

# SOCIO-TECHNICAL COMPONENTS AFFECTING ENROLLMENT OF NEEDY STUDENTS INTO FREE SECONDARY EDUCATION IN KENYA: SURVEY OF MT. ELGON SUB-COUNTY, BUNGOMA COUNTY, KENYA

<sup>1</sup>Chemonges, Cheboriot, Lindah, <sup>2</sup>Dr. Calvins Otieno .

<sup>1</sup>Jomo Kenyatta University of Agriculture & Technology (Msc .Development Studies)

<sup>2</sup>Jomo Kenyatta University of Agriculture & Technology (Director, JKUAT-Kitale Campus, PhD).

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**Abstract:** Many poor children never enter primary school or dropout early. For those that are successful in the secondary school selection process, tuition and other formal and informal cost are often unaffordable. Where scholarships are available they are often poorly targeted. Enrolment growth has outpaced the increase in resources resulting in shortages of instructional materials and supplies, poorly stocked libraries and double or triple shift use of facilities. In most countries 50% or more of recurrent expenditure is allocated to primary schooling. Higher education typically absorbs 15-20% leaving some 20-25% for secondary education. Many countries have spread the same resources over larger number of students, attempted to mobilize private funding or most often did both (World Bank, 2018). The objective of this study was to examine the socio-technical components affecting the enrolment of needy students in free secondary education in Mt. Elgon Sub County. The specific objective for this study were: to find out the influence of culture on the enrolment of needy students in free secondary education in Mt. Elgon sub-county, to examine the influence of physical facilities on needy student's enrolment in free secondary education in Mt. Elgon sub-county, to establish the influence of learning resources on needy student's enrolment in free secondary education in Mt. Elgon sub-county, and to establish the influence of proximity to school on needy students enrolment in free secondary education in Mt. Elgon sub-county. This study employed a descriptive survey research design. The target population of this study was public secondary schools in Mt. Elgon sub-county, Bungoma County. Simple random sampling was used to select 8 schools from which the students and a few teachers were selected to take part in the study. The Sub-county Education Officers, some Quality Assurance and Standards Officers (QASOs) and parents were also selected for the study. Data was collected using questionnaires and interview schedules for students, parents, teachers, QASOs and the Sub-county Education Officers. Descriptive statistics was used to analyze the quantitative data while the qualitative data was analyzed by organizing them into similar themes and tallying the number of similar responses. In conclusion basing on the findings, the study concluded that there is a significant relationship between physical facilities and enrolment of needy students in Free Secondary Education. This suggests that there is up to 0.307 unit decrease in enrolment of needy students for each unit increase in physical facilities. Also, the effect of physical facilities is more than the effect attributed to the error, this is indicated by the t-test value = 7.936. Nonetheless, the study findings showed that learning resources have no significant effect on enrolment of needy students basing on  $\beta_2 = 0.073$  (p-value = 0.061 which is more than  $\alpha = 0.05$ ). Furthermore, there is significant relationship between proximity to school and enrolment of needy students in Free Secondary Education in Mt. Elgon Sub-County. The study established that there is up to 0.327-unit increase in enrolment of needy students for each unit increase in cultural Practices. The effect of culture is eight times the effect attributed to the error, this is indicated by the t-test value = 8.067.

**Keywords:** Physical facilities, learning resources, proximity to school, culture and enrolment of needy students.

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## 1. INTRODUCTION

### Background of the study

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 such as Zambia and Rwanda, the situation in Kenya is quite different because education should be free and compulsory up to secondary level according to 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).

### Global perspective of free secondary education

The wide gap in secondary enrolment rates between Sub-Saharan Africa and the rest of the world is raising concerns (Oketch, 2010). 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 (Karugu, 2006). 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 (Chabari, 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 (Nyaegah, 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 (Nyaegah, 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.

### Regional perspective of free secondary education

In sub-Saharan, 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 in the Sub-Saharan Africa are considering abolishing school fees for secondary school education (Ohba, 2009). 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 (Ohba, 2009). This is against the backdrop 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 (Ohba, 2009). 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 (Ohba, 2009).

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).

### **Local perspective of free secondary education**

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. Saitoti (2004) 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 Defense 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.

### Statement of the problem

With various challenges facing the education sector in Kenya, it prompted the government to introduce free secondary education (UNESCO, 2015). There are many challenges which threaten the sustainability of a robust education regime in Kenya such as 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, 2012) 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. 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 (Ohba, 2009). It was expected that the county records 90% access for both primary and secondary. However, this is not the case. (Ndolo, Simatwa & Ayodo, 2011).

### Objectives of the study

#### General Objective

The general objective of the study was to evaluate the influence of socio-technical components on the enrolment of needy students in Kenyan secondary schools.

#### Specific Objectives

- I. To examine the influence of physical facilities on needy students enrolment in free secondary education in Mt.Elgon sub-county.
- II. To establish the influence of learning resources on needy student's enrolment in free secondary education in Mt.Elgon sub-county.
- III. To establish the influence of proximity to school on needy students enrolment in free secondary education in Mt.Elgon sub-county.
- IV. To find out the influence of culture on the enrolment of needy students in free secondary education in Mt. Elgon sub-county.

**Research questions**

- I. What is the influence of physical facilities on needy student's enrolment in free secondary education in Mt.Elgon sub-county?
- II. What is the influence of learning resources on needy student's enrolment in free secondary education in Mt.Elgon sub-county?
- III. How does proximity to school influence needy student's enrolment in free secondary education in Mt.Elgon sub-county?
- IV. What is the influence of culture on the enrolment of needy students in free secondary education in Kenya?

**Significance of the study**

This study is anticipated to contribute to knowledge and inform on the status of the enrolment of the needy students in Kenya. The study will be beneficial to the following sectors;

**The government and policy makers.**

This study is expected to provide information on the status of the needy student's enrolment in FSE in Kenya. This information will enable the government through the ministry of education to understand the challenges that affect the needy student's enrolment in FSE and incorporate them in their FSE Annual plans. Policy makers can also develop policies to address gaps.

**The academicians**

These study findings are beneficial to other stakeholders in other sub counties in Kenya and beyond who are involved in similar projects. The study findings, conclusion and recommendations will also provide reference material for future research in the area of project management with a bias in procurement.

**The constituency development fund**

This study will highlight areas that need attention from the CDF committee such as proximity to school. This can enable the committee to formulate strategize to improve the proximity of needy students to school.

**Scope of the study**

The study will focus on the learners transitioning from primary to secondary schools and also their retention levels in the system in Mt.Elgon sub-county. Education officers and teachers will be included in the study which is estimated to take about 7 months with several data collection techniques to be applied.

