

**DETERMINANTS OF INTERNAL EFFICIENCY IN PUBLIC PRIMARY
SCHOOLS IN TIGANIA EAST DISTRICT, KENYA**

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DECLARATION

This research project is my original work and has not been presented for a degree or any other award in any other University.

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DEDICATION

This project is dedicated to my wife Jedylin Muthoni, daughter Glorly Mukiri and two sons Edwin Mugambi and Polycap Mawira for their support and encouragement throughout the course. Also sincere dedication to my parents Mr. Peter M' Ithuta and Mum Mrs. Jeniffer Rigiri for giving me basic education which has been the base of my higher education.

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ABBREVIATIONS AND ACRONYMS

ASAL	Arid and Semi arid Land.
CBS	Central Bureau of Statistics
DEO	District Education Officer
FPE	Free Primary Education
ILO	International Labour Organization
IPAR	Institute for policy analysis and research
IPEC	International Programmes on Child labour.
KCPE	Kenya Certificate of Primary Education
KDHS	Kenya Domestic Household Survey
MDG	Millennium Development Goals
MOE	Ministry of Education
ROK	Republic of Kenya
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization.
UNICEF	United Children's Education Fund.

ABSTRACT

The purpose of the study was to investigate the determinants of internal efficiency in public primary schools in Tigania East district. Four research questions were formulated to guide the study. The study adopted a descriptive survey design. The sample comprised of 10 headteachers, 100 teachers, 10 Education officers and 400 standard seven pupils in the District. Data was collected by use of questionnaires and were analyzed by use of qualitative and quantitative technique. Findings revealed that parents' economic background has a p value of 0.01 which is lower than 0.05, (significant level) hence was statistically significant in explaining completion rates. Child labour was statistically significant in explaining completion rates with a coefficient of 0.169. School physical facilities had a p value of 0.28 which was higher than 0.05 hence school physical facilities was not statistically significant in determining completion rates.

Teaching learning resource was statistically significant at a p value of 0.02. Based on the findings, it was concluded that economic background of parents of children in primary schools in the area was medium as their source of living was from miraa farming as indicated by the Education officers. On the influence of physical facilities on internal efficiency in public primary schools, the study concluded that pupils did not have adequate sitting place in their class and they sat more than the required number of pupils in a desk. It was also concluded that pupils whose schools lacked facilities and materials were significantly more likely to attain lower scores than those pupils whose schools were well equipped. The study further concluded that majority of pupils did not have writing materials and there were no enough textbooks in the class. The schools had inadequate teaching aids, textbooks, reference materials and staff. The study recommended that the devolved government should seek ways of empowering the parents economically so that they are able to provide for the school needs of their children.

The County Government should put up measures to curb child labour such as involvement in Miraa growing so that pupils can fully participate in learning. The headteachers and SMC should seek for ways of providing school physical facilities and teaching learning resources so that effective teaching and learning can be achieved in schools. The study suggested that since this study was conducted in one administrative district, there is need to carry out a similar study in other districts to establish whether similar or different results will be realized. Taking into consideration that the study was carried out in primary schools, there is a need to carry out a study in secondary school to assess the factors that influence internal efficiency. This study focuses on factors such as pupils' parents economic background, child labour, school physical facilities and teaching learning resources. There is a need to carry out a study on how other factors affect internal efficiency.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Education is considered paramount in the development of every country. According to Johnstone (2007), education is key to any country's development and it is further considered as the route to economic prosperity, the key to scientific and technological advancement, the means to combat unemployment, the foundation of social equality, equal wealth distribution, and the spearhead of political socialization and cultural diversity. Earthman and Lemasters (2006) state that education remains the main catalyst for development in any society, whether in the developed or developing world. The future development of the world and of individual nations hinges more than ever on the capacity of individuals and countries to acquire, adopt and advance knowledge (Foster, 2009).

Denmark, Sweden and Cyprus allocate nearly 7% of their GDP into public investment in education. These are the highest levels in the European Union (EU) and among the highest in the world. Japan (3.5%) and the US (4.8%) trail the EU (5%) on public investment. However, they both have much higher levels of private investment in education than any Member State. Bulgaria, Czech Republic and Romania are catching up on public investment in education while Estonia, Lithuania, Italy, Slovakia, Spain and Germany are losing ground (Lisbon Educational Council, 2009). This is an indication that most of the

governments of the world spend a significant amount of their budget on resource inputs in the education sector.

Adeyemi (1989) found that the wastage rates were 2 and 3% and wastage ratio 1.00 and 1.08 respectively for the two sets of cohort used. Internal efficiency 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. Egen and Kauchack (2008) found out that an educational system may fail to achieve its goals. They further concluded that when a school is not able to achieve its goals, the school has not achieved its internal efficiency. Internal and external efficiency of educational institutions are closely linked because the skills and attitudes developed must be of value to the society as a whole for the education system to be efficient (Todaro, 2009).

Internal efficiency of educational system is the relationship of its outputs (graduates) to its inputs (resources). Longe and Durosaro (1988) referred to internal efficiency as the extent of the educational system's ability to minimize cost and reduce wastage resulting from repetitions, dropouts and failures. Wastage in education is used to describe those who are un-certificated school leavers who left the system before the completion of the course. Wastage may occur between grades, that is, those who repeat the grade and those who dropout of the system between the grades.

As stated by the World Bank (2002), the notion of efficiency cannot be overlooked in education. It is an idea that presupposes a transformation of some kind (World Bank 2002). The before elements are commonly referred to as ingredients, inputs, or resources while the after elements are called results, outputs, or outcomes (Levin, 2001). A study by the Institute for policy Analysis and research IPAR (2003) found out that one of the factors that affect internal efficiency in a school is student flow which determines whether pupils entering the school system are able to graduate within a stipulated period.

When the rate of progression from the entry point to the point of departure is low the system is said to be internally inefficient since the affected students are disproportionately using the resources allocated to the sector (IPAR, 2003). Likewise Glewwe (2005) found that poor performance in national examinations is an indicator of internal inefficiency. Egen and Kauchack (2008) found that wastage is the worst form of inefficiency because when learners dropout of an educational system, resources already invested in them go into waste. Okwach and Odipo (2007) state that participation of children in child labour forces children out of school. Another is lack of teaching and learning materials in the schools. These children are not able to complete the school cycle and hence affecting school's internal efficiency. Social economic background according to Okwach and Ondipo (2007) forces children into child labour. This implies that the social economic activities of the parents determines whether children participate in school or not.

Internal efficiency is observed in the way children participate in primary education. School participation in Tigania East tends to favor boys than girls (Paul & Yusuf, 2007). In Mali, the male gross intake rate is 102 while in Burkina Faso, more than 70% of pupils entering primary school survive until the last grade, and in Ethiopia girls are more likely to reach the last grade. This implies that different countries have different levels of efficiency in educational systems. In other countries gender differences in intake are reinforced as children progress through school for example, Guinea has high dropout rates for boys than girls, but more boys are more likely to complete the school cycle (World Bank, 2008).

Chimakati (2012) in his study on the internal efficiency of public primary schools in Ikolomani South Division, Kakamega South District found out that grade survival, graduation rates and average years per pupil were calculated using already established formulae and the results used to compute the efficiency coefficient to determine the level of internal efficiency. He also found that public primary schools in Ikolomani South Division had a low internal efficiency of average years per graduate of 10.497 which translated to an additional 2.497 years needed to produce graduates that require an optimal 8 years of the primary education course. A coefficient of efficiency of 0.762 or 76.2% which was at great variance with the UNESCO recommended coefficient of efficiency of over 0.90 (90%) for internally efficient education systems was established.

As stated by Khamala (2011), primary education is particularly known to have a high social benefit, this is why the government of Kenya has been committed to the attainment of its national objective of providing universal primary education to all school- age children. The government's commitment can clearly be seen through the introduction of FPE in 2003, which saw enrolments surging from about 6 million to about 7.6 million by 2006 (Khamala, 2011).

According to Riddel (2003), Kenya abolished tuition fees for primary school education to enhance more participation in primary education. Physical facilities are not adequate in most schools in Tigania East district. There have been cases of repetition of pupils in schools as observed from the school records in a number of schools. The teacher pupil ratio, the textbook pupil ratio and the classroom students' ratio are all high. The resources are inadequate in most of the primary schools and directly impact on the running of the schools. Further there has been high drop out. Within a period of 4 months the enrolment had gone down by 4.2% and within a month in the same year it had gone down to 5.14%. National gross enrolment rate (GER) was 107 percent in 2006, rising to 110 in 2008 while that of Tigania was less than 50%. The situation poses some questions that need to be answered through research study on the determinants of internal efficiency in public primary schools in Tigania East District.

1.2 Statement of the problem

The Kenyan government has made a significant effort to increase efficiency in primary education. Despite many education policies and constitutional provisions that encourage pupil participation in primary education, there is serious wastage due to drop out of learners. According to Economic survey, 2012 (RoK, 2012), Tigania East District was rated as having low economic growth, there was low pupil participation in schools and wastage was further reported. Several studies Chimakati (2012), Khamala (2011) and Riddel (2003), and even Ministry of Education statistics have indicated that access, promotion, retention and completion rates are low. This study therefore aimed at establishing the determinants of internal efficiency in public primary schools in Tigania East district, Kenya.

1.3 Purpose of the study

The purpose of the study was to establish the determinants of internal efficiency in public primary schools in Tigania East district.

1.4 Research objectives

The study was guided by the following objectives.

- i. To determine how pupils parents' economic background affect the internal efficiency in public primary schools in Tigania East District

- ii. To determine the influence of child labour on internal efficiency in public primary schools in Tigania East district.
- iii. To establish the influence of school physical facilities on internal efficiency of public primary school in Tigania East District.
- iv. To assess the influence of teaching learning resources on internal efficiency in public primary school in Tigania east district.

