

**FACTORS INFLUENCING PROVISION OF QUALITY EDUCATION IN
NEWLY ESTABLISHED SECONDARY SCHOOLS IN MATHIRA
CONSTITUENCY, KENYA**

**BY
MAINA SAMMY NJAGI**

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DECLARATION

Declaration by the Student:

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

Signature.....
Maina Sammy Njagi,
E220/2237P/13

Date.....

Declaration by University Supervisors:

We confirm that the work reported in this thesis report was carried out by the candidate under our supervision and has been submitted with our approval as University supervisors.

Signature:.....
Dr. Josephat Kageema,
(PhD in Curriculum Development)
Karatina University.

Date:.....

Signature:.....
Dr. Richard Peter Kimiti,
(PhD in Curriculum Development)
Machakos University.

Date:.....

DEDICATION

This work is dedicated to my beloved wife Mrs. Deborah Njagi for her encouraging words and emotional support during the period I undertook my studies. To my children Edward and Victor for the inspiration and kind words of encouragement as I pursued my studies.

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ABBREVIATIONS AND ACRONYMS

BOM:	Board of Management
CBE:	Curriculum-Based Establishment
EFA:	Education for All
FPE:	Free Primary Education
FSE:	Free secondary Education
GERs:	Gross Enrollment Ratios
KCPE:	Kenya Certificate of Primary Education
KCSE:	Kenya Certificate of Secondary Education
KICD:	Kenya Institute of Curriculum Development
MOEST:	Ministry of Education Science and Technology
NACOSTI:	National Commission of Science, Technology and Innovation
NG-CDF:	National Government Constituency Development Fund
SCEO:	Sub County Education Office
SCDE:	Sub County Director of Education
SDGs:	Sustainable Development Goals
SES:	Social Economic Status.
SPSS:	Statistical Package for Social Sciences
TSC:	Teachers Service Commission
UN:	United Nations
UNESCO:	United Nations Educational, Scientific and Cultural Organization
UPE:	Universal Primary Education

ABSTRACT

In the last ten years, there has been an establishment of new secondary schools across Kenya, rising out of increased demand for secondary education, government policy to enhance access of education and provision of resources through Constituency Development Funds. However, quality issues in these schools are a point of concern for educational researchers. In view of this, the purpose of this study was to assess the factors influencing quality education provision in the newly established secondary schools in Mathira Constituency, Kenya. The objectives of the study were: To assess the status of learning resources in the newly established secondary schools, analyse the entry behaviour of students in the newly established secondary schools, assess teachers' competency level in the newly established secondary schools and to evaluate the challenges facing newly established secondary schools in Mathira Constituency. The study employed Context, Input, Process Product (CIPP) theory as postulated by Stufflebeam and Coryn. The study adopted a descriptive survey design. The target population comprised of 85 teachers and 10 principals. Simple random sampling method was used to select 70 teachers and then 10 principals were selected purposively for the study. The research instruments used open-ended questionnaires, interview schedules and observation guides. The instruments were tested for reliability and posted a correlation coefficient of 0.72 and 0.71 for principals and teachers questionnaires respectively. Data was coded, analysed and presented using descriptive statistics such as percentages. Qualitative data was thematically arranged and patterns established which are presented in form of statements. The finding of the study revealed that newly established schools lacked the necessary infrastructure for provision of quality education. The study also established that the majority of the newly established schools lacked adequate resources, were highly understaffed and admitted learners with low entry behaviour thereby compromising the provision of quality education. The study therefore concludes that the newly established schools have gaps that need to be filled if the quality agenda is to remain paramount. The study further recommends that there should be concerted efforts to elevate the profile of those schools through increased funding, provision of teachers and enhance teachers' capacity which will ultimately raise the quality education provision in these schools.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

On gaining independence, the Kenyan government established education as one of the key pillars to fighting poverty and diseases. Education was thus emphasized as a key pillar to Kenya's development plan as a tool for socio-economic growth and productivity (MOE, 2007). Republic of Kenya (2006) outlined the national goals of education in Kenya as fostering nationalism, patriotism and national unity, promotion of social, economic, technological and industrial needs of national development as well as the promotion of individual development and self-fulfilment. Kenya Institute of Curriculum Development (2002) noted that one of the key goals of education is the promotion of moral and religious values, social equity, development of rich Kenyan culture as well as the promotion of international consciousness and positive attitude towards the environment. The Kenyan government efforts are aimed at ensuring that the sustainable development goals and vision 2030 are achieved. These two programmes are very much dependent on the provision of education and ensuring that the citizenry accesses Education for All (EFA) goals.

