a statistically significant difference in bursary disbursements between recipients in low income group and the medium income group in favour of low income group (P< 0.05, I-J=23311.8). There was also a statistically significant difference in bursary allocation to recipients in the low income group and high income group in favour of Low income group (P<0.05, I-J=24744.1). However, the mean difference in bursary disbursements between recipients in medium income group and high income group were not significant (P>0.05, I-J=1532.3).

### 5.1.6: Determinants of Bursary Allocation in Bungoma County

This study aimed at establishing equity in bursary allocation in relation to internal efficiency of secondary schools in Bungoma County, Kenya. In order to accurately estimate the extent of equitable allocation of bursaries, the study sought to estimate the relative influence of selected factors on bursary allocation to secondary school students. The selected factors influencing bursary allocation became the determinants of bursary

allocation or the explanatory variables/predictor variables.

### 5.1.7: Multiple Regression analysis

The results of the regression analysis depicted negative standardized beta coefficients for four variables while three variables yielded positive values. All the values were significant apart from two, namely, the Form/class the recipient was enrolled in and the age of the recipient. Hence all the variables entered could predict the bursary disbursement apart from Form/Class. From the Findings as expressed by the standardized beta coefficients, it turns out that Socio-economic status of bursary recipients was the biggest predictor of bursary disbursements with a standardized beta coefficient of 0.274. This implies that SES of bursary recipients could predict up to 27.4 percent of the variations in bursary disbursements. This was followed at a distance with gender of the recipients with a standardized beta coefficient of 0,129 implying that gender of the recipient accounted for 12.9 percent in explaining bursary disbursements.

## 5.2 Conclusions of the Study

Based on the study objectives, findings of the study, implications derived and discussions postulated, the following conclusions have been reached.

### 5.2.1: Relationship between Bursary Demand and Amount Disbursed

The first objective was to determine the relationship between the amount of bursary demanded and the amount disbursed to secondary school students in Bungoma county of Kenya. It was concluded that the total amount disbursed was only half the amount demanded. The Pearson correlation revealed that there was a strong significant relationship between bursary amount demanded and amount received. Thus the null hypothesis stating that there is no significant relationship between Bursary demand and amount disbursed to secondary school students in Bungoma County could not be sustained. The study concludes that as the amount of bursary demand increased so did the

supply.

### 5.2.2: Relationship between Bursary Allocation and Student Participation

The second objective of this study sought to investigate the relationship between Bursary amount received and the students' participation rates. The results indicated that there was a weak but significant negative relationship between Bursary allocation and students non-attendance rates. This led to the conclusions that as the students' school non-attendance decreases, bursary disbursements tended to increase with implication that the amount of Bursary disbursement had an effect on school attendance.

### 5.2.3: Relationship between Bursary Allocation and Students' Performance

The third objective of this study was to investigate the relationship between bursary amount received and the students' performance. The results revealed that there was a weak but significant positive relationship between the two variables. It was concluded that as the amount of bursary allocation to recipients increased so did the students' performance with implication that higher bursary awards enables students to remain in school and attend lessons and they are more likely to perform better.

### 5.2.4 Relationship between Bursary Disbursements and Students Characteristics

The fourth objective of this study aimed at investigating the relationship between Bursary disbursements and students characteristics. The findings reveal that the mean bursary disbursement to male was higher at 8027.78 and was allocated to 36 recipients representing 65.6 percent while the mean allocation to female students was 6889.89 and this went to 220 students representing 34 percent of the recipients. However, the differences were found not to be significant hence, the null hypothesis stating that there is no significant difference in bursary disbursements between male and female secondary school students in Bungoma County was sustained. The study concluded that Bursary disbursements were more or less the same between male and female students.

The analysis of variance (ANOVA) was used to find the difference in disbursements between school categories. This was used to test the hypothesis that several means are equal in the disbursement of bursaries between all categories of schools in the County. The results indicate that there were significant differences in means in the allocation of bursaries in different categories of schools thus there was no evidence to support the null hypothesis that stated no significant differences existed in the bursary disbursements according to different categories of schools. The findings however, indicate that from I to J there were significant means between extra county schools coded (1), County Schools Coded 2 and Sub county schools Coded (3). The study therefore concludes that extra county schools received more bursaries than County and sub-county schools.