1.5 Research questions

The research was guided by the following research questions:

- i. To what extent does pupils' parents' economic background affect the internal efficiency in public primary schools in Tigania East District?
- ii. What is the influence of child labour on internal efficiency in public primary school in Tigania East District?
- iii. How do school physical facilities influence internal efficiency in public primary school in Tigania East district?
- iv. How does teaching learning resources influence internal efficiency in public primary school in Tigania east district?

1.6 Significance of the study

The study findings would be important to education policy makers in establishing how internal efficiency can be improved in the schools. The findings would also be of importance to the headteachers in the district in establishing the factors that influence internal efficiency in primary schools. The findings of the study would also add knowledge to the area of economics of education by its contribution of literature on the specific factors of internal efficiency in primary schools. The findings would also be important to education managers in the contribution of information applicable to effective implementation of government funding in financing education in Kenya.

1.7 Limitations of the study

One of the limitations of the study was that it is not possible to adequately measure the determinants of internal efficiency in primary schools. The researcher relied on respondents' information who might give socially acceptable responses which may not reveal the determinants of internal efficiency in public primary schools. The researcher would not be able to control the respondents' attitudes which may affect the findings. To mitigate this, the researcher requested the respondents to be truthful in responding to the research instruments.

1.8 Delimitation of the study

The study was carried out in Tigania East district in Meru County, Kenya. The study intended to cover all the public primary schools in the district. The study

was focused on the school educational officers, headteachers, teachers and pupils as the main respondents. The parents, SMCs who were also stakeholders in school were not involved in the study due to logistics of getting them. Although there were many measures of internal efficiency, the study was confined to socio-economic background of the parents, physical facilities, teaching learning resources and child labour as the main measures of internal efficiency. Other educational quality concerned like instructional and supervisory processes were not addressed in the study.

1.9 Assumptions of the study

The following were the assumption of the study:

It is assumed that the selected schools have been keeping up to date records on pupil's enrolment and drop out.

1.10 Definitions of terms

Child labour refers to employment of services of people under the age of eighteen

Drop out refers to a person who leaves school before completing the designated eight years of primary school cycle.

Efficiency refers to achieving the greatest amount of output from a given set of input or achieving a specified amount of output while utilizing a minimum quantity of input.

Grade repetition refers to ratio of students that spend more than one year in a given level of education.

Internal efficiency refers to the capacity of the system to turn out graduates at any level of education in the best way possible which is without wastage and stagnation.

Repetition rate refers to the proportion of students repeating a given level of schooling for whatever reason.

Transition rate refers to the proportion of students moving from class to another higher class in each year.

Wastage refers to the global input-output relationship in terms of years taken by a cohort of students to complete the study course.

1.11 Organization of the study

The study was organized into five chapters. Chapter one consists of the background to the study, purpose of the study, research objectives, research questions & significance of the study, assumptions and definition of significant term and organization of the study. Chapter two dealt with review of literature, theoretical frame work and conceptual framework. Chapter three indicated research design, target population, sample size and sampling techniques, research instruments, data collection procedure and analysis. Chapter four contained data collected analysis and their interpretations. Chapter five summarized research findings, makes conclusions and recommendations and offer suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section presents the literature review. It focuses on Internal efficiency in education, influence of pupils parents' economic background on internal efficiency in public primary schools, influence of physical facilities on internal efficiency of public primary schools, influence of child labour on internal efficiency in public primary and influence of availability of teaching learning resources on internal efficiency. The section also presents the theoretical and conceptual framework for the study.

2.2 Concept of internal efficiency in education

Internal efficiency 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. 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 (Winkler, 1988). He further pointed out that internal efficiency 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. Khamala (2012) 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 internal efficiency.

Tan and Mingat (1992) argued that a high rate of survival or retention within cycles of education, particularly in primary and secondary education, is necessary, although insufficiency mark is of an efficient system; conversely a system that exhibits low intra-cycle retention rate is designed to impart and reinforce certain cognitive skills; students who exit before the end of the cycle will acquire those skills only partially and probably temporarily (World Bank, 2002). As much as this outcome holds the resources invested in those students' education would be wasted, leading to inefficiency in the system. Therefore reduced rate of wastage (high retention) is necessary for internal efficiency in schools.

2.3 Influence of economic background of the parents on internal efficiency in public primary schools

Population studies from some Less Developed Countries (LDCs) (2011) have shown a significant positive correlation between pupils' social economic background and pupil participation in schools. The study shows that percentage of people living below the poverty line which is an equivalent of less than one dollar per day have a limited ability to participate in school. This study focused on pupil social economic background but did not address other determinants of internal efficiency a gap to be filled by this study. The study implies that pupils whose

families are not able to provide for school needs are less likely not to participate in education and hence making the school not achieve its goal of enabling pupil participation in learning. According to Finan (2010) the family's economic background influences greatly the child's education. Where a child comes from an economically stable and happy family, such a child will be psychologically and emotionally balanced hence able to participate in school. On the other hand, children from unstable economic background are not able to fully participate in education hence affecting schools capacity to fulfill its goals of enabling pupils participation in schools (Republic of Kenya, 2005). It goes then that children from unstable economic family background will not be balanced emotionally and psychologically to learn. Such children will drop out before completion of the education cycle hence affecting schools internal efficiency.

A study conducted in Guatemala by Graham (2009) show that children from low economic backgrounds are malnourished, tired and do not learn well. If they are malnourished for long, they are also vulnerable to diseases which mean time away from school. The study also indicates that eight out of ten pupils who attended schools arrived with empty stomachs. The end result of these children is to drop out of school before completing the cycle hence influencing school's internal efficiency. This study was conducted in Guatemala and concentrated on economic background of the pupils. The current study will be conducted in Kenya and specifically in Tigania East district.

Analysis of the cost of educating children in Kenya in relation to family incomes show that on average, the proportion spent on educating one child is 6 – 7 percent of family income, two children, it is 11 – 15 percent while for three children raises it to 17 – 22 percent (Odada and Odhiambo, 2009). Children from poor families in school are fewer than children from richer families. As the years of study increase, their retention rate is lower than that of their counterparts from the richer families. In Tigania East district, poverty level is high as indicated by Economic survey (2012). Most of the people are famers and depend on rains to grow their crops. When crops fail, they are economically disempowered and hence cannot provide for their children in schools.

In a study conducted by Ohba (2009) found that schools within community with low economic status have a likelihood of pupils not participating in education hence lowers the schools internal efficiency The parents from low economic background will be the first not to send their children to school for solving their hand to mouth problem. The parents of low economic status do not send their children to school, if they have some work at home, for example taking care of their younger children and livestock. The work at home creates low attendance of the pupils at school and it causes low achievements in their educational status hence lowering schools internal efficiency.

2.4 Influence of child labour on internal efficiency in public primary

According to Forasteri (1997), child labour is a pervasive problem throughout the world especially in the developing countries. Statistics show that Africa and Asia together account for over 90 percent of the total child employment. Child labour is especially prevalent in rural areas where the capacity to enforce minimum requirement for schooling and work is inadequate. In these areas, children work for a variety of reasons and the most important being poverty. Though children are not well paid, they still serve as major contributors to family income in developing countries and especially Africa. It is very difficult to abolish child labour due to poverty. ILO estimated about 165 million children between 5 and 14 years are involved in child labour (ILO, 2008). Though restrictions on child labour exist in most countries, many children do work. This leaves them prone to exploitation. The International Labour Office (ILO) reports that children work the longest hours and are worst paid labourers (Bequel & Boyden, 1998). They endure work conditions which include health hazards and potential abuse.

Many Africans view work as means of integrating children in their cultures for self esteem and for trading. Despite the legal obligations and international restrictions on child labour, children are still forced to work to the severe detriment of their education (Forasteri, 1997). In 1998, the International Labour Organization (ILO) estimated that 40% of children between ages 10 and 14 years in Kenya were working (ILO, 1997). According to Child Labour Survey conducted by the Kenya Central Bureau of statistics, an estimated 17.4 percent

(1.9 million) of children between ages 5 and 27 were economically active in 2000 (GOK, 2001). Among the factors contributing to child labour in Kenya is growing poverty and effects of HIV/AIDS pandemic.

Koech Report (Republic of Kenya, 1999) noted that child labour was rampant practice that continues to keep children out of school. Children in different parts of the country are involved in activities such as fishing, tea picking, coffee picking, sand mining, miraa harvesting, hawking and petty trading. In addition, girls are employed as house helps and child minders in urban and rural areas. In ASAL areas, girls and boys are expected to take care of cattle (herding), an important role in pastoralists' economies. Such children cannot therefore be able to participate in education. Work prevents many children from going or benefiting from education, while at the same time education system fail to take into account the special circumstances of working children (GOK, 1999).

The government of Kenya became a member of the International Labour Organizations international program on elimination of child labour (ILO – IPEC) in 1992. Since then, Kenya has launched 67 action programmes on child labour and several more mini-programmes in collaboration with 22 partner agencies including government agencies, employers and labour organizations a wide range of non-organizations and media based organizations, (ILO-IPEC, 2000). With the help of US government, Kenya has been participating in ILO-IPEC regional

programmes to eliminate child labour. UNICEF has been working in Kenya to help formulate policy on issues affecting children.

2.5 Influence of availability of teaching learning resources on internal efficiency

The availability and use of teaching and learning materials affect the effectiveness of a teacher's lesson. When pupils are able to learn well at school, it leads to good academic performance hence the school can be said to have internal efficiency. According to Brown and Brown (1999) the creative use of a variety of media increases the probability that the student would learn more, retain better what they learn and improve their performance on the skills that they are expected to develop. Bolton (1988) also stated that young children are capable of understanding abstract ideas if they are provided with sufficient materials and concrete experiences with the phenomenon that they are to understand. Teaching learning resources hence facilitate pupils learning which has a direct impact on pupils' academic performance hence an indicator of internal efficiency.