**2. LITERATURE REVIEW****Introduction:**

In this chapter, the researcher reviews literature that is related to the study. The chapter discusses the theoretical review relevant to the study. It also establishes the conceptual framework, review of variables, critique of existing literature, summary and research gaps.

**Theoretical framework**

A theoretical framework gives an in-depth knowledge of the problem by linking the subject under study to the existing theories in the same field. According to Mugenda & Mugenda (2003), it is the process of linking up the existing models to the conceptual framework. It describes the theory that explains why the research problem under study exists and it consists of concepts together with their definition and the existing theories used for that particular study (Abend Gabriel, 2014)

**Systems Theory of management**

This theory was propounded by Ludwig Von Bertalanffy in the 1940s. It focuses on the effectiveness of an organization through proper operations management. An organization is a social system made up of individuals who cooperate within a formal framework, drawing resources, people and finance from their environment then putting them back to the same

environment. A school is an organization and the community is an important part of a school. The role played by the community in school operations goes a long way in ensuring the effectiveness of its operations. The theory is related to this study as it is linked to the independent variable on the role played by the community towards enhancing the effectiveness of the free secondary education policy. It is also linked to the study by the variable on how the operations of the schools are affected by the resources available in this era of Free Secondary Education.

### **Capital theory of school effectiveness and improvement**

This study is based on Capital Theory of school Effectiveness and improvement by Hargreaves(2001). Hargreaves developed this theory based on outcomes, both cognitive and moral leverage, which is the relation between teacher input and education output ; intellectual capital, which is the sum of the school's knowledge and experience and social capital that is networks of trust and collaboration between the school and the wider community.Hagreaves (2001) argues that the conventional model of measuring school effectiveness(and improvement)is an inadequate tool for the analysis of school success and failure. The theory is related to the study as it shows the importance of the role played by the community in ensuring the success of the policy. It also focuses on the effects of the resources available in a school on effectiveness of the FSE programme.

The theory emphasizes on the need to focus on improving the relationship between teacher input and educational output or changes in students' intellectual and moral state resulting from the teacher's effort. Outstanding schools use combinations of high leverage strategies. Understanding school effectiveness involves exploring how high leverage works (Hargreaves,2001).To fully achieve the impact intended for free secondary education ,the three major factors raised by the model must prevail. The leverage in which the knowledge is passed is of prime importance in achieving its intended results. At the end of the day the transfer of knowledge is determined by the qualification of the teacher and the availability of the needed resources to pass the knowledge. The structures and the environment in which the knowledge is being passed will influence the quality of the output. To achieve the desired outcome social capital must be put in place as the government of Kenya set free secondary education as a capital to empower education of its citizens.

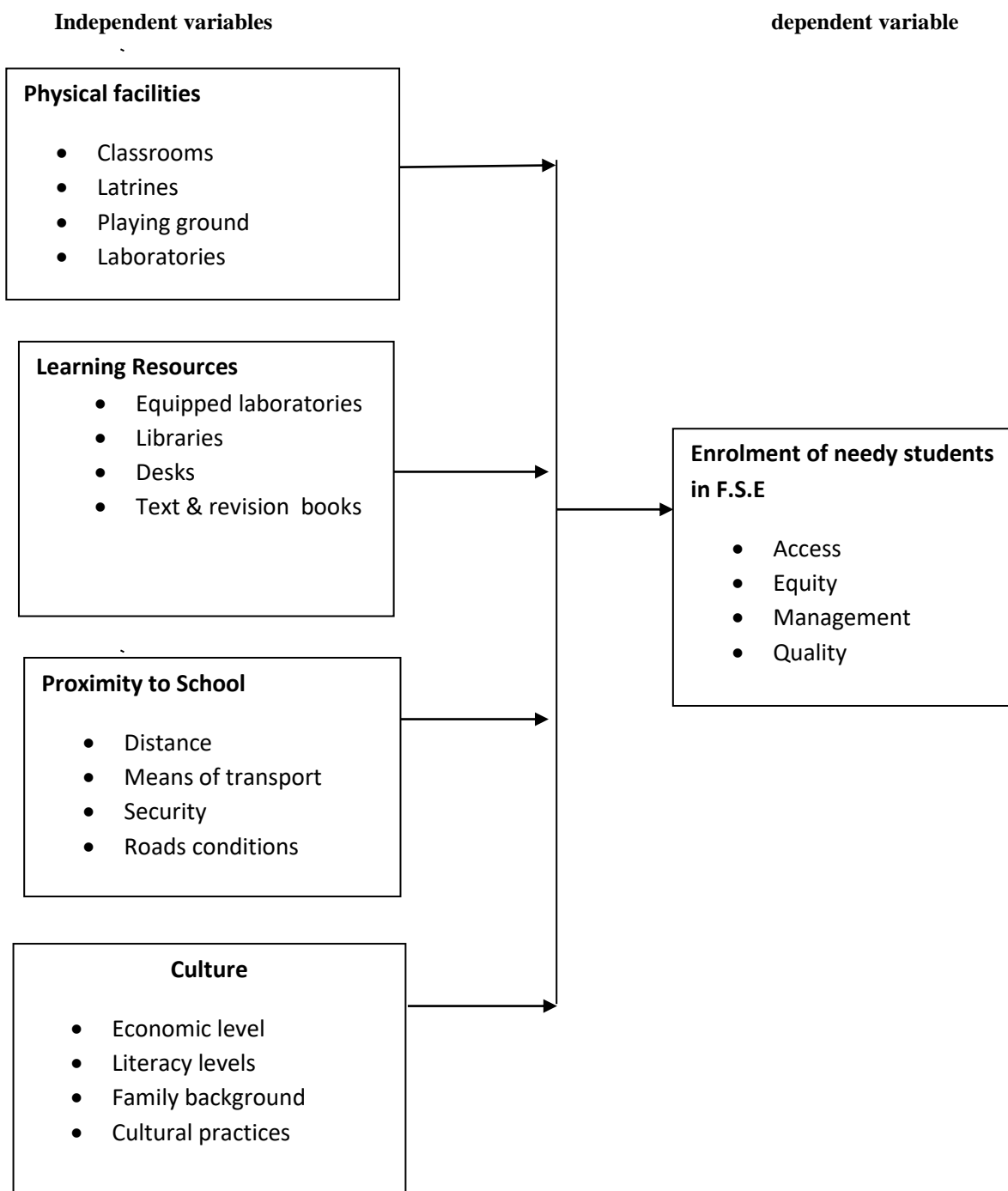
Hargreaves' theory of school effectiveness and improvement is focused on the results achieved by the improvement programme. After the government and community intervention (social input) has been put, the intended standards of results are achieved. The country will have large number of learned personnel hence building an intellectual capital for socio-economic development of the nation. Other desired results like improved academic performance of students will be achieved due to availability of resources. With more educational commitment amongst the youth, the schools achieve high discipline amongst its students hence reducing crime in the country. With the right resources and structures in place, the motivation of teachers is propelled and their desire to achieve the desired results is boosted.