Another student's characteristic was the socio-economic status. Under this sub-hypothesis, the study sought to investigate the disbursement of bursaries between Low, Medium and High socio-economic income groupings of the students. The analysis of variance (ANOVA) was used to find the difference in disbursements between students of various income groups. This was used to test the hypothesis that several means are equal in the disbursement of bursaries between all students in different categories of socio-economic status. Since the results indicate that there were significant differences in means in the allocation of bursaries to students in different income groups, the null hypothesis that stated no significant differences existed in the bursary disbursements to students in different income groups could not be sustained.

Results for the multiple comparison tests for Bursary disbursements to different categories of recipients in different income groups showed that there existed a statistically significant difference in bursary disbursements between recipients in low-income group and the medium income group in favour of low-income group. There was also a statistically significant difference in bursary allocation to recipients in the low-income group and high-

income group in favour of low-income group. However, the mean difference in Bursary disbursements between recipients in medium income group and high-income group were not significant. The study concluded that the means-testing tool used by bursary administrators in the county could not effectively discriminate students' socio-economic status. Whereas students in low income groupings were effectively identified, those in medium and high income groupings could not be effectively discriminated.

### 5.2.5: Determinants of Bursary Allocation in Bungoma County

This study aimed at establishing equity in bursary allocation in relation to internal efficiency of secondary schools in Bungoma County, Kenya. In order to accurately estimate the extent of equitable allocation of bursaries, the study sought to estimate the relative influence of selected factors on bursary allocation to secondary school students.

The results of the regression analysis depict negative standardized beta coefficients for four variables while three variables yielded positive values. All the values were significant apart from two, namely, the Form/class the recipient was enrolled in and the age of the recipient. Hence all the variables entered could predict the bursary disbursement apart from Form/Class.

## 5.3 Recommendations of the Study

Based on the study objectives, findings of the study, implications derived, discussed and the conclusions made, the study arrived at the following recommendations.

### 5.3.1 Relationship between Bursary demand and amount disbursed

The first objective was to determine the relationship between the amount of bursary demanded and the amount disbursed to secondary school students in Bungoma county of Kenya. The study concludes that as the amount of bursary demand increased so did the supply.

### 5.3.2 Relationship between bursary allocation and student participation

The second objective also showed that as the students' school non-attendance decreases,

bursary disbursements tended to increase leading to the conclusion that more deliberate efforts need to be made to increase the kitty so as to meet the demand and to reduce school non-attendance rates. This can be through lobbying for exchequer allocation, bilateral donations and old students alumni associations.

### 5.3.3: Relationship between bursary allocation and students' Performance

The third objective of this study was to investigate the relationship between Bursary amount received and the students' performance. It was concluded that as the amount of bursary allocation to recipients increased so did the students' performance with implication that higher bursary awards enables students to remain in school and attend lessons and they are more likely to perform better. The recommendation is that attention should be paid to students who receive bursaries with view to identifying any assistance that could help them cater for academic needs that can help them to perform better. This could be trough support to purchase of books, stationary, indirect costs such as school uniforms, transport etc.

### 5.3.4: Relationship between bursary disbursements and students characteristics

The fourth objective of this study was aimed at investigating the relationship between Bursary disbursements and students characteristics. The study employed difference in means to establish the difference in means of the bursaries disbursed to male and female students. The study concluded that Bursary disbursements were more or less the same between male and female students. It is recommended that bursary administrators should try to segregate bursaries according to gender because there is overwhelming evidence that students needs differ according to gender of learners.

The analysis of variance (ANOVA) was used to find the difference in disbursements between school categories. The study therefore concludes that extra county schools received more bursaries than County and sub-county schools. Since extra county schools

are seen to be accessed more by students from higher income groups, the school category ought to be included in the means testing school so as to help poorer students who are in other categories of schools and need bursary support.

Another student's characteristic was the socio-economic status. Under this sub-hypothesis, the study sought to investigate the disbursement of bursaries between Low, Medium and High socio-economic income groupings of the students. The study concludes that the means testing tool used by bursary administrators in the county could not effectively discriminate students' socio-economic status. Whereas students in low income groupings were effectively identified, those in medium and high income groupings could not be effectively discriminated. It is only fair to recommend that government through the MOSST should develop a policy that must guide all bursary administrators in the county to accurately identify the needy not just by SES

but also other students' characteristics.