Instructional materials are an integral component of the learning process. Their adequacy and suitability are important. Bett (2006) in his study found that the quality of education the learners receive bears direct relevance to the availability or lack of instructional materials. Availability of teaching learning resources impacts on pupils learning process hence influencing their academic performance. Ayoo (2002) carried out a study that established that the availability of schools

learning resources had effect on performance of class seven pupils in examination in Botswana. The study on the effects of schools learning resources had a direct link to performance. Eshiwani (1983) conducted a study in Western Province, of Kenya on factors influencing performance among primary and secondary school pupils and noted that school facilities such as textbooks, visual aids and libraries are vital to performance in national examinations.

Other studies have shown a significant relationship between teaching materials and other related inputs and student learning and achievement in developing countries. The availability of textbooks and other reading materials have a positive effect on school effectiveness (Mugambi, 2006). It is only with such materials that pupils can learn to work independently or in groups (Republic of Kenya, 2001) Elimu Yetu Coalition (2003) says that there is a positive correlation between availability of textbooks and three other variables namely: Pupil's achievement, enriching of teaching – learning and professional development of poorly trained teachers in developing countries.

Instructional materials are critical ingredients in learning and intended curriculum cannot be easily implemented without them (Knight & Sabot, 2004). Instructional materials provide information, organise the scope and sequence of information presented, and provide opportunities to pupils to use what they have learnt. Nothing has ever replaced the printed word as a key element in educational

process at all level of education. When the textbooks are available, instructional time is not wasted (World Bank, 2005).

Mwamwenda and Mwamwenda (1997) carried out a study that established that the availability of learning facilities had effect on schools internal efficiency in Botswana. The study revealed that learning resources had a direct link to the education quality measured in terms of internal efficiency. A study was conducted by the Population Council and the Government of Kenya in 2007 to establish the effects of the material inputs on performance in single sex and mixed secondary schools. Some of these included textbooks, library, laboratory, playing fields, science rooms and telephone. An examination of the material inputs in selected schools revealed that single sex schools were better equipped than the mixed schools. The shortage of the necessary material inputs in mixed schools was therefore identified as one of the factors affecting performance (Population Council and Government of Kenya, 2007).

Fullan and Miles (1992) found that performance demands resources for teaching, for substitutes, for new materials, for new space, and, above all, for time. Berman and McLaughlin (2006) found that a significant level of human resource support was important, and that student's performance would not have been possible without proper financial support. Teaching and learning materials are critical ingredients in learning, and the intended programme cannot be easily implemented without them. No meaningful teaching and learning takes place

without adequate resource materials (Lockheed et al, 1991). The availability and quality of resource material and the availability of appropriate facilities have a great influence on students' academic performance (Sowell, 2000). The above studies indicated that without teaching learning resources, learning is hampered and hence affects internal efficiency.

2.6 Influence of physical facilities on internal efficiency in public primary schools

Pedagogical learning attributes such as school type, learning attributes, personnel and resource are attributes that promote school achievement or students progress influence performance. Lack of these resources and facilities have been aggravated by the rapid enrollment and expansion of primary schools together with high social demand on education (Muhhana, 2012). Majority of schools in Tigania East district lack physical facilities such as toilets, libraries and classrooms. Lack of these facilities have an impact on pupils learning hence affecting schools internal efficiency.

The school's physical facilities or the school plan contributes an important component of the learning environment. The facilities include the administrative offices, classrooms, libraries, stores and the school playground. According to Bell and Rhodes (2006), these resources are important because the school uses them to advance the learning opportunities offered to the pupils. Anandu (2003) asserts that physical facilities are vital for pupils in the teaching/ learning situations. Any

trace of inadequacy leads to frustration and the motivating factor in terms of comfort diminishes (Anandu 2003). Wamahiu (2005) also notes that inappropriate school facilities such as poor sanitary facilities or lack of separated toilets may hinder girls' school attendance.

Availability of physical facilities in the school plays a major role in influencing students' academic performance. If students are expected to perform well which is an indicator of schools internal efficiency, then they should be provided with the required physical facilities. (Okumu,2005). The brief literature on school size does include a few studies that indicate small school size is associated with high student achievement (Okumu, 2005).

Physical learning environments or the places, in which formal learning occurs, range from relatively modern and well-equipped buildings to open-air gathering places. The qualities of school facilities directly affect learning and performance (Fuller, 2006). A study in India, which, sampled 59 schools found out that of these only 49 had buildings and of these, 25 had a toilet, 20 had electricity, 10 had a school library and four had a television (Carron and Chau, 2006). In this case, the quality of the learning environment was strongly correlated with pupils' achievement in Hindi (Carron & Chau, 2006). In Latin America, a study that included 50,000 students in grades three and four found that students whose schools lacked classroom materials and had an inadequate library were significantly more likely to show lower test scores and higher grade repetition

than those whose schools were well equipped (Willms, 2000). Other studies, carried out in Botswana, Nigeria and Papua New Guinea, concur with these latter findings (Pennycuick, 2003). These studies suggest that physical facilities are essential for schools internal efficiency.

Availability of physical facilities encourages meaningful learning and teaching. The headteacher should plan for the physical facilities in the schools bearing in mind that school population keeps on changing in line with change in programmes and modernization. The management of material resources entails planning, acquisition, allocation, distribution and controlling the use and maintenance of the materials. Onyango (2001) states that planning for material resources involves the identification of the resource requirements, assessing quality in terms of the needs, establishing criteria for standards, determining the cost per unit and the use of the materials whether by individuals or groups.

Wanjala (2009) observes that lack of inadequate physical facilities like libraries and classrooms affects pupils' participation in school. Lack of pupils' participation in schools is a factor of internal efficiency. He points out that enough classrooms facilitate good teaching while insufficient classrooms make the teaching difficult. Large class size leads to difficult work both in preparation and in marking. It also strains the text books usage consequently adversely affecting the students' performance. In the study by UNESCO (2005) most schools did not have adequate classrooms to accommodate the large number of pupils enrolled

under FPE, the classrooms were generally congested and there was hardly space for movement.

Availability of physical facilities in schools plays a major role in influencing students' retention. Mwangi (2007) found out that lack of physical and learning facilities in teaching of mathematics in teachers colleges had a negative impact on student's participation in schools. A study by Macharia (2004) also found out that lack of physical facilities in teacher training colleges contributed to poor performance of students. The study implied that schools physical facilities had an impact of schools internal efficiency. The management of material resources entails planning, acquisition, allocation, distribution and controlling the use and maintenance of the materials. Onyango (2005) states that planning for material resources involves the identification of the resource requirements, assessing quality in terms of the needs, establishing criteria for standards, determining the cost per unit and the use of the materials whether by individuals or groups.

Lack or inadequate facilities in schools have been found to affect quality education. Eshiwani (1983) found that in all levels of learning availability of physical facilities such as classrooms, desks, chairs had a positive relationship to quality education. Availability of these facilities contributed to conducive learning environment hence enabling students to perform well in examinations hence provision of quality education (Earthman and Lemasters, 2006). Verspoor (2008) argues that increases in public spending will be inadequate to generate increases

in education attainment and learning achievement unless accompanied by reforms that aim at a more efficient use of available resources and find sources of additional funding.

All the primary schools in rural areas are found weak in their physical infrastructure. They have their small playground and limited rooms for library. There is no proper provision of pure drinking water and separate toilets for girls and boys. A study by Cerid (2006) found that the school's environment is also not in favor of internal efficiency of primary schools. Schools are affected by political activities and other un-necessary activities that are not in favor of teaching learning. Teachers are appointed according to their political ideology and allegiance to their parties. This affects teaching learning environment of school. Then the achievement of school naturally decreases. These factors have an influence on pupils learning and hence schools internal efficiency.

Chimakati (2012) in his study on the internal efficiency of public primary schools in Ikolomani South Division, Kakamega South District found out that grade survival, graduation rates and average years per pupil were calculated using already established formulae and the results used to compute the efficiency coefficient to determine the level of internal efficiency. He also found that public primary schools in Ikolomani South Division had a low internal efficiency of average years per graduate of 10.497 which translated to an additional 2.497 years needed to produce graduates that require an optimal 8 years of the primary

education course. A coefficient of efficiency of 0.762 or 76.2% which was at great variance with the UNESCO recommended coefficient of efficiency of over 0.90 (90%) for internally efficient education systems was established. Based on the study findings, it was recommended that teachers, educational policy makers and education planners adopt strategies that would lower the average years per graduate thus lowering the wastage rate as the first step towards increasing enrolment and completion rates and consequently ensuring an internally efficient primary education system.

A study by Khamala, (2011) on the impact of Free Primary Education (FPE) on internal efficiency of public primary schools in Londiani Division of Kipkelion District revealed that after the introduction of FPE enrolment in all schools went up in all classes. However, dropout cases started to rise after two or three years. Besides, there were many overage pupils who enrolled. The main factors which contributed to dropout and absenteeism included repeating classes, domestic chores, overage and underage, poverty, parental negligence, drugs and circumcision rites. Many schools had inadequate teaching staff, inadequate desks and toilets but the textbook-pupil sharing ratio was very good at an average of 1:2 in all the subjects except Social Studies. Besides, indiscipline of pupils and congestion in classrooms were also major constraints faced by teachers during the teaching-learning process.