### **Classical Liberal Theory of Equal Opportunities**

The study is also centered on the Classical Liberal Theory of Equal Opportunities by Sherman and Wood(1982) which holds that each child possesses inborn talents which accelerate them to social promotion hence there should be equal opportunities in all educational systems which should be designed without any barriers such as socio-economic factors, socio-cultural factors, geographical factors and school-based factors which have been found to hinder students from taking advantage of their in-born talents. This theory is related to the study as it is linked to the objective of promoting gender equity. It demands that opportunities be made available for individuals to go through all levels of education (primary, secondary and tertiary) to which participation will not be determined by the different needs of learners but by their capabilities. In so doing, education would provide equality of economic opportunities where all classes, races and gender could benefit economically from excellent academic performance (Sherman & Wood,1982).

### **Conceptual Framework**

A conceptual framework is a display of the model under study and the connections between the dependent and independent variables (Mugenda & Mugenda, 2006).McGaghie et al (2015) say it sets a stage for the presentation of the particular research question that drives the investigation based on the problem statement. It lies within a broader framework called a theoretical framework which draws support from theories that embody the findings of other researchers on why and how a particular phenomenon occurs.



**Figure 2.1 conceptual framework**

### **Physical facilities and enrolment of needy students**

Onyango (2001) states that planning for material resources involves the identification of the resource requirements, assessing quality in terms of the needs, establishing criteria for standards, determining the cost per unit and use of the materials whether by individuals or by groups. A rapid influx of students together with an inelastic supply of education inputs may dilute the per-student resource. This is likely to have a negative impact on the quality of education.

### **Learning resources and enrolment of needy students**

There is inadequate supply of many things in schools like desks, tables, maps, picture and posters. The success of any lesson depends on how well the teacher prepares his lesson, what type of equipment he uses and the use of teaching aids. This means that the availability of adequate education resources cannot be downplayed in the journey to excelling academically (African Education in Focus. 2001).

**Proximity to school and enrolment of needy students**

The relationship between distance to school and the probability of enrolment may differ for different children. The value of travel time will depend on the individual student's opportunity cost of time, which may differ by the gender of the child. Enrolment at the secondary level was responsive to distance to school: on average, a one-kilometre increase in the distance was associated with about an 8 percent decline in enrolment (Younger 2003).

**Culture and enrolment of needy students**

According to Kojo and Mayo (2008) some marital and family problems that culturally lead to divorce or separation or widowed have led to many rural families to have large families to take care of. These attitudes and perceptions continue to influence children's enrolment to school in many African communities today. Mingat (2002) established that the richest households, 76 percent of their children attend school compared to 40% of the poorest households. This means that children from poor households have much lower attendance than those from richer households.

**Enrolment of needy students**

FSE is a government initiative to increase literacy levels in Kenya and it has rapidly increased the number of students continuing from primary to secondary school particularly in areas that initially had low primary to secondary transition rates (Brudevold, 2017). The 2010 Kenyan constitution also provides for free and compulsory basic education as a human right to every Kenyan child. The objectives of this policy were to enhance access to secondary education, improve quality, equity, relevance and gender parity in the provision of secondary education (MoE, 2012).

**Review of variables****Influence of Physical resources on enrolment of needy students into free secondary education**

Planning for material resources involves the identification of the resource requirements, assessing quality in terms of the needs, establishing criteria for standards, determining the cost per unit and use of the materials whether by individuals or by groups (Onyango, 2001). With the introduction of free secondary education, schools could have registered over-enrolment, which means that the resources available in schools are constrained. A rapid influx of students together with an inelastic supply of education inputs may dilute the per-student resource. This is likely to have a negative impact on the quality of education.

Vespoor (2008) argues that increases in public spending will be inadequate to generate increases in education attainment and learning. He advises that well-structured public-private partnerships (PPPs) can help diversify the sources of financing and provision. Mbugua (1987) cites that it is the duty of school head teachers to develop the physical facilities. Such factors also impact on quality of teaching and learning that take place in schools.

Onyango (2001) observes that human resource is the most important resource in a school organization. Staffs such as secretaries, bursars, account clerks, matrons, nurses, messengers and watchmen are important. However, teachers comprise the most important staff in the school. This is because, as cited by Odhiambo (2005), the most important purpose of a school is to provide children with equal and enhanced opportunities for learning and the most important resource a school has for achieving that purpose is the knowledge, skills and teachers.

**Influence of learning resources on enrolment of needy students into free secondary education**

According to African Education in Focus (2010) journal, reading books are not the only problems that face schools in the side of teaching materials and equipment's. There is inadequate supply of many things in schools, like desks, tables, maps, picture and posters. The success of any lesson depends on how well the teacher prepares his lesson, what type of equipment he uses and the use of teaching aids. This means that the availability of adequate education resources cannot be downplayed in the journey to excelling academically. In most cases, books, charts, maps and other learning materials are not adequate. The quality of the available learning materials is low. In some cases the materials are not learner friendly as they are full of stereotyping and at times gender biased. This affects the quality of learning and at the same time discourages learning (Mbilyini and Omari, 1998). Toilets are lacking in schools and where they exist, they are inadequate and in poor condition. This has badly affected girls, the disabled and young children. Educational resources or teaching-learning resources as all materials and equipment used to enhance effective learning. Her major concern is that there is notable shortage of teaching materials and equipment in the schools today. This is a problem which needs careful



consideration for solution to be reached. She laments at a situation whereby a teacher wants to teach reading in the absence of reading books, while at times, a teacher wants to write something on the chalkboard and there is no chalk. She strongly urges the school administrators to start exploring ways and means of how they can solve this problem, because if it is left unsolved, the schools will go deeper and deeper into many problems which impact negatively on school achievements, Lydia (2008).