Hallinan and Sorensen (2001) carried out a study in American schools to establish the effect of the school on quality and academic performance. This study was motivated by the existing inequalities in the education sector among the American population. The study noted that most of the research concentrated on school syllabus as well as physical facilities whereas it ignored the school environment. This study established that the school environment in terms of its location and immediate environment

influenced the academic performance of learners. Majority of the newly established schools are located in the primary schools and serve the local population. Therefore the majority of the learners had undergone their transformational studies in the adjacent primary school and this study seeks to establish if this has an effect on their entry behaviour and quality of education provided in the secondary school.

Hunt (2008) in a study carried out in South Asian countries argued that newly established institutions at higher and low level faced challenges in the provision of quality education. In this study, Hunt notes that in an effort to improve access to basic education, most governments and local authorities in South Asian countries embarked on the indiscriminate establishment of schools in every town and local authorities. Hunt argues that schools supported by central governments were particularly prone to offer a lower quality of education compared to schools managed and run by local authorities.

Digolo (2006) argued that the greatest and working tool a nation can offer its youth is education, and a healthy society is nurtured through the provision of quality education that is accessible and relevant. Due to the importance given to education worldwide, the United Nations (UN) declared education as a basic human right in 1948. African countries met in Addis Ababa in 1961 and agreed at attaining Universal Primary Education (UPE) by 1980 and at the same time planned to expand all other levels of education. The management of education was re-emphasized in 1990 when 1500 participants from 155 countries including Kenya gathered in Jomtien in Thailand and re-affirmed education as a human right by adopting the World Declaration on Education for All (Republic of Kenya, 2005). Therefore, provision of high quality education remains the top most agenda for the African Countries as they strive to

achieve development and join the league of developed nations in the world. However, quality issues still clog the education systems in developing nations.

A study done in Nigeria by Akiri (2013) argued that the newly established schools faced a myriad of challenges. Among the most common included lack of teaching and learning resources, lack of teachers and therefore schools had to recruit their own teachers, lack of physical infrastructure among others. Akiri further argued that the local authorities are unable to send teachers to these schools for fear that the schools might not be sustainable and therefore left recruitment of casual teachers to the local communities and once the teachers' body gauged the school as viable it would send government teachers to these schools after some years.

In Kenya, the implementation of the Free Primary Education (FPE) and Free Secondary Education (FSE) have been responsible for the recent upsurge in the secondary school enrollment since 2003. Munavu, Ogutu and Wasanga (2008) posit out that the enrolment trends in secondary schools show a steady growth from 30,000 in 1963 to 860,000 students in 2003, and to over a million in 2006. They noted that the number of public secondary schools increased from 151 in 1963 to 3660 in 2005 (Republic of Kenya, 2006). Prior to 2006, there was a limitation to the growth of Gross Enrollment Ratios (GERs) at the secondary level in Kenya due to a limited number of secondary schools. To bridge this gap, the government embarked on the establishment of secondary schools at the location level (Republic of Kenya, 2006).

In Muranga, Kiambu, Nyeri and Kirinyaga counties, there was an increment of new newly established secondary schools by 143 from 586 in 2008 to 729 in 2010. These data covers only those day secondary schools which were at least four years old and presented students for Kenya Certificate of Secondary Education in 2010 (KICD,

2014). Mathira Constituency has newly established secondary schools that have been established through collaboration between the local community and the Constituency Development Fund. Statistics from the Sub-County Education Offices shows that there is 10 new districts newly established secondary schools. All these schools are mixed newly established secondary schools. In Nyeri county, newly established secondary schools constitute 70% of all secondary schools (Republic of Kenya, 2010).

Achoka, Odebero, Maiyo and Mualuko (2007) carried out a study on access to basic education in Kenya between 2001-2006 after the adoption of Education for All in Dakar in 2000. In this study, they analysed the basic education by 2006 and noted that access to basic education had improved. However, the study also noted that the quality of education did not correspond to the expansion of basic education. They argued that the quality of education offered in the new secondary schools did not tally with the envisioned goals. They noted that the performance of the new secondary schools was very poor compared to other schools. In this study, they expressed concerns on the school infrastructure in these schools noting that some students saw vital components such as burettes, test tubes and other science-based practical instruments when they were doing their national examinations. Thus the study on the factors influencing quality education provision in the newly established secondary schools in Mathira East and Mathira West Sub-Counties that constitutes Mathira Constituency, Kenya.