2.7 Summary of literature review

The review of literature has focused on the determinants of internal efficiency in primary schools. Finan (2010) has established that family's economic background influences greatly the child's education. Graham (2009) has shown that children from low economic backgrounds are not able to participate well in schools. Ohba (2009) found that schools found within community with low economic status have a likelihood of pupils not participating in schools hence lowers the schools internal efficiency. These study did not however focus on other areas of internal efficiency hence the gap to be filled by this study. Bett (2006) in his study found that the quality of education the learners receive bears direct relevance to the availability or lack of instructional materials while Ayoo (2002) established that the availability of schools physical facilities had effect on performance of class seven pupils in examination in Botswana. The above studies indicated that without teaching learning resources, learning is hampered and hence internal inefficiency. However the above study was conducted in other areas hence this study will be conducted in Tigania East to find out whether similar results will be arrived at. Anandu (2003) found that physical facilities are vital for pupils in the teaching/learning situations while Wamahiu (2005) revealed that inappropriate school facilities such as poor sanitary facilities or lack of separated toilets may hinder girls' school attendance. Other studies, carried out in Botswana, Nigeria and Papua New Guinea, concur with these latter findings (Pennycuick, 2003). These studies suggest that physical facilities are essential for schools internal

efficiency. While Mwangi (2007) found out that lack of physical and learning facilities in teaching of mathematics in teachers colleges had a negative impact on student's participation in schools, Macharia (2004) also found out that lack of physical facilities in teacher training colleges contributed to poor performance of students. These studies implied that schools physical facilities had an impact of schools internal efficiency. While these studies were conducted in other areas, the current study will be conducted in Tigania East district.

2.8 Theoretical framework

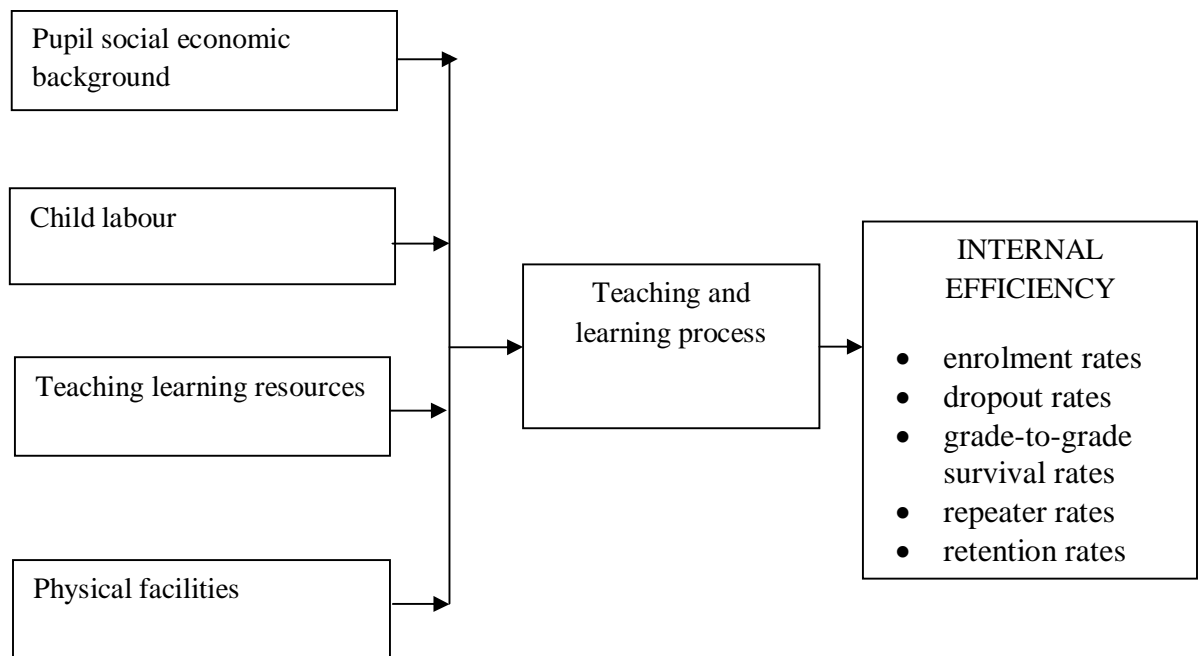
The study will be based on the production function theory by Mace (1979). In this theory, different combinations of inputs can produce different levels of outputs. The production function theory describes the relationship between inputs and outputs. According to this theory, education is a process which uses scarce financial, physical and human resources allocated to produce educated people. These resources include teaching and learning materials, infrastructure and the human resources which are inputs in the production function. However, this has not been the case hence learning is distracted by lack or late delivery of funds. These resources affect the teaching and learning, participation and quality of education in terms of performance in primary education which are the outputs in the education system. With adequate educational resources, a case of dropouts which is an indicator of internal efficiency in the education wastage is reduced. Using this theory, the study will show how different combinations of inputs can produce different levels of outputs which are indicators of internal efficiency.

Using the theory, the study will seek to explain how various determinants influence schools' internal efficiency.

2.9 Conceptual framework

The conceptual framework of the study is presented in figure 2.1

Figure 2.1 Interrelationships between variables in the determinants of internal efficiency in public primary schools



The conceptual framework has been developed to show factors affecting participation in primary. From the model the independent variables such as pupils socio economic background, child labour, physical facilities and teaching learning resources influence the dependent variables namely schools internal efficiency.

Pupils participating and completion in their schooling depend on variables under study. The interrelationship between these variables within the school setting will have different results within the school (output). All these factors will impact directly on the kind of teaching and learning (process) that goes on in schools whereby positive impact will lead to internal efficiency.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the procedures that were used in conducting the study. The section focuses on research design, target population, sample and sampling procedures, research instruments, validity of the instruments, reliability of the instruments, data collection procedures and data analysis.

3.2 Research design

According to Orodho (2003), research design is what holds all the elements of the research project together. The research design used in this study was descriptive survey, which is a method of collecting data by interviewing or administering a questionnaire to sampled individuals. The major purpose of descriptive survey was the description of the state of affairs as it exists at present and the researcher has no control over the variables. Descriptive survey also can be used to investigate a population by collecting samples to analyze and discover occurrences. The descriptive survey design was used in this study because it sought to obtain information by asking individuals about their feelings on the determinants of internal efficiency in primary schools.

3.3 Target population

Orodho (2004) defined the target population or the universe of a study as all members of a real or hypothetical set of people, events or objects to which an investigator wishes to generalize the results of the research study. The target population of this study was all the 100 headteachers in the 100 public primary schools, 1000 teachers, 10 district educational officers and 4,000 class seven pupils

3.4 Sample size and sampling techniques

A sample has been explained, Orodho (2004) as a small proportion of a target population. By studying a sample, one can know about the population without studying the entire population. Simple random sampling technique will be used to select the sample. According to Mugenda & Mugenda (2003), 10% of the target population is adequate sample. This implied that 10 headteachers out of 100 head teachers were sampled for the study. To select a sample, the researcher picked a school randomly from 100 schools, record and return the name before picking the next and so on. To sample the teachers, 10% was used which implied that 100 teachers were selected. To sample the standard seven pupils, 10% was used which implied that 400 pupils were selected. This gave each of the schools equal chance of being selected and included in the sample. All the ten education officers were selected since they are just ten.

3.5 Research instruments

The researcher used questionnaire and interview schedules to collect data according to Kombo and Tromp (2006) the advantages of using questionnaires are that the person administering the instrument has an opportunity to establish rapport, explain the purpose of the study and explain the meaning of items that may not be clear. Gay (1976) maintains that questionnaires give respondents freedom to express their views or opinions and also to make suggestions. The questionnaire was used for the headteachers and teachers. The questionnaire had both structured and unstructured items addressing the research objectives. The researcher also used interview for the education officers.

3.6 Instrument Validity

According to Kombo and Tromp (2006), validity of a test is a measure of how well a test measures what it is supposed to measure. The pilot study helped to improve face validity and content of the instruments. The researcher used face validity to review and develop an informal opinion as to whether or not the test is measuring what it is supposed to measure. Content validity on the other hand was used by the researcher to check whether the items in the questionnaire answer the research objectives. The supervisors who are experts in the area of study validated the instruments through expert judgment.

3.7 Instrument Reliability

Mugenda and Mugenda (2003) defines reliability as a measure of the degree to which a research instrument yields consistent results or data after repeated tests when administered a number of times. To enhance reliability of the instruments a pilot study was conducted in 2 schools in a neighboring district but which were not included in the main study. Test re-test method was used to test for content reliability of the instruments. Similar questions were administered and repeated after one week. The relationship between the two tests in the pilot study was calculated using the Pearson product moment correlation coefficient. This was to ensure that the instrument captures all the required data. Pearson's product moment correlation coefficient formula was used.

$$r = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{[N\sum(x)^2 - (\sum x)^2][N\sum(y)^2 - (\sum y)^2]}}$$

The questionnaire revealed a correlation coefficient of 0.84. According to Mugenda and Mugenda (2003) a coefficient of 0.80 or more will show that there is high reliability of data.

3.8 Data collection procedure

The researcher sought a research permit from the National Council for Science and Technology (NCST). The researcher then proceeded to report to the District Commissioner and District Education Officer, Tigania East District and thereafter wrote letters to the headteachers to be allowed to do the study. The researcher

visited the selected schools, created rapport with the respondents and explained the purpose of the study and then administered the questionnaire to the respondents. The completed questionnaires were collected once they had been filled.

3.9 Data analysis techniques

Data analysis followed after the data was collected. The research yield both qualitative and quantitative data from the structured and the unstructured items. Coding was done for the structured items. The analysis of the coded data was done using the Statistical Package for Social Sciences (SPSS). Quantitative and qualitative methods of data analysis were used in which descriptive statistics like frequencies and percentages were applied to summarize quantitative data while the qualitative data was arranged into themes. Quantitative data was analysed in form of frequencies (f) and percentages (%) while qualitative data from open ended questions was analysed according to the themes in the research objectives.