To reduce problems of teaching learning resources, teaching resource centers would be helpful for teachers at which teachers can borrow items such as radio from the broad casting lessons, tape recorders for teaching or all language lessons, cassette players, projectors and many other teaching equipment and materials (World Bank, 2008). postulates that object well-handled practically impresses itself more firmly in the mind than the object merely seen from a distance, Yadar (2007) and UNESCO (2008). Pupil –teacher ratio refers to the number of learners enrolled in a given level of education divided by the number of teachers in the system (Williams, 1979). According to Katunzi and Ndalichako (2004), pupil teacher ratio is a significant measure of quality in education because learners' progress through the curriculum may be hindered, a factor that may lead to dismal performance hence affecting pupils enrolment.

Pedagogical principles and school resources are substantive hypothesis and facilitation about teaching and learning of the pupils, Grimmitt (2000). Maicibi (2003) asserts that when the right quantity and quality of human resources is brought together, it can manipulate other resources towards realizing institutional goals and objectives. Mutai (2006) states that learning is strengthened when there are enough reference materials such as textbooks, teaching aids can positively change teachers and learners attitudes. Compassion (2011) asserts that school sponsors provide educational support to primary school pupil's. This is in the form of textbooks, school uniform, school bags and hurricane lamps that help them to do private studies at home. This is aimed at ensuring that these children will be retained at school and will not be sent home because of lack of required textbooks or school uniform or schoolbag.

#### **Influence of Proximity to school on enrolment of learners into secondary education**

According to Ndolo et al, 2017, the relationship between distance to school and the probability of enrolment may differ for different children. The value of travel time will depend on the individual student's opportunity cost of time, which may differ by the gender of the child. For example, if secondary school age girls look after their siblings, freeing up their mothers to engage in higher productivity activities, then time lost could be valued quite highly. Boys might participate in income generating activities, for example farm work, that contribute directly to household income. This will determine the value of the time lost travelling to school. The non-economic aspects of travel time may differ by gender of the child as well. For example, travelling long distances on foot might pose more of a personal safety issue for young girls than young boys, which would lead one to expect that the enrolment of girls would be more sensitive to travel time than that of boys. Similarly, the value of lost time might differ systematically for richer or poorer children. Children in poorer families might contribute relatively more to household income, and therefore the time they spend travelling to school might be relatively more valuable. Clearly, reducing the time it takes for children to reach school should increase enrolment. Whether it contributes to reducing inequalities in enrolment is less clear. But distance to school is only one of many factors that influence the decision to enrol. Any model of the demand for education will depend on the family's myriad perceived costs of and benefits to schooling (Kiplimo, 2015).

The literature on the relationship between access to school and enrolment is difficult to summarize. Often the distance to school is included in an analysis as a control variable but is not the focus of attention and therefore its importance is not discussed. Perhaps more pernicious, it is easy to imagine that studies that set out to analyze the relationship between distance to school and enrolment and find no effect do not get wide distribution (or are not written at all if preliminary data analysis finds no association). Moreover, even among studies that have focused on the question and have been published, methodological differences make it difficult to draw strict comparisons. Some relatively recent results do stand out, however. In particular, four studies explicitly attempt to account for the potential endogeneity of school availability and school enrolment (Kiplimo, 2015).

A panel data study of over 4,000 households in rural India between 1971 and 1982 found that the new construction of a school in a village significantly increased the probability that a child aged 5 to 14 was enrolled (Foster and Rosenzweig, 1996). The point estimates imply that building a school in a village can more than double the enrolment rate— although only about 6 percent of villages did not have a school at the start of the study period. A retrospective study of a large-scale

school construction program in Indonesia between 1973 and 1980 found that additional schools led to higher average education attainment. The program, which resulted in increasing the number of schools by more than 1 per 500 children resulted in on the order of .2 to .4 additional years of schooling for those children (Duflo 2001). The impact of the program was larger in poor regions. Using a different methodology, a panel study between 1976 and 1986 showed that the change in the density of schools significantly affected school attendance of children ages 10 to 14 and somewhat less significantly those ages 15 to 18 (Pitt, Rosenzweig and Gibbons, 1993). A repeated cross-section study of a large-scale program that emphasized school construction in India between 1993 and 1999 found that the enrolment of children ages 6 to 10 only increased by about 1 percentage point, and that of children 11 to 13 actually decreased (Jalan and Glinskaya 2003). Other studies use cross-sectional analysis to address the issue—but cannot deal with potential endogeneity. In rural Ghana, a bigger distance to all types of schools—primary, middle, and secondary—reduced the probability that a child aged 5 to 12 had ever been to school, and reduced the number of years a child would spend in school (Lavy 1993). In rural communities in Northwest Tanzania, distance to secondary school mattered for girls' enrolment in primary school—but not boys'—ages 10 to 15 while the presence of more primary schools in a village affected neither (Beegle Burke 2003).

In Tanzania, overall, the distance to the nearest primary school increased the age at which a child enrolled in school, and shortened the number of years spent in school (Bommier and Lambert 2000). Longer travel time to the nearest school in Mozambique was significantly negatively related to enrolment, with boys being more sensitive to distance than girls (Handa 2002). Enrolment at the secondary level was responsive to distance to school: on average, a one-kilometre increase in the distance was associated with about an 8 percent decline in enrolment (Younger 2003). The latter study interacts distance to school with household income and finds that the interaction is not statistically significantly different from zero, suggesting that the effect is neither larger nor smaller for poor children. Despite the variability in methodologies of these published results, it is clear that there is enough to support the notion that distance can matter for enrolment. There is a wide range in terms of the estimated magnitudes of the impact and ambiguity on whether it matters more for girls. Of the two studies that interact availability and poverty, one suggests that the poor are more responsive to availability (Duflo, 2001) the other that they are not (Younger, 2003).

### **Influence of Culture on enrolment of needy students into free secondary education**

According to Kojo and Mayo (2008) some marital and family problems that culturally lead to divorce or separation or widowed have led to many rural families to have large families to take care of. These attitudes and perceptions continue to influence children's enrolment to school in many African communities today.