### 5.3.5: Determinants of Bursary Allocation in Bungoma County

This study aimed at establishing equity in bursary allocation in relation to internal efficiency of secondary schools in Bungoma County, Kenya. In order to accurately estimate the extent of equitable allocation of bursaries, the study sought to estimate the relative influence of selected factors on bursary allocation to secondary school students.

The results of the regression analysis depicted negative standardized beta coefficients for four variables while three variables yielded positive values. From the Findings as expressed by the standardized beta coefficients, it turns out that Socio-economic status of bursary recipients was the biggest predictor of bursary disbursements with a standardized beta coefficient of 0.274. Since it was concluded that SES of bursary recipients could predict the highest percentage (27.4 percent) of the variations in bursary disbursements, followed at a distance by gender of the recipients at (12.9 Percent). The study recommends

that a proper means developed to ensure students from lower SES access bursaries and remain school to improve their performance. This will reduce intergenerational inequality in the long run.

**5.5 Recommendations for Further Research**

i. This study recommends that similar studies be carried out in other Counties in Kenya for purposes of making comparisons and in order to ascertain whether Bursary allocations meets its objective.

ii. This study also recommends that a study be carried out to determine the extent to which political interference, which emerged as a limitation in this study, has interfered with disbursement with a view of finding solutions of reducing or eliminating it.

iii. This study also recommends that a study be carried out to determine how efficient and effective bursaries are as a method of financing secondary education in Kenya.

iv. This study recommends also a study be carried out to determine the extent of inequality in bursary allocations in Kenya.

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# APPENDICES

## APPENDIX 1: QUESTIONNAIRE FOR BURSARY RECIPIENTS

This questionnaire intends to establish equity in bursary allocations to secondary schools students in relation to internal efficiency of operations. You are required to provide honest responses which will be used for the purposes of this study only.

**Section A: Demographic Information**

- Name of school?_____
- Type of school_____(eg extra county, county, sub-county boarding etc)
- Which class are you? :Form 1 [ ] Form 2 [ ] Form 3 [ ] Form 4 [ ]
- Gender: Male [ ] Female [ ]
- Age: 15-17 [ ] 18-19 [ ] 20-21 [ ] > 22 [ ]

**Section B: Socio-economic background information**

- Who pays your fees? Father [ ] Mother [ ] Guardian [ ] organization (s) (please specify [ ]_____
- Are your parents still alive? Yes [ ] No [ ]
- If your parents are alive, what the status: Both parent alive [ ] Single parents [ ] One parent dead [ ]
- Describe the work of the person who pays your expenses: Unemployed [ ] Self-employed [ ]
  Salaried [ ]
- State education level reached by the person who pays your fees: No formal education [ ] Primary [ ] secondary [ ] middle level college[ ] University [ ] others [ ] (please specify)_____
- Describe the work of the person who pays your expenses: Unemployed [ ] Self-employed [ ] civil servant [ ] employed in a private company [ ] (specify)_____

**Section C: Bursary Information**

- Indicate which bursary sources you have ever demanded for? School bursary[ ] bank [ ] County Burary [ ] CDF [ ] any other (please specify [ ]_____
- Indicate the amount of bursary demanded for and the amount received from various sources as shown in the table and total tuition fees required in school

| **Year** | **Amount demanded** | **Amount awarded** | **Bursary Sources (total fees required p.a)** |
|---|---|---|---|
| 2019 F4 | | | |
| 2018 F3 | | | |
| 2017 F2 | | | |
| 2016 F1 | | | |

- Was the amount sufficient? yes[ ] No [ ]

- How much more do you require to spend on? Uniform [ ] personal effects [ ] Travelling [ ] books [ ] medication [ ] any other ?[ ]
- Indicate total fees charged in your school per year and total Bursary awarded

| Year | Fees per year | Amount awarded | Bursary Sources |
|---|---|---|---|
| 2019 F4 | | | |
| 2018 F3 | | | |
| 2017 F2 | | | |
| 2016 F1 | | | |

## Section D: School Participation

- Have you ever missed school since you joined Form one? Yes [ ] No [ ]
- Indicate the number of days missed and the reason in the table below

| Year | Number of days missed per year | reasons |
|---|---|---|
| 2019 | | |
| 2018 | | |
| 2017 | | |
| 2016 | | |

- Have you ever repeated school? Yes [ ] No [ ]
- If yes which form _____
- Indicate your overall mean score in the following classes

| Year | Mean score | Position in class |
|---|---|---|
| 2019 F4 | | |
| 2018 F3 | | |
| 2017 F2 | | |
| 2016 F1 | | |

- What suggestions would you make to improve bursary awards to secondary school students?