To test the relationship between the independent and dependent variables, regression analysis was used. The *regression equation* takes the form $Y = b_1 * x_1 + b_2 * x_2 + c + e$, where Y is the true dependent, the b's are the regression coefficients for the corresponding x (independent) terms, where c is the constant or intercept, and e is the error term reflected in the residuals. Sometimes this is expressed more simply as $y = b_1 * x_1 + b_2 * x_2 + c$, where y is the estimated dependent and c is the constant (which includes the error term). The study employed multiple

regressions where the researcher identified several predictor variables for each of the objective correlated all identified variables against the criterion variable (completion rates) to determine how strongly the variables related. Correlation coefficients have a value between -1 and +1. A positive coefficient means that x and y values increases and decrease in the same direction. A negative correlation means that as x and y move in opposite directions where one increases as the other decreases. Coefficient of 0 means x and y are associated randomly. Multiple regressions were performed to show the cumulative effect of the regression results. In regression analysis the R value is the slope of the linear regression model, such that if the R value is close to 0 the change in y (dependent) over relative to the change in x (predictor variable) is very small, the larger this value is, the less random the values are.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This study investigated the determinants of internal efficiency in public primary schools in Tigania East district. The study specifically investigated how pupils parents' economic background affect the internal efficiency , the influence of child labour on internal efficiency, the influence of school physical facilities on internal efficiency and assessed the influence of teaching learning resources on internal efficiency in public primary school in Tigania East District. This chapter also discusses those findings in line with the views that had been advanced earlier in the study in then review.

4.2 Response rate

Out of the 10 Education Officers, 10 headteachers, 100 teachers and 400 pupils sampled in the study, 10 Education Officers, 10 headteachers, 95 teachers and 385 pupils responded and returned the questionnaire. This shows that there was a fair representation of respondents.

4.3 Internal Efficiency in primary schools

To establish the internal efficiency in public primary schools in Tigania East district, the respondents were posed with items that sought to establish the same.

The results of the analysis are presented in the following subsections:

When headteachers were asked whether they had pupils missing to attend school, they responded as Table 4.1

Table 4.1 Headteachers responses on whether they had pupils missing to attend school

Response	F	%
Yes	2	20.0
Sometimes	5	50.0
Never	3	30.0
Total	10	100.0

Data shows that majority 5(50.0%) of headteachers sometimes had pupils missing school while 3(30.0%) of headteachers had no cases of pupils missing school. Asked to indicate some of the reasons the pupils gave for missing school, headteachers revealed that it was due to inability of their families to provide for school needs i.e. family's economic background.

Asked to indicate the reasons why some pupils dropped out of school, headteachers indicated that it was due to lack of basic needs, child labour and inability of their families to provide for their needs hence joining other families' members in economic activities in the area. This indicates high poverty levels in the area making pupils to drop out of school.

4.4 Pupils Parents' economic background

The researcher sought to establish how pupils' parents' economic background affected the internal efficiency in public primary schools. The headteachers were asked to indicate the average income of parents in their school, they responded as Table 4.2.

Table 4.2 Headteachers responses on the average income of parents in the school

Response	F	%
High	2	20.0
Medium	4	40.0
Low	4	40.0
Total	10	100.0

Data shows that 40.0 percent of headteachers indicated that income of parents in the school was medium, the same number of headteachers indicated that it was low while 20.0 percent of headteachers revealed that it was high. This shows that only 20% of parents can adequately sustain children in school hence lowering retention rates. When teachers were asked to respond to the same item, they responded as Table 4.3

Table 4.3 Teachers responses on the average income of parents in the school

Response	F	%
High	16	16.8
Medium	39	41.1
Low	40	42.1
Total	95	100.0

Data shows that 42.1 percent of teachers indicated that the income of the parents in their school was low, 39 (41.1%) of teachers indicated that it was medium while 16 (16.8%) of teachers indicated that it was high. When headteachers were asked whether parents were able to provide for their children school needs, they revealed that not all parents were able to provide their children school needs. Teachers responses show that only 16.8% of parents have high income and can retain their children in school.

The study further sought to establish the source of parents' livelihood. The respondents indicated that the main livelihood of the parents was Miraa farming. Table 4.4 shows teachers responses on whether parents had difficulties in payment of any school levies/fees charged.

Table 4.4 Teachers responses on whether parents had difficulties in payment of any school levis/fees charged

Response	F	%
Yes	40	42.1
Sometimes	43	45.3
Never	12	12.6
Total	95	100.0

Findings indicates that 40(42.1%) of teachers indicated that parents had difficulties in payment of any school Levis/fees charged, 43(45.3%) of teachers indicated that they had difficulties sometimes while 12(12.6%) of teachers indicated that parents in their schools had no difficulty in payment of any school levies. 12.6% of teachers indicate that parents never fail to pay school levies. This is a small number hence funding for education from other sources is required.

When headteachers were asked to indicate the same, majority 5(50.0%) of headteachers revealed that sometimes parents had difficulties in payment of any school Levis/fees charged. The researcher further sought to establish the percentages of parents that had difficulties in payment of any school Levis/fees charged. Table 4.5 shows headteachers responses.

Table 4.5 Headteachers responses on the percentages of parents that had difficulties in payment of any school Levis/fees charged.

Response	F	%
10	2	20.0
20	4	40.0
30 percent and above	4	40.0
Total	10	100.0

Table 4.5 shows that 4(40.0%) of headteachers indicated that they had about 20% of parents who had difficulties in payment of any school Levis/fees charged, the same number of headteachers indicated that they had 30% and above of parents while 2(20.0%) of headteachers had 10% of parents. Table 4.6 shows teachers responses on the same item.

Table 4.6 Teachers responses on the percentages of parents that had difficulties in payment of any school Levis/fees charged.

Response	F	%
10%	14	14.7
20%	41	43.2
30% and above	40	42.1
Total	95	100.0

Table 4.6 shows that 41(43.2%) of teachers indicated that they had about 20% of parents who had difficulties in payment of any school Levis/fees charged, 40(42.1%) of teachers indicated that they had 30% and above of parents while 14(14.7%) of teachers had 10% of parents.

Asked to indicate the causes of above named difficulties, headteachers and teachers revealed that some parents did not value education as parents concentrated on the economic background. This implies that work at home created low concentration of both parents and the pupils at school which caused low achievements in their educational status hence lowering schools internal efficiency. Table 4.7 shows pupils responses on parents' economic background

Table 4.7 Pupils responses on parents' economic background

Statement	Yes		No	
	F	%	F	%
Are your parents able to provide for your school needs	105	27.3	280	72.7
Do you have adequate place to study while at home	57	14.8	328	85.2
Are you sent home because your parents are not able to pay school levies?	136	35.3	249	64.7
Do you miss out school to assist your parents in their jobs	252	65.5	133	34.5

Table 4.7 shows that majority 280(72.7%) of pupils indicated that their parents were not able to provide their school needs, majority 328(85.2%) of pupils indicated that they lacked adequate place to study while at home. Data further shows that majority 249(64.7%) of pupils were not sent home because of school levies while majority 252(65.5%) of pupils indicated that they missed out school to assist their parents in their jobs. Findings from the Education officers revealed that the economic background of parents of children in primary schools in the area was medium as their source of living was from miraa farming.

The officers further added that those children who came from an economically stable and happy family were psychologically and emotionally balanced hence able to participate in school.

4.5 Influence of child labour on internal efficiency in public primary

To establish the influence of child labour on internal efficiency in public primary, the researcher posed items to the respondents to establish the same. Pupils were asked whether there were pupils in their school who missed out school to provide for the family. Data revealed that majority 260(67.5%) of pupils indicated that there were pupils in their school who missed out school to provide for the family while 125(32.5%) of pupils indicated that there were no pupils who missed out school to provide for the family. When headteachers were asked whether they had encountered reported cases of pupils' participation in child labour in their school,

majority 5(50.0%) of headteachers indicated that they had such cases. Teachers responded as Table 4.8

Table 4.8 Teachers responses on whether they encounter reported cases of pupils' participation in child labour in the school

Response	F	%
Yes	48	50.5
Sometimes	35	36.8
Never	12	12.6
Total	95	100.0

Data shows that majority 48 (50.5%) of teachers had encountered reported cases of pupils' participation in child labour in the school, 35 (36.8%) of teachers encounter sometimes while 12 (12.6%) of teachers have never encountered child labour cases. Table 4.10 shows headteachers responses on the same item.

Table 4.10 Headteachers responses on whether they had reported cases where pupils miss out school because of child labour

Response	F	%
Yes	2	20.0
Sometimes	7	70.0
Never	1	10.0
Total	10	100.0

Findings indicates that majority 7(70.0%) of headteachers had reported cases where pupils miss out school because of child labour, 2(20.0%) of headteachers had the cases while a significant number 1(10.0%) of headteachers never had cases where pupils miss out school because of child labour. This implies that there was child labour in the community due to inadequate capacity to enforce minimum requirement for schooling and work. Headteachers further added that children served as major contributors to family income.

To establish the economic activities that prevented children for attending school in the area, headteachers and teachers were asked to indicate the same. Headteachers responses is tabulated in table 4.11

Table 4.11 Headteachers responses on the economic activities that prevented children for attending school in the area

Response	F	%
Plucking and picking of Miraa	6	60.0
Selling Miraa	3	30.0
Other forms of farming	1	10.0
Total	10	100.0

Findings shows that 6(60.0%) of headteachers indicated that plucking and picking miraa was the economic activities that prevented children from attending school in the area, 3(30.0%) of headteachers indicated selling miraa while 1(10.0%) of headteachers indicated other form of farming. This agreed with majority 60(63.2%) of teachers who indicated that plucking and picking of miraa prevented children from attending schools in the area.