The occupation and education level of parents shape the schooling attainment of children (Smith and Cleming, 1860). The family background affects the early years of formal schooling of the child as this is seen in the probability that children enrol in, attend and complete various levels of education (Lockheed 1991). According to Smith and Cheung 1986, the occupational level and educational level of parents, shapes the school attainment of their children. This is because children from literate homes enter school with more vocabularies than children who are unfamiliar with books. Children with parents who have graduated from college assume that academic excellence is their birthright, while other children struggle to achieve it. The struggle leads these children to drop out of school as lack of education from parents leads to non-enrolment of their children. In conformity with this situation, Mingat (2002) established that the richest households, 76 percent of their children attend school compared to 40% of the poorest households. This means that children from poor households have much lower attendance than those from richer households. Pscharapoulos (1985) cited in Chepkenei, (2004) concur with Mingat (2020) that the level of the family income is one of the most powerful influences on primary school enrolments rates in the developing countries. (Onyango, 2000), showed that parental socio-economic background influences their children's participation in education. This is especially so for the developing countries where children of the poor families are not provided with adequate educational materials and most are not apt to enrol in school. If enrolled, they are more likely to drop out of school than children who are from better-off families. Free education however, even if it were possible to remove all economic constraints still left the citizens the option to send or not to send their children to school remains with the parents because the law requiring all primary school going children is not being reinforced. Some communities have a negative attitude towards sending children to school. In some cultural settings, communities see little or no value of educating children neither do they see the children future being different from their own (UNICEF 2003).

Briggs, (1980) cited in Mbai (2004) contends that poor families may contemplate bearing the cost of sending their children to school but might abandon the whole exercise when more exercises are demanded. A report carried out in contemporary economic policy magazine in January 2001 entitled “Determinants of school enrolment on performance in Bulgaria,” revealed that the role of the income among the poor and the rich is a major determinant for school access. Those poor families are constrained in their investment in education and withdraw from school prematurely.

At home, the child might not have appropriate facilities and resources to enable them carry on with school work. In some homes of the poor, there might be no table and chairs that can be used for reading, which lighting for night studies is either of very poor quality or non-existent (Carnoy, 1971, Johnson, et al., 1983). Thus the family environment is not conducive to learning. Eventually, the child becomes too frustrated to continue schooling under these hardships. The cost of living is rising rapidly for all families in Kenya; poor rural families that have always lived on the farm find it even more difficult to cope with the financial demands of the modern economy. It has therefore become necessary for such families to diversify their economic base for the aged and illiterate parents, their children are a great asset.

According to West (1980) cited in Otunge (2004) large numbers of children in a family of limited income result in overcrowding in the home and this may in turn have a deleterious effect upon behaviour. West further adds that parents in overcrowded accommodation in poor tenements cannot protect or supervise their young children as they might wish. According to Ruther (1980) cited in Otunge (2004) large family size is quite strongly associated with socio-economic disadvantage. The large family size limits the parental involvement in the academic welfare of each child. Thus leads to low participation of the child in school activities and may eventually lead to dropout. Children’s academic performance is affected by their parents’ ability to provide conducive environment financially, Chepcheing and Kibos (2004). Children from single parent families, large families, poorly housed and low income families grow up holding lower aspirations for education, (Essen, 1992). In Mt.Elgon sub-county, the men who had been part of the SLDF were eliminated in the forest rendering many families fatherless. The women who were then left to be the head of the households had challenges in educating the children (Watch 2010).

### **The enrolment of needy students into free secondary education**

FSE is a government initiative to increase literacy levels in Kenya and it has rapidly increased the number of students continuing from primary to secondary school particularly in areas that initially had low primary to secondary transition rates (Brudevold, 2017). It was introduced in Kenya in 2008 with an aim of making secondary education affordable. The policy was expected to provide an equal opportunity to all secondary school going age entry to school regardless of their social class, gender and ethnic background, physical and mental disability. (Ng’eno and Simatwa, 2015)

Prior to the introduction of FSE, the government had introduced FPE in 2002 and later in 2008 partially subsidized secondary school education. The social pillar in the Kenya Vision 2030 outlines education as an important tool for propelling Kenya into becoming a middle income economy. The 2010 Kenyan constitution also provides for free and compulsory basic education as a human right to every Kenyan child. The objectives of this policy were to enhance access to secondary education, improve quality, equity, relevance and gender parity in the provision of secondary education (MoE, 2012). FSE was launched in 2008 and according to the policy, the government was expected to meet tuition fees while parents meet other requirements. This is in line with the government’s commitment to ensure that regional special needs and gender disparities are addressed. (Republic of Kenya, 2009)

According to Asayo (2009) however, even after the introduction of FSE, public schools continue to levy fees for lunch, school buildings and boarding equipment. In a bid to deal with the inability of poor and vulnerable households to pay fees, the government of Kenya created a bursary scheme to ensure that no student who qualifies for secondary school academically is denied education due to inability to pay school fees (Republic of Kenya, 2009). In its Sessional paper number 10 of 1965, the Kenyan government committed itself to the eradication of ignorance, poverty and diseases (Kariuki, 2009).

### **Critique of existing literature**

A 2010 Transparency International report found that education is being denied to African children in incredibly large numbers. According to International human rights law, primary education shall be compulsory and free of charge while secondary and higher education shall be made progressively free of charge (Committee on Economic, Social and cultural rights, 1999). Many countries have embraced the goal extending and expanding the idea of basic education to include

much of what used to be restricted access, elitist secondary education and this entirely changed the concept as well as the duration of basic education to the point that the basic education usually included lower secondary schooling (Chabari, 2010). The demand for secondary education is increasing rapidly in almost all SSA. Even though survival rates have remained stable so far, this still implies a very large increase in the number of primary school graduates that are seeking a place in secondary school (Ledoux and Mingat, 2007). As cited in Vespoor (2008) note that with increasing completion rates the number of primary school leavers could even triple by 2020 in many SSA countries (Vespoor, 2008).

According to UNESCO, the universally accepted teacher-to-student ratio is 1:40 anything beyond that is disastrous. Teacher shortage has been a major challenge for the past decade but this has worsened with the increased enrolment of students following the introduction of free primary education has escalated to secondary schools. Increased enrolment has triggered massive congestion in schools. As at 2016, there was need to construct additional 4000 classrooms, 270 laboratories and other vital school infrastructure to guarantee 100% transition from primary to secondary education.

### Research gaps

In as much as we appreciate the efforts made by various researchers, there is still much to be done concerning the study on enrolment of needy students in FSE policy in Kenya. For instance, emphasis is being put on 100 percent transition into FSE yet the question of proximity to school, physical resources, learning resources and culture have not been sufficiently addressed. It is also important to acknowledge efforts made the Constituency Development Fund which has in the recent past bought school buses for several schools (Kiplimo, 2015). However, these buses do not offer transport services to students who are day scholars and as such it is clear that the effort has not in any way helped to improve the proximity of learners to school. There is also need to go deeper into evaluating how the schools utilize the education funds by the government for the free secondary schools education policy. This provides the gap that this study intends to fill by examining the factors that influence the enrolment of needy students in FSE in Mt. Elgon Sub- County.