……
……
.....
……
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……
…

THANK YOU

**APPENDIX 2: QUESTIONNAIRE FOR BUSRSARY ADMINISTRATORS**

This questionnaire intends to establish equity in bursary allocations to secondary schools students in relation to internal efficiency of operations. You are required to provide honest responses which will be used for the purposes of this study only.

**Section A: Demographic Information**

- Name of the institution_____
- Sub-county_____
- Public [ ] private [ ]

**Section C: Bursary Information**

- When did you start giving bursaries to secondary schools?
- What motivated your decision to start awarding bursaries?_____
  _____
  _____
  _____
- What criteria do you use to award bursaries to students? You may tick more than one.
  Rank in order of priority. KCPE score [ ] orphanhood [ ] poor background [ ] school fees balance in schools [ ] Home location of the applicant [ ] any other (please specify [ ]_____

- Indicate the amount of bursary you have allocated per year in the last 4 years as follows:

| Year | Number of applicants | Total amount allocated |
|---|---|---|
| 2019 | | |
| 2018 | | |
| 2017 | | |
| 2016 | | |

- What challenges do you face in bursary administration to schools? ……
  ……
  ……
  ……

## APPENDIX 3DOCUMENT ANALYSIS SCHEDULE

| Year | No. of the Students | Amount applied | Amount awarded | Additional data |
|---|---|---|---|---|
| | | | | |
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## APPENDIX 4: RESEARCH LETTER FROM NACOSTI


**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION**

**Telephone:+254-20-2213471**
**2241349, 3310571, 2219420**
**Fax: +254-318245,318249**
**Email: dg@nacosti.go.ke**
**Website:www.nacosti.go.ke**
**When replying Please quote**

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

**Ref: No.** NACOSTI/P/16/07855/12730

**Date:** 16th January, 2014

Edwin Wafula Namachanja
Masinde Muliro University Of
Science and Technology,
P.O. Box 190-50100,
**KAKAMEGA,**

**RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *"Equity in Bursary Allocations In Relation To Internal Efficiency of Secondary Schools in Bungoma County, Kenya,"* I am pleased to inform you that you have been authorized to undertake research in **Bungoma County** for the period ending 16th January, 2015.

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

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

**BONIFACE WANYAMA**
**FOR: DIRECTOR – GENERAL / CEO**

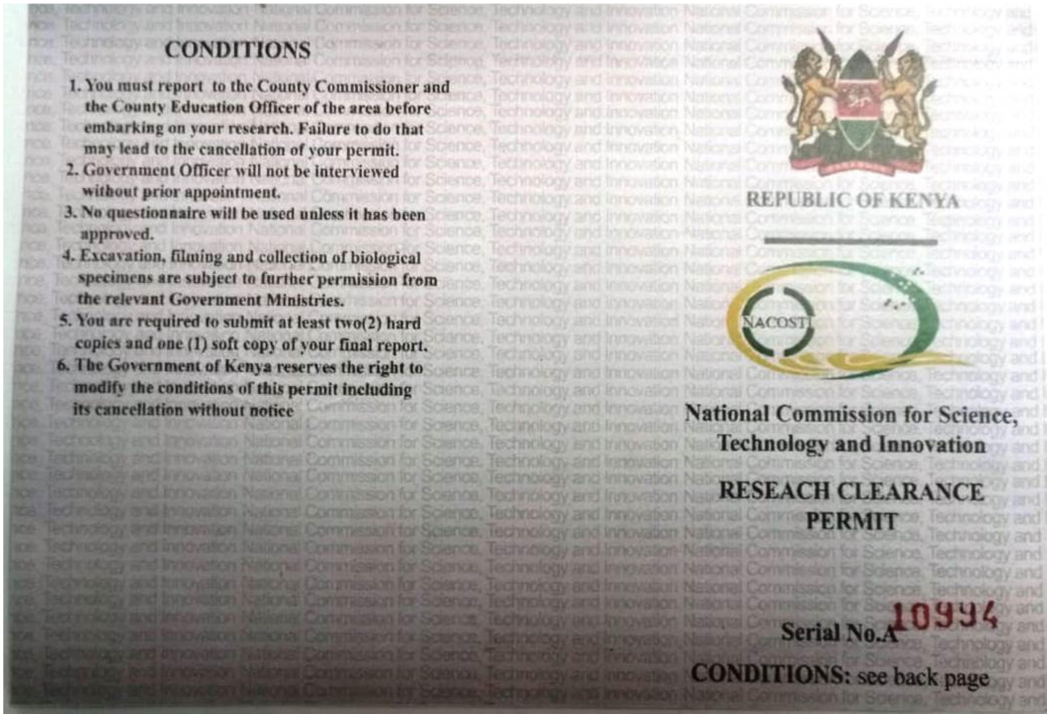
Copy to:

The County Commissioner
Bungoma County

The County Director of Education
Bungoma County

*National Commission for Science, Technology And Innovation is ISO 9001:2008 Certified*

**APPENDIX 5: RESEARCH PERMIT**



**CONDITIONS**

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.
2. Government Officer will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one (1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

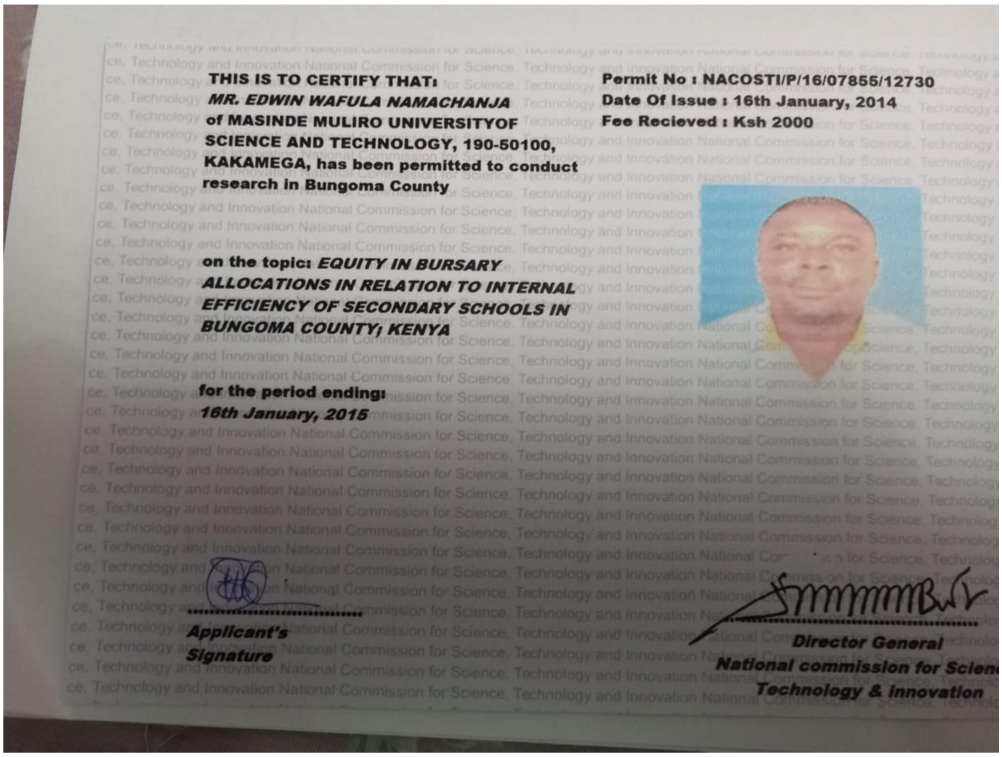
NACOSTI

National Commission for Science, Technology and Innovation

RESEACH CLEARANCE PERMIT

Serial No.A 10994

CONDITIONS: see back page



THIS IS TO CERTIFY THAT:
*MR. EDWIN WAFULA NAMACHANJA*
of MASINDE MULIRO UNIVERSITYOF SCIENCE AND TECHNOLOGY, 190-50100, KAKAMEGA, has been permitted to conduct research in Bungoma County

Permit No : NACOSTI/P/16/07855/12730
Date Of Issue : 16th January, 2014
Fee Recieved : Ksh 2000

on the topic: *EQUITY IN BURSARY ALLOCATIONS IN RELATION TO INTERNAL EFFICIENCY OF SECONDARY SCHOOLS IN BUNGOMA COUNTY, KENYA*

for the period ending:
*16th January, 2015*

.....
*Applicant's Signature*

.....
*Director General*
*National commission for Scien*
*Technology & Innovation*

## APPENDIX 6: MAP OF BUNGOMA COUNTY