Asked to indicate how these activities affected pupils learning, headteachers indicated that there were cases of drop out where boys were involved in activities of miraa harvesting and girls were employed as house helps and child minders in urban and rural areas. This agreed with Koech (1999) who noted that child labour was rampant practice that continues to keep children out of school.

Headteachers further added that child labour had affected pupils learning as pupils who were contributors to family income never concentrated in class work hence performing poorly.

When the education officers were asked to comment on the rate of child labour in primary schools in the area, they indicated that that children from unstable economic family background were not balanced emotionally and psychologically to learn hence dropping out before completion of the education cycle hence affecting schools internal efficiency.

4.6 Influence of physical facilities on internal efficiency in public primary schools

The study sought to establish the influence of physical facilities on internal efficiency in public primary schools. Pupils' responses is tabulated in Table 4.12.

Table 4.12 Pupils responses on physical facilities in the schools

Statement	Yes		No	
	F	%	F	%
Do you have adequate sitting place in your class?	84	21.8	301	78.2
Do you sit more than the required number of pupils in a desk?	234	60.8	151	39.2
Are there pupils who sit on the floor since there are no desks	138	35.8	247	64.2

Table 4.12 shows that majority 301(78.2%) of pupils indicated that they did not have adequate sitting place in their class, majority 234(60.8%) of pupils indicated that they sat more than the required number of pupils in a desk while 247(64.2%) of pupils revealed that there were no pupils who sat on the floor since there were no desks.

When the headteacher were asked to indicate the adequacy of physical facilities in their school, they responded as Table 4.13

Table 4.13 Headteachers responses on the adequacy of physical facilities in their school

Physical facilities	Adequate		Not adequate		Not available	
	F	%	F	%	F	%
Furniture	3	30.0	7	70.0	0	0.0
Libraries	1	10.0	1	10.0	8	80.0
Classrooms	3	30.0	7	70.0	0	0.0
Toilets	2	20.0	8	80.0	0	0.0
Water	4	40.0	5	50.0	1	10.0
Play grounds	1	10.0	5	50.0	4	40.0

Table 4.13 shows that majority 7(70.0%) of headteachers indicated that furniture and classrooms were inadequate. majority 8(80.0%) of headteachers revealed that toilets were inadequate while majority 5(50.0%) of headteachers indicated that water and play ground were not adequate. Generally, majority 7(70.0%) of headteachers revealed that the physical facilities in their schools were inadequate.

Table 4.15 presents teachers responses on the adequacy of physical facilities.

Table 4.14 Teachers responses on the adequacy of physical facilities in their school

Physical facilities	Adequate		Not adequate		Not available	
	F	%	F	%	F	%
Furniture	18	18.9	77	81.0	0	0.0
Libraries	1	1.1	30	31.6	64	67.3
Classrooms	15	15.7	80	84.2	0	0.0
Toilets	14	14.7	80	84.2	1	0.0
Water	30	31.5	58	61.1	7	7.4
Play grounds	8	8.4	62	65.3	25	26.3

Majority 77(81.0%) of teachers indicated that furniture were not adequate, 64(67.3%) of teachers indicated that they lacked libraries in their schools. Data further shows that majority 80(84.2%) of teachers had inadequate classrooms and toilets in their school while majority 62(65.3%) of teachers indicated that they had inadequate play grounds in the school.

Generally, majority 88(92.6%) of teachers revealed that the physical facilities in their schools were inadequate. This revealed that the performance of the school was attributed to inadequacy of facilities in the school.

When headteachers were asked whether the availability of physical facilities had affected teaching and learning in their school, they responded as table 4.15

Table 4.15 Headteachers responses on whether availability of physical facilities affected teaching and learning in the school

Response	F	%
Yes	8	80.0
No	2	20.0
Total	10	100.0

Findings shows that majority 8(80.0%) of headteacher indicated that availability of physical facilities affected teaching and learning in the school. Table 4.17 tabulates teachers' responses on the same item

Table 4.16 Teachers responses on whether availability of physical facilities affected teaching and learning in the school

Response	F	%
Yes	72	75.8
No	23	24.2
Total	95	100.0

Majority 72(75.8%) of teachers indicated that availability of physical facilities affected teaching and learning in the school. Asked to indicate the ways in which

the facilities affected teaching and learning in the school, headteachers and teachers indicated that due to the rapid enrollment and expansion of primary schools together with high social demand on education resources and facilities have been inadequate hence being difficult to advance the learning opportunities offered to the pupils. This agreed with Wamahiu (2005) who revealed that any trace of inadequacy leads to frustration and the motivating factor in terms of comfort diminishes. He further noted that inappropriate school facilities such as poor sanitary facilities or lack of separated toilets may hinder girls' school attendance.

On the availability of school physical facilities in primary schools in the area, the Education Officers indicated that pupils whose schools lacked facilities and materials were significantly more likely to perform poorly than those pupils whose schools were well equipped. They further added that availability of physical facilities encourages meaningful learning and teaching.

4.7 Influence of availability of teaching learning resources on internal efficiency

The researcher sought to investigate the influence of availability of teaching learning resources on internal efficiency. Table 4.17 tabulates pupils' responses on the teaching learning resources in the school.

Table 4.17 Pupils responses on the teaching learning resources in the school

Statement	Yes		No	
	F	%	F	%
Do you always have writing materials	188	48.8	197	51.2
Does your school provide you with books and pens/pencils	227	59.0	158	41.0
Are there enough textbooks in your class	190	49.4	195	50.6

Data shows that majority 197(51.2%) of pupils indicated that they did not have writing materials always, majority 227(59.0%) of pupils indicated that their school provided them with books and pens/pencils while majority 195(50.6%) of pupils indicated that there were no enough textbooks in their class. Majority of pupils 261(67.8%) indicated that they shared text books more than three pupils.

Table 4.18 shows headteachers responses on availability of teaching learning resources in the school.

Table 4.18 Headteachers responses on availability of teaching learning resources in the school

Teaching learning resources	Adequate		Not adequate		Not available	
	F	%	F	%	F	%
Teaching Aids	5	50.0	5	50.0	0	0.0
Text books	5	50.0	5	50.0	0	0.0
Reference materials	2	20.0	7	70.0	1	10.0
Teachers	1	10.0	9	90.0	0	0.0

Table 4.18 shows that majority 5(50.0%) of headteachers had inadequate teaching aids and textbooks. Data further shows that majority 7(70.0%) of headteachers indicated that they had inadequate reference materials while majority 9(90.0%) of headteachers revealed that teachers in their school were inadequate. Generally, majority 9(90.0%) of headteachers rated the teaching learning resources in their school being inadequate.

Table 4.19 shows teachers responses on availability of teaching learning resources in the school

Table 4.19 Teachers responses on availability of teaching learning resources in the school

Teaching learning resources	Adequate		Not adequate		Not available	
	F	%	F	%	F	%
Teaching Aids	31	32.6	56	58.9	8	8.4
Text books	25	26.3	70	73.6	0	0.0
Reference materials	8	8.4	79	83.2	8	8.4
Teachers	24	25.2	71	74.7	0	0.0

Findings indicates that majority 56(58.9%) of teachers indicated that they had inadequate teaching aids, majority 70(73.6%) of teachers indicated that text books were inadequate. Data further shows that majority 79(83.2%) of teachers revealed that reference materials were not adequate while majority 71(74.7%) indicated that teachers in the school were not adequate.

Table 4.20 shows teachers responses on teaching and learning resources.

Table 4.20 Teachers responses on teaching and learning resources.

Statement	Agree		Undecided		Disagree	
	F	%	F	%	F	%
The teaching staff consists of trained and qualified teachers	65	68.4	14	14.7	16	16.8
The teachers are adequate according to the curriculum based establishment	30	31.6	0	0.0	65	68.4
There is adequate non-teaching staff	8	8.4	40	42.1	47	49.5
The work load for staff is just too much	76	80.0	11	11.6	8	8.4

Findings indicated that majority 65(68.4%) of teachers agreed that the teaching staff consists of trained and qualified teachers, the same number of teachers disagreed that teachers were adequate according to the curriculum based establishment. Data further shows that majority 76(80.0%) of teachers agreed that the work load for staff was just too much while 47(49.5%) of teachers disagreed that there was adequate non-teaching staff in their schools.

The Education Officers revealed that availability of teaching learning resources had an impact on pupils learning process hence influencing their academic performance. The officers indicated that it is only with learning materials that

pupils can learn to work independently or in groups. They further added that teaching and learning materials were critical ingredients in learning, and the intended programme cannot be easily implemented without them. This agreed with Fullan (1992) who noted that performance demands resources for teaching and learning.

When teachers were asked to recommend what the school administration should do in a bid to improve pupils learning in school, they revealed that administration should provide the required physical facilities to pupils if students were expected to perform well which is an indicator of schools internal efficiency.

They further added that enough classrooms facilitate good teaching while insufficient classrooms make the teaching difficult. Large class size leads to difficult work both in preparation and in marking hence adequate facilities should be provided as inadequate physical facilities and resources strains the text books usage consequently adversely affecting the students' performance.

Headteachers recommend that various stakeholders including parents should take part in provision of instructional materials as they provide information, and provide opportunities to pupils to use what they have learnt. Headteachers further recommended that parents should be educated on importance of education to their children as the families that were not able to provide for school needs were less likely not to participate in education and hence making the school not achieve its goal of enabling pupil participation in learning.

To establish how the several determinants of internal efficiency: parents' economic background, child labour, school physical facilities and teaching learning resources influenced internal efficiency (completion), categorical regression was carried out against learner completion rates.