### Summary

From the studies it is clear that the FSE policy has had great impacts on the education system in Kenya. It has increased the enrolment of learners into secondary schools by almost 80%. The literature review has also showed that due to increased enrolment with the introduction of FSE, the available resources are constrained. Finance has also been found to be a major challenge facing schools after the introduction of FSE. Olorsky (1984) associated adequacy of finance with effective school management. However, probably because FSE was introduced just recently (2008), the researcher could not trace any studies which had been conducted to examine the factors that could threaten the quality of FSE, leading to a research gap that the proposed study hopes to fill. The 100 percent transition policy is part of the global campaign to give all children access to 12 years of learning and also show the government's commitment to the constitutional imperative on the right to education. A face value, operation "tapelinewatotoshule" is not only viable but also timely and thoughtful. But because the policy was only introduced last year, many schools have not had time to prepare for the surge in enrolment. The transition rate jumped from about 56 percent in 2004 after the introduction of FPE in 2003 to about 81.3 percent in 2017.

## 3. RESEARCH METHODOLOGY

### Introduction

This chapter focuses on the research area, research design, target population, sample and sampling techniques, data collection instruments, pilot test and data analysis and presentation.

### Research design

This is a blueprint which gives methods and procedures adopted in the collection and analysis of data in a detailed manner (Mugenda, 2013). This study adopted a descriptive research design, which according to Creswell and Creswell (2017) is a framework containing guidelines for data collection.

### Target population

According to Creswell and Creswell (2017) target population is a collection of subjects in which analysis can be derived from. The target population in this study will be 3500 people.

**Table 3.1: Target population**

Section	Target Population
Teachers	500
Education officials	500
Students	2000
Parents	500
<b>Total</b>	<b>3500</b>

**Sample size and sampling technique**

Kendra Cherry(2017) defines a sample as a subset of the population that is used to represent the entire group as a whole. This study applied quota sampling which involves intentionally sampling a specific proportion of a sub group within a population, simple random sampling, which according to Pitlenger (2003) is a method in which the number of sampling population has an equal probability of being selected and purposive sampling which is a way of selecting a specific group of people for the study. It involves seeking out individuals who meet specific criteria.

The sample size was calculated using Yamane's formula;

$$n = \frac{N}{1 + N(e)^2}$$

Where; n is the sample size

N is the target population

e is the level of precision

$$N = \frac{3500}{(0.05)^2} = 358.97$$

$$1 + 3500(0.05)^2$$

Therefore the sample size for this study will be 359 respondents.

**Data collection instrument**

According to Foddy(1994), questionnaires are instruments consisting of questions and other prompts for the purpose of gathering information from respondents. They will be used because they can be used to collect information from a large number of people within a short period of time and they are also relatively cost-effective. Approximately 300 questionnaires will be distributed for research purposes.

**Pilot test**

A pilot study was conducted in Elgon ward, Mt. Elgon sub-county to determine the reliability and validity of the research instrument, the questionnaire. These are two most important quality control objects in research.

**Reliability of the research instrument**

Neil (2009) describes reliability as an instrument which is used to describe the overall consistency of a measure which is said to have a high reliability if it produces similar results under consistent conditions. For reliability testing, the Cronbach Alpha coefficient was used to test the internal consistency of the variables. This coefficient also showed the correlation between these variables. (Cronbach,1951)

**Validity of the research instrument**

Validity on the other hand refers to the degree which a study accurately reflects or assesses the specific concepts of the researcher in attempting to measure (Fidel,1993).To test the validity of the questionnaire the supervisor checked and perfected to ensure the required standards were met.

**Data analysis and presentation**

After collecting the questionnaires, there was the cleaning of data and detection of errors before being corrected for consistency and completeness. Data analysis was done using descriptive statistics such as frequencies and percentages and

multiple linear regressions. The data was presented in the form of tables, charts and graphs which facilitated clear interpretation of results and assisted in the drawing of conclusions.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where

- Y = the enrolment of needy students in FSE
- $\beta_0$  = the regression coefficient
- $\varepsilon$  = the error term
- $X_1$  = Availability of physical resources
- $X_2$  = proximity to school
- $x_3 = Culture$
- $X_4$  = learning resources

#### 4. RESEARCH FINDINGS AND DISCUSSIONS

##### Introduction

This chapter presents the research findings on the influence of socio-technical components on the enrolment of the needy students in free secondary education in Kenya: a survey of Mt. Elgon sub-county, Bungoma County, Kenya.

##### Response Rate

In this study, a total of three hundred and fifty questionnaires were distributed across Mt. Elgon sub-county. Out of the 350 questionnaires that were distributed, 344 were completed and returned for analysis yielding a return rate of 98 percent. This questionnaire return rate was very reliable response rate to enable generalizations of the study findings. This agrees with Zikmund et al., (2010) who noted that a response rate of 70 percent and above is a reliable response rate.

##### Pilot Study

Pilot study was conducted in Elgon ward, in Mt. Elgon sub-county to test the validity and reliability of the research instruments. The sample of 35 respondents was selected by getting 10 % of the sample size. In this study, data collection instrument which is a questionnaire was tested to ensure that it is relevant and effective. Reliability was tested using 25 questionnaires which were duly completed. The questionnaire responses were input into statistical package for social sciences (SPSS) and Cronbach's alpha coefficient generated to assess reliability. The closer Cronbach's alpha coefficient is to 1, the higher the internal consistency reliability (Sekaran, 2003). In general terms a Cronbach alpha of 0.8 is good, 0.7 is an acceptable range while if it is 0.6 and below, is poor (Sekaran, 2003). In this study, all the variables yielded a Cronbach's value which was higher than the threshold 0.7 as summarized in the table 4.1 below.

**Table 4.1: Cronbach's Test Results**

Variable	N	Cronbach's Alpha	Remarks
Physical facilities	5	0.964	Accepted
Learning resources	5	0.874	accepted
Proximity to school	5	0.987	accepted
Culture	5	0.793	accepted
Enrollment	5	0.926	Accepted

##### Demographic Data

##### Gender of the respondents

In this study, 58.8 percent of the respondents were male, while 41.2 percent of the respondents were female. This shows that majority of the respondents were male. This analysis is consistent with that of Cooper & Schindler 2006 studies that have identified male domination in the formal and informal sectors. Other studies however, found that in spite of women

being major actors in Kenya's economy, men dominate in the formal sector citing (Ellis, Cutura, Dione, Gillson, Manuel & Thongori, 2007).