Table 4.21 displays the regression results for the various variables

Table 4.21 *Correlations of variables against completion*

Ordered probit regression						
Number of obs	=	602				
LR chi2(6)	=	55.54				
Prob > chi2	=	0.0000				
Log likelihood	=	-1981.4632				
Pseudo R2	=	0.0138				
Completion rate	Coef.	Std. Error	z	P>z	[95% Confidence Interval]	
Parents' economic background	0.010606	0.088256	0.12	0.904	-0.16237	0.183583
Child labour	0.180287	0.076878	2.35	0.019	0.029609	0.330964
School physical facilities	0.169785	0.08034	2.11	0.035	0.012323	0.327248
Teaching learning resources	0.115097	0.107952	1.07	0.286	-0.09648	0.326678

Data shows Prob>chi2 =0.000. The p-value of the model is shown in the table 4.22 for each of the variables regressed against completion rate. It indicates the reliability of X to predict Y. For a statistically significant relationship the p-value should be lower than 0.05. R-square shows the amount of variance of Y explained by X. In this case the model explains 1.38% of the variance in completion rate.

The data showed that parents' economic background has a p value of 0.01 which is lower than 0.05, (significant level) hence was statistically significant in explaining completion rates. The coefficient for parents' economic background was 0.18028 which meant for a one unit increase in parents' economic background completion rates there was a 0.180 increase in completion rates.

As per the child labour, it has a p value of 0.03 which is lower than significant level (0.05) hence it was revealed that child labour was statistically significant in explaining completion rates. The coefficient was determined to be 0.169 which means for every increase in child labour at 0.169 there was a one unit increase in completion rates. This implies the regression model definitively determined a relationship between the child labour and completion rate.

For the variable school physical facilities, the data dealt with a categorical variable. The data showed that school physical facilities had a p value of 0.28 which was higher than 0.05 hence school physical facilities was not statistically significant in determining completion rates. This implied that the regression model did not definitively determine a relationship between the completion rate and school physical facilities.

It was further observed that teaching learning resource was not statistically significant with p value of 0.43 which implies that the regression model cannot definitively determined a relationship between the completion rate and the teaching learning resource. The duration at the centre was statistically significant.

This was shown by a p value of 0.02 which was lower than 0.05. This implied that the regression model definitively determined a relationship between the completion rate and the teaching learning resource. The coefficient was determined to be 0.14148 which meant that for a one unit increase in completion rates you will need a 0.14148 increase in teaching learning resource.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study, conclusions, and recommendations and also presents suggestions for further research.

5.2 Summary

The purpose of the study was to investigate the determinants of internal efficiency in public primary schools in Tigania East district. Four research questions were formulated to guide the study. Research objective one sought to determine how pupils parents' economic background affect the internal efficiency, objective two sought to determine the influence of child labour on internal efficiency, objective three sought to establish the influence of school physical facilities on internal efficiency while research objective four assessed the influence of teaching learning resources on internal efficiency in public primary school in Tigania East District.

The study adopted a descriptive survey design. The sample comprised of 10 headteachers, 100 teachers, 10 Education officers and 400 standard seven pupils in the District. Data was collected by use of questionnaires and interviews and were analyzed by use of qualitative and quantitative technique.

Findings revealed that majority 5(50.0%) of headteachers sometimes had pupils missing school due to inability of their families to provide for school needs. Findings on economic background of the parents in the area indicated that main source of parents' livelihood was Miraa farming. Majority 5(50.0%) of headteachers revealed that sometimes parents had difficulties in payment of any school Levis/fees charged.

Majority 280(72.7%) of pupils revealed that their parents were not able to provide their school needs, majority 328(85.2%) of pupils indicated that they lacked adequate place to study while at home. Findings further indicated that the economic background of parents of children in primary schools in the area was medium as their source of living was from miraa farming as indicated by the Education officers. The officers further added that those children who came from an economically stable and happy family were psychologically and emotionally balanced hence able to participate in school.

On the influence of child labour on internal efficiency in public primary, finding revealed that majority 260(67.5%) of pupils indicated that there were pupils in their school who missed out school to provide for the family. Majority 5(50.0%) of the headteachers encountered reported cases of pupils' participation in child labour in their school. The study also found out that children from unstable economic family background were not balanced emotionally and psychologically

to learn hence dropping out before completion of the education which affect schools internal efficiency.

On the influence of physical facilities on internal efficiency in public primary schools, the study found out that majority 301(78.2%) of pupils did not have adequate sitting place in their class, majority 234(60.8%) of pupils sat more than the required number of pupils in a desk. Findings further revealed that furniture and classrooms were inadequate as indicated by majority 7(70.0%) of headteachers. Toilets were inadequate as indicated by majority 8(80.0%) of headteachers.

Generally, majority 88(92.6%) of teachers revealed that the physical facilities in their schools were inadequate. The study revealed that poor performance of the school was attributed to inadequacy of facilities in the schools. The study also found out that due to the rapid enrollment and expansion of primary schools together with high social demand on education, resources and facilities have been inadequate hence being difficult to advance the learning opportunities offered to the pupils. Pupils whose schools lacked facilities and materials were significantly more likely to perform poor than those pupils whose schools were well equipped as indicated by Education officers in the area.

Findings on the influence of availability of teaching learning resources on internal efficiency revealed that majority 197(51.2%) of pupils did not have writing

materials always, and majority 195(50.6%) of pupils indicated that there were not enough textbooks in their classes.

Data further shows that majority 56(58.9%) of teachers had inadequate teaching aids, majority 70(73.6%) of teachers text books were inadequate. Data further shows that majority 79(83.2%) of teachers reference materials were not adequate while majority 71(74.7%) indicated that teachers in the school were not adequate.

The study also found out that availability of teaching learning resources had an impact on pupils learning process hence influencing their academic performance as indicated by the Education officers. Teaching and learning materials were critical ingredients in learning, and the intended programme cannot be easily implemented without them as revealed by the officers. It was also found that in order to improve pupils learning in school, the school administration should provide the required physical facilities to pupils if students were expected to perform well which is an indicator of schools internal efficiency.

In determining how various variables impacted on internal efficiency, categorical regression were carried out against learner completion rates. Data showed that parents' economic background has a p value of 0.01 which is lower than 0.05, (significant level) hence was statistically significant in explaining completion rates. The coefficient for parents' economic background was 0.18028 which meant for a one unit increase in parents' economic background completion rates there was a 0.180 increase in completion rates.

As per the child labour, it has a p value of 0.03 which is lower than significant level (0.05) hence it was revealed that child labour was statistically significant in explaining completion rates. The coefficient was determined to be 0.169 which means for every increase in child labour at 0.169 there was a one unit increase in completion rates.

This implies the regression model definitively determined a relationship between the child labour and completion rate.

For the variable school physical facilities, the data dealt with a categorical variable. The data showed that school physical facilities had a p value of 0.28 which was higher than 0.05 hence school physical facilities was not statistically significant in determining completion rates. This implied that the regression model did not definitively determine a relationship between the completion rate and school physical facilities.

It was further observed that teaching learning resource was not statistically significant with p value of 0.43 which implies that the regression model could not definitively determined a relationship between the completion rate and the teaching learning resource. The teaching learning resource was statistically significant. This was shown by a p value of 0.02 which was lower than 0.05. This implied that the regression model definitively determined a relationship between the completion rate and the teaching learning resource. The coefficient was

determined to be 0.14148 which meant that for a one unit increase in completion rates you will need a 0.14148 increase in teaching learning resource.

5.3 Conclusions

Based on the findings, it was concluded that sometimes pupils missed school due to inability of their families to provide for school needs i.e. family's economic background. Majority of parents were not able to provide their school needs and pupils indicated that they lacked adequate place to study while at home. The study also concluded that the economic background of parents of children in primary schools in the area was medium as their source of living was from Miraa farming as indicated by the Education officers.

On the influence of child labour on internal efficiency in public primary, the study concluded that there were pupils in their school who missed out school to provide for the family and schools encountered reported cases of pupils' participation in child labour in their community. The study also concluded that children from unstable economic family background were not emotionally balanced and psychologically set to learn hence dropping out before completion of the education cycle which affect schools internal efficiency.

On the influence of physical facilities on internal efficiency in public primary schools, the study concluded that pupils did not have adequate sitting place in their classes and they sat more than the required number of pupils in a desk.

The study also concluded that due to the rapid enrollment and expansion of primary schools together with high social demand on education resources and facilities have been inadequate hence being difficult to advance the learning opportunities offered to the pupils. It was also concluded that pupils whose schools lacked facilities and materials were significantly more likely to perform poorly than those pupils whose schools were well equipped. The study further concluded that majority of pupils did not have writing materials always and there were no enough textbooks in the class. Teachers had inadequate teaching aids, textbooks, reference materials and teachers in the schools.

The study finally concluded that availability of teaching learning resources had an impact on pupils learning process hence influencing their academic performance. Teaching and learning materials were critical ingredients in learning, and the intended programme cannot be easily implemented without them and in order to improve pupils learning in school, the study concluded that the school administration should provide with the required physical facilities to pupils if students are expected to perform well which is an indicator of schools internal efficiency.

The study also concluded that parents' economic background has a p value of 0.01 which is lower than 0.05, (significant level) hence was statistically significant in explaining completion rates. Child labour was statistically significant in explaining completion rates. The coefficient was determined to be

0.169 which means for every increase in child labour at 0.169 there was a one unit increase in completion rates. School physical facilities had a p value of 0.28 which was higher than 0.05 hence school physical facilities was not statistically significant in determining completion rates. Teaching learning resource was statistically significant. This was shown by a p value of 0.02 which was lower than 0.05.

5.4 Recommendations

Based on the findings, the following recommendations were made:

- i. The devolved government should seek ways of empowering the parents economically so that they are able to provide for the schools needs of their children.
- ii. The provincial administration should put up measures to curb child labour such as involvement in Miraa growing so that pupils can fully participate in learning.
- iii. The headteachers and PTA should seek for ways of providing school physical facilities and teaching learning resources so that effective teaching and learning can be achieved in schools.