### Academic qualifications

The respondents were asked to indicate their level of education. From the results obtained, the study indicated that 24 percent of the respondents had a degree qualification. On the other hand, 7 percent of the respondents were master's degree holders, 13 percent were diploma holders, 26 percent were certificate holders either K.C.S.E, or KASNEB certificates and 30 percent were secondary school students. These findings shows that majority of the population in Mt. Elgon sub-county are learned.

### Presentation of the findings

#### Influence of Physical facilities on enrolment of needy students in Free Secondary Education in Mt. Elgon Sub County.

The study sought to find out whether the school has adequate classrooms, desks and latrines. The findings of the study indicated that 13.24 percent of the respondents strongly agreed, 64.71 percent agreed, 10.29 were neutral, while 11.76 percent disagreed, and none of the respondents strongly disagreed. These findings show that the school has adequate classrooms, desks and latrines. The study further was interested in establishing whether the school has adequate classrooms and they are in good condition. The study established that 26.47 percent strongly agreed, 57.35 percent agreed, 7.35 percent were neutral, 7.35 percent disagreed, while 7.35 percent strongly disagreed. This findings shows the school has adequate classrooms and they are in good condition.

The respondents were further asked to indicate whether the school has a library that is fully functional the responses obtained indicated that 23.53 percent strongly agreed, 4.41 percent agreed, 4.41 percent had no idea, 19.12 percent disagreed, while 48.53 percent strongly disagreed. The findings imply that the school has a library that is fully functional. In addition, the study sought to know whether the available latrines are enough for all the learners and they are well maintained. From the results obtained, 4.41 percent strongly agreed, 5.58 percent agreed, 17.65 percent had no idea, while 13.24 percent disagreed, and 58.82 percent strongly disagreed. This means the available latrines are not enough for all the learners and they are well maintained. The study further sought to find out whether There are enough laboratories in the school to enable learners carry out practical's. From the results obtained, 16.18 percent strongly agreed, 39.71 percent agreed, 2.91 percent were neutral, 23.74 percent disagreed, and 17.65 percent strongly disagreed. This findings shows that there are enough laboratories in the school to enable learners carry out practical.

Finally, the respondents were asked whether the school playing ground is able to accommodate learners for physical exercises and training for different sports. The results obtained indicated that 17.65 percent strongly agreed, 32.35 percent agreed, 17.65 percent were neutral, 26.47 percent disagreed, and 5.88 percent strongly disagreed. This means the respondents doubt the school playing ground is able to accommodate learners for physical exercises and training for different sports. The results are summarized in table 4.2 below.

**Table 4.2: influence of physical facilities on enrolment of needy students in free secondary education in Mt.Elgon Sub County.**

Statements		SA	A	N	D	SD
The school has adequate classrooms and they are in good condition	%	13.24	64.71	10.29	11.76	0
The school has a library that is fully functional	%	26.47	57.35	7.35	7.35	7.35
The available latrines are enough for all the learners and they are well maintained	%	23.53	4.41	4.41	19.12	48.53
There are enough laboratories in the school to enable learners carry out practical's	%	4.41	5.88	17.65	13.24	58.82
The school playing ground is able to accommodate learners for physical exercises and training for different sports	%	16.18	39.71	2.94	23.47	17.65

### Model Summary

Coefficient of determination explains the extent to which changes in the independent variable can be explained by the change in the dependent variables or the percentage of variation in the dependent variable (enrolment of needy students) that is explained by all the four independent variables (physical facilities, learning resources, proximity to school and culture). The four independent variables that were studied, explain only 64.5% of the effects of the independent variables on enrolment of needy students as represented by the R<sup>2</sup> which means that other factors not studied in this research contribute 35.5% of the effects of the independent variables on enrolment of needy students. Therefore, further research should be conducted to investigate the other factors influencing enrolment of needy students (35.5%).

**Table 4.3: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.805	0.649	0.645	.000
a.	Predictors: (Constant), physical facilities, learning resources, proximity to school, and culture.			
b.	Dependent variable: enrolment of needy students			

### ANOVA Model

Study findings in ANOVA table 4.4 indicated that the above discussed coefficient of determination was significant as evidence of F ratio of 156.465 with p value 0.000 < 0.05 (level of significance). Thus, the model was fit to predict enrolment of needy students using physical facilities, learning resources, proximity to school, and culture.

**Table 4.4: ANOVA**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	190.608	4	47.652	156.465	.000b
	Residual	103.244	339	0.305		
	Total	293.851	343			

### Hypotheses Testing

#### Hypothesis One

**H<sub>01</sub>: Physical facilities do not have significant statistics effect on enrolment of needy students in Free Secondary Education in Mt. Elgon Sub County.**

The first hypothesis of the study stated that there is a significant relationship between physical facilities and enrolment of needy students in Free Secondary Education. Findings showed that physical facilities had coefficients of estimate which was significant basing on  $\beta_1 = -0.307$  (p-value = 0.000 which is less than  $\alpha = 0.05$ ) thus we accept the hypothesis and conclude that there is a significant relationship between physical facilities and enrolment of needy students in Free Secondary Education. This suggests that there is up to 0.307 unit decrease in enrolment of needy students for each unit increase in physical facilities. Also, the effect of physical facilities is more than the effect attributed to the error, this is indicated by the t-test value = 7.936.

## 5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

### Introduction

This chapter presents the summary of the study findings as per the data analysis, the conclusions that were derived from the findings and the recommendations in line with the study objectives. The chapter concluded with a suggestion for the areas for further study.

### Summary of Findings

**Influence of Physical facilities on enrolment of needy students in Free Secondary Education in Mt. Elgon Sub County.**

The study sought to determine the influence of physical facilities on enrolment of needy students in Free Secondary Education in Mt. Elgon Sub County. The findings revealed that the schools have adequate classrooms and they are in good condition. In addition, the findings of the study revealed that most of the schools have a library that is fully



functional. On the other hand, the study showed that the available latrines are not enough for all the learners and they are not well maintained. However, the findings showed that there are enough laboratories in the school to enable learners carry out practical. Finally, the study revealed that respondents doubt the school playing ground is able to accommodate learners for physical exercises and training for different sports.

### Conclusion

In conclusion basing on the findings, physical facilities had coefficients of estimate which was significant basing on  $\beta_1 = -0.307$  (p-value = 0.000 which is less than  $\alpha = 0.05$ ) thus we accept the hypothesis and conclude that there is a significant relationship between physical facilities and enrolment of needy students in Free Secondary Education. This suggests that there is up to 0.307 unit decrease in enrolment of needy students for each unit increase in physical facilities. Also, the effect of physical facilities is more than the effect attributed to the error, this is indicated by the t-test value = 7.936. Nonetheless, the study findings showed that learning resources have no significant effect on enrolment of needy students basing on  $\beta_2 = 0.073$  (p-value = 0.061 which is more than  $\alpha = 0.05$ ). Furthermore, the effect of learning resources was stated by the t-test value = 1.876 which implies that the standard error associated with the parameter is less than the effect of the parameter.