5.5 Suggestions for further research

Taking the limitations and delimitations of the study, the following areas were suggested for further study

- i. Since this study was conducted in one administrative district, there is need to carry out a similar study in other districts to establish whether similar of different results will be realized.
- ii. Taking into consideration that the study was carried out in primary schools, there is a need to carry out a study in secondary school to assess the factors that influence internal efficiency.
- iii. This study focuses on factors such as pupils parents' economic background, child labour, school physical facilities and teaching learning resources. There is a need to carry out a study on how other factors affect internal efficiency.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

University of Nairobi,
School of Education
P.O. Box.39007
Nairobi
April, 2013

The head teacher

_____ Primary School,

Dear Sir/Madam

Ref: PERMISSION TO CONDUCT RESEARCH IN YOUR SCHOOL

I am a student from the University of Nairobi Department of Educational Administration and planning, school of education. As part of my masters in education course, I am carrying out a study on the “Determinants of internal efficiency in public primary schools in Tigania East District-Meru County”. In this regard I kindly request for your permission to collect data in your school. I wish to assure you and your staff that the information you provide is purely for the research purposes and your identity will be treated with utmost confidentiality.

Thank you in advance.

Yours Faithfully,

Jacob Kiungah

APPENDIX II

QUESTIONNAIRE FOR THE HEADTEACHERS

The purpose of this questionnaire is to solicit information on the determinants of internal efficiency in primary schools in Tigania East district. You are asked to participate in this study by filling in the questionnaire. You are assured that your identity will be treated confidentially. Please answer all the questions provided as honestly as possible, to the best of your knowledge.

Section A: Internal Efficiency

1. a) Do you have pupils missing to attend school?

Yes [] Sometimes [] Never []

b) What are some of the reasons do they give for missing school _____

2. a) How many children have dropped your school in the last five years? _____

b) What are the reasons for dropping out of school? _____

3. How many children have completed your school in the last five years in standard eight? _____

If few have completed, what were the reasons _____

Section B: Pupils Parents' Economic Background

4. What is the average income of parents in your school?

A. High B. Medium C. Low

Are parents able to provide for their children school needs? _____

5. a) Do parents have difficulties in payment of any school Levis/fees charged?

A. Yes B. No

b) If yes, at least what percentages of parents have difficulties (tick appropriate)

A. 5% B. 10% C. 20% D. 30% and above

c) What are the causes of above named difficulties _____

Section C: Child Labor

6. a) Do you encounter reported cases of pupils' participation in child labour in your school?

Yes [] Sometimes [] Never []

b) What are the causes _____

7. Are there reported cases where pupils miss out school because of child labour?

Yes [] Sometimes [] Never []

8. a) What economic activities prevent children for attending school in your area?

A. Plucking and packing of Miraa C. Selling Miraa

B. Other forms of farming D. Trading in other goods

Others (Specify) _____

b) How does the activities above affect pupils learning

9. In your own opinion, how has child labour affect pupils learning?

Section D: School Physical Activities

10. Please indicate whether the following facilities are adequate in your school.

Facilities	Very adequate	Adequate	Not adequate	Not available
Furniture				
Libraries				
Classrooms				
Toilets				
Water				
Play grounds				
others				

11. Generally, how do you rate the adequacy of physical facilities?

Adequate [] Inadequate []

12. Has the availability of physical facilities affected teaching and learning in your school?

Yes [] No []

If Yes, in what ways

Section E: Teaching and Learning Resources

13. Please indicate whether the following teaching and learning resources are adequate in your school.

Resource	Very adequate	Adequate	Not adequate	Not available
Teaching Aids				
Text books				
Reference materials				
Teachers				
others				

14. In general how would you rate the adequacy of teaching learning resources in your school?

Adequate [] Inadequate []

b) If no, how does that affect pupils learning?

15. What would you recommend the school administration should do in a bid to improve pupils learning in school?

APPENDIX III

QUESTIONNAIRE FOR TEACHERS

The purpose of this questionnaire is to solicit information on the determinants of internal efficiency in primary schools in Tigania East district. You are asked to participate in this study by filling in the questionnaire. You are assured that your identity will be treated confidentially. Please answer all the questions provided as honestly as possible, to the best of your knowledge.

Section A: Pupils Parents' Economic Background

1. How would you rate parents economic status of majority of the parents

- A. High B. Medium C. Low

2. . What is the source of their livelihood?

.....
.....

3. . Do they have difficulties in payment of any school Levis/fees charged?

- A. Yes B. No

4. . If yes, at least what percentages of parents have difficulties (tick appropriate)

- A. 5% B. 10% C. 20% D. 30% and above

Section B: Child Labor

5. Do you encounter reported cases of pupils' participation in child labour in your school?

- Yes [] Sometimes [] Never []

6. Are there reported cases where pupils miss out school because of child labour?

Yes [] Sometimes [] Never []

7. What economic activities prevent children for attending school in your area?

A. Plucking and packing of Miraa C. Selling Miraa

B. Other forms of farming D. Trading in other goods

Others (Specify) _____

8. In your own opinion, how has child labour affected pupils learning?

Section D: School Physical Activities

9. Please indicate whether the following facilities are adequate in your school.

Facilities	Very adequate	Adequate	Not adequate	Not available
Furniture				
Libraries				
Classrooms				
Toilets				
Water				
Play grounds				
others				

10. Generally, how do you rate the adequacy of physical facilities?

Adequate [] Inadequate []

11. Has the availability of physical facilities affected teaching and learning in your school?

Yes [] No []

If Yes, in what ways

Section E: Teaching and Learning Resources

12. Please indicate whether the following teaching and learning resources are adequate in your school.

Resource	Very adequate	Adequate	Not adequate	Not available
Teaching Aids				
Text books				
Reference materials				
Teachers				
others				

13. Statements below are related to teaching and learning resources. Please tick appropriately.

Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
The teaching staff consists of trained and qualified teachers					
The teachers are adequate according to the curriculum based establishment					
There is adequate non-teaching staff					
The work load for staff is just too much					

14. In general how would you rate the adequacy of teaching learning resources in your school?

Adequate [] Inadequate []

b) If no, how does that affect pupils learning?

15. What would you recommend the school administration should do in a bid to improve internal efficiency?

APPENDIX IV:

QUESTIONNAIRE FOR PUPILS

The purpose of this questionnaire guide is to solicit information on the determinants of internal efficiency in primary schools in Tigania East district. You are asked to participate in this study by responding to the questions suggested. You are assured that your identity will be treated confidentially. Please answer all the questions provided as honestly as possible, to the best of your knowledge.

1. Are you parents able to provide for your school needs

Yes [] No []

2. Do you have adequate place to study while at home

Yes [] No []

3. Are you sent home because your parents are not able to pay school levies?

4. Do you miss out school to assist your parents in their jobs?

Yes [] No []

5. Are there pupils in your school who miss out school to provide for the family?

Yes [] No []

Yes [] No []

6. Do you have adequate sitting place in your class?

Yes [] No []

7. Do you sit more than the required number of pupils in a desk?

Yes [] No []

8. Are there pupils who sit on the floor since there are desks?

9. Do you always have writing materials?

Yes [] No []

10. Does your school provide you with books and pens/pencils?

Yes [] No []

11. Are there enough textbooks in your class?

12. In case you share text books, how many of you share?

2 [] 3 [] 4 [] more than 4

APPENDIX V

INTERVIEW SCHEDULE FOR EDUCATION OFFICERS

The purpose of this interview schedule is to solicit information on the determinants of internal efficiency in primary schools in Tigania East district. You are asked to participate in this study by filling in the items in the tools. You are assured that your identity will be treated confidentially. Please answer all the questions provided as honestly as possible, to the best of your knowledge.

1 a) Comment on the economic background of parents of children in primary schools in your area?

b) How is this affecting children participation in schools in your area?

2 a) What would you say about the rate of child labour in primary schools in your area?

b) How is this affecting children learning ?

3 a) What would you say about the availability of school physical facilities in primary schools in your area?

b) How is this affecting learning?

4 a) What would you say about the availability of teaching and learning resources in primary schools in your area?

b) How is this affecting learning in the schools?

APPENDIX VI

LETTER OF AUTHORIZATION



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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

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

Date:

Ref: No.

15th November, 2013

NACOSTI/RCD/14/013/1762

Jacob Kiungah Ithuta
University of Nairobi
P.O.Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application dated 4th November, 2013 for authority to carry out research on "*Determinants of internal efficiency in public primary schools in Tigania East District,*" I am pleased to inform you that you have been authorized to undertake research in Meru County for a period ending 31st December, 2013.

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

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


DR. M. K. RUGUTT, PhD, HSC.
DEPUTY COMMISSION SECRETARY
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Copy to:

The County Commissioner
The County Director of Education
Meru County



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

APPENDIX VII
RESEARCH PERMIT

PAGE 2 **PAGE 3**

Research Permit No. NACOSTI/RCD/14/013/1762

THIS IS TO CERTIFY THAT: **Date of issue** **15th November, 2013**

Prof./Dr./Mr./Mrs./Miss/Institution **Fee received** **KSHS. 1000**

Jacob Kiungah Ithuta

(Address) University of Nairobi

P.O.Box 30197-00100, Nairobi.

has been permitted to conduct research in


Location



District

Meru **County**

On the topic: Determinants of internal efficiency

In public primary schools in Tigania East District.






Applicant's Signature **For: Secretary**
National Commission for Science, Technology & Innovation

for a period ending: 31st December, 2013.

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 Officers 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

RESEARCH CLEARANCE PERMIT

Serial No. A 630

CONDITIONS: see back page