### Recommendations

Based on the findings, the study recommended the following: Since the available latrines are not enough for all the learners and they are not well maintained, the school should build new more latrines and ensure they are well maintained. The school should improve the playing ground to accommodate learners for physical exercises and training for different sports. Community members should be sensitized to avoid bad cultural practices which interfere with their learning. Schools should increase the number of libraries and their ability to cater for the needs of learners. All Parents should encourage their children to attend school. The government should consider helping the needy students to afford basic needs.

### Areas for further Research

The study has analyzed the influence of socio-technical components on the enrolment of needy students in Kenyan secondary schools. The study recommends that another study should be done on impact of socio-technical components on the enrolment of needy students in Kenyan schools. Furthermore conducting a replication study in another sub- County is necessary so that there are sufficient and conclusive results in relation to study.

### ACKNOWLEDGEMENT

My appreciation goes to God Almighty by whose grace I managed to complete this project and to my supervisor, Dr. Calvins Otieno (PhD) who remained so committed to see me through the project. He offered timely corrections and dedicated his time to guide me through. Thanks to the schools I will collect my data from and for any kind of assistance they will offer me. I would like to acknowledge the JKUAT Kitale branch fraternity for giving me the opportunity and conducive environment to have my master's degree here.

### REFERENCES

- [1] African Education Focus (2010). *A publication for the Centre for African education and The African studies working group at Teachers College, Columbia University.*
- [2] Buyaki, I. B, Ocharo, C. M. (2016). Influence of Increased Student Enrolment on Internal Efficiency in Teaching and Learning in Public Secondary Schools in Kisii Central Sub County, Kisii County, Kenya. *International Journal of Novel Research in Education and Learning Vol. 3, Issue 2, pp.: (43-53).*
- [3] Chabari, E.B. (2010). *Challenges Facing Effective Implementation of Free Secondary Education in Public Secondary Schools in Kangundo District, Kenya. Unpublished Master's Thesis.* Chuka University College.
- [4] Creswell and Creswell (2017) *Research Design; Qualitative, quantitative and mixed Methods approaches.*
- [5] Gogo, J.O. (2003). *Impact of Cost Sharing Strategy on Access, Equity and Quality of Secondary Education: A Case Study of Rachuonyo District.* Unpublished M.Ed. thesis, Maseno University.
- [6] Karagu, M.A., Oanda, O.I. & Sifuna, D.N. (Eds). (2006). *Themes in the study of the Foundations of Education.* Nairobi: Jomo Kenyatta Foundation.

- [7] Kiplimo (2015) *Factors influencing pupil's enrolment in public primary schools in Kenya*, Research project, UON.
- [8] Lewin, K.M. (2008). *Strategies for Sustainable Financing of Secondary Education in Sub-Saharan Africa*. Washington D.C: World Bank.
- [9] Maicibi, N. A (2003) *Human resource management success* .Kampala Net media Publication LTD, Uganda
- [10] MoE (2012) *Task force on realignment of the education sector to the constitution of Kenya 2010: Report of the taskforce towards a globally competitive quality Education for Sustainable development: Nairobi, ministry of education*.
- [11] Mugenda, O.M & Mugenda, A.G (2003) *Research methods. Qualitative and quantitative Approaches*. Nairobi: ACTS Press.
- [12] Mugenda, O. M & Mugenda, A.G. (2013). *Research method: Qualitative and Quantitative approaches*. Nairobi African center for technology studies.
- [13] Ndolo, M.A, Simatwa,E.M.W and Ayodo, T.M.O (2016). Impact of Free Secondary Education Policy on Access to Secondary School Education in Kenya. A Case Study of Mbita and Suba Sub-Counties. *Greener Journal of Educational Research*, 6(2): 067-085.
- [14] Njeru and Orodho, J (2003). Education financing in Kenya: Secondary School Bursary Scheme. Implementation and Challenges. Nairobi: Institute of policy analysis and research. *International Journal of Development*.
- [15] Ng'eno,C.V.Simatwa,E.M.W & Ayodo,T.M.O (2015). Influence of free secondary education policy on equity in secondary schools education in Kenya;A case Study of Kericho County.*Journal of education vol.5 (3):83-97*
- [16] Nyaegah, O.J (2011). Education and Millennium Development Goal challenges facing management of- FPE in Nyamira county, Kenya.
- [17] Ohba, A. (2009). *Does Free Secondary Education enable the poor to gain? Access,Create.Republic of Kenya. (2012a).Task Force on the Re-Alignment of the Education Sector to the Constitution of Kenya 2010*.Nairobi; GovernmentPrinter.
- [18] Oketch, M. & Somerset, A. (2010). Free Primary Education and after in Kenya: Enrolment Impact, Quality Effects and the Transition to secondary School. Create Pathways to Access Research monograph No. 37. Retrieved February 22nd February, 2014 from [http://www.create\\_rpc.org](http://www.create_rpc.org).Kenya? *International Journal of Development Research*, vol 4.
- [19] Psacharopoulos, G & Woodhall, M (1985). Education for development. New York:World Bank.
- [20] Republic of Kenya (2008) *Free Secondary Education Programme*. Nairobi: Government Press.
- [21] Republic of Kenya (2013) *Basic Education Act 2013 No.14 of 2013* .Nairobi Kenya Printers.
- [22] Republic of Kenya (2012) *A policy Framework for re-aligning education to the 2010 Constitution and vision 2030 and beyond MOEST*. Nairobi.Government Printers.
- [23] Saitoti, G. (2004). *Education in Kenya: Challenges and Policy responses. Paper Prepared for presentation at the Council on Foreign Relations. Washington DC*.
- [24] Sherman, L. W & Wood, D.J (1982) *Education theories in the eighties*, University of Illinois, Urbana.
- [25] UNESCO (2001) *Education For All, is the world on track*, Paris: The EFA Global Monitoring report.
- [26] Verspoor, A. (2008).*At the Crossroads; Choices for Secondary Education in Sub-Saharan Africa*; Washington, D.C: World Bank.
- [27] World Bank (2005c). *Meeting the Challenge of Africa's Development: A World Bank Group Action Plan*. The World Bank. Washington D.C.
- [28] Yamane, T. (1967) *Statistics. An introductory analysis*, New York: Harper and Row