1.2 Statement of the Problem

Education is the key to national development (MoE, 2007). However, this can only be achieved when quality education is offered to all citizens. In an effort to enhance

accessibility, equity and retention after the FPE and FSE initiatives of 2003 and 2008 respectively, the government and other development partners have endeavored to provide facilities for the realization of FPE and FSE which have led to the establishment of new district secondary schools. With educational financing by the government in education taking up 20% of the national budget, Sisungu, Kaberia and Buhere (2014) noted that schools that received less than 20% financing performed poorly. Newly established schools according to SCEO (2016) received less than 10% financing from the government since only funds under the Free Secondary Education programme as dispensed to these schools. There was also evidence of lack of infrastructural development funds to newly established schools. During the Mathira East and Mathira West prize giving days, the education stakeholders showed their concern on poor performance by the newly established secondary schools (SCEO, 2014). The Sub-County Education Officials expressed concern on the quality of education in these schools since the last five bottom positions in the 2016 KCSE were held by newly established secondary schools and recorded low mean grades of average 2.326 in 2016, 2.98 in 2015 and 2.66 in 2014. This clearly shows that students in these schools perform dismally majority getting a mean grade of D and below in the Kenya Certificate of Secondary Examinations. This provoked this current study on factors influencing provision of quality education in newly established secondary schools in Mathira Constituency, Kenya

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of this study was to assess the factors that influence the provision of quality education in newly established secondary schools in Mathira Constituency, Kenya.

1.3.2 Specific Objectives

The specific objectives of this study were:

- i. To assess the status of learning resources in the newly established secondary schools in Mathira Constituency, Kenya
- ii. To assess teachers' competency level in the newly established secondary schools in Mathira Constituency, Kenya
- iii. To analyse the entry behaviour of students in the newly established secondary schools in Mathira Constituency, Kenya
- iv. To evaluate the challenges facing newly established secondary schools in Mathira Constituency, Kenya

1.4 Research Questions

The study sought to answer the following research questions:

- i. What is the status of learning resources in the newly established secondary schools in Mathira Constituency, Kenya?
- ii. What is the teachers' competency level in the newly established secondary schools in Mathira Constituency, Kenya?

- iii. How does the entry behaviour of students in the newly established secondary schools affect the provision of quality education in Mathira Constituency, Kenya?
- iv. What are the challenges facing the newly established secondary schools affect the provision of quality education in Mathira Constituency, Kenya?

1.5 Justification of the Study

Quality education is envisaged in the Constitution of Kenya 2010) as one of the fundamental rights of Kenyans. This study provides information on the status of the newly established secondary schools and the quality of education offered in these schools. The study should provide data on the status of teachers, learning resources and student entry behaviour and how this has affected the quality of education in newly established secondary schools. The findings would help the Ministry of Education in policy formulation guiding the establishment of new schools. Future researchers may use it as a reference in policy formulation concerning establishment and resource allocation in secondary schools.

1.6 Scope of the Study

This study was aimed at establishing the quality of education offered in the newly established secondary schools. The study focused on the teaching and learning materials used in the newly established secondary schools. The key areas of concern were the quality, adequacy and the applicability of the teaching and learning materials in this category of secondary schools. The study also focused on the student entry behaviour in newly established secondary schools. The study aimed at establishing the entry grades of students in newly established secondary schools. The study also analysed the teachers competency in the secondary schools it analysed the teachers

qualifications, experience and teaching methodologies. Finally the study also studies the challenges facing the newly established secondary schools.

1.7 Limitations of the Study

In the course of carrying this study, some factors limited the study. The study depended on data provided by the principals and teachers in the newly established schools. This class of respondents were sceptical about the nature and use of the study and thus at first was not forthright with the information needed.

The study was also limited to the application of questionnaire, observation and interview guides to collect data which might not capture psychological aspects of the respondents which would assist to form cues on the status of the respondent's mind, attitudes and other factors.

An introduction letter from the University and a research permit from Nacosti was sought and this assured the respondents that the study was primarily academic. The study also assured the respondents that neither their names nor any personal identification was required in the questionnaires.

The researcher was well versed with and has advance knowledge on the nature, culture and social orientation of the people and therefore was easier to access the respondents without breaking any cultural and religious barriers. The researcher having worked in the constituency found it easy to locate all the newly established schools.

1.8 Assumptions of the Study

This study was based on the following assumptions:

- i. The respondents in this study would cooperate and give unbiased information on factors influencing quality education provision in the newly established secondary schools.
- ii. The study also assumed that there would be a considerable number of the newly established secondary schools in Mathira Constituency.
- iii. The study also assumed that the study variables would not drastically change within the time set for the study.

1.9 Operational Definition of Terms

Education: This is the process of imparting knowledge and skills as envisioned in Kenya's Basic Education Act (2013).

Free secondary education: Refers to the waiver of tuition fees by the government for secondary school level. Parents meet other requirements and boarding fees for students in boarding schools.

Newly established secondary schools: These are secondary schools that have been established in the last ten years as a result of the expansion of secondary education in line with Education for All protocol.

School: An institution which is approved and registered by the Ministry of Education (MOE) for learning purposes.

Split subjects: Subjects that Kenya National Examination Council allows a candidate to choose either, these subjects are; Geography or History, Agriculture or Business Studies, Computer Studies, Home Science among many others.

Status: This is the situation/condition of the facilities/or item under critical review to the extent to which it serves its intended purpose.

Quality education: This is equipping learners with capabilities required to be economically productive and contribute to a sustainable livelihood.

CHAPTER TWO

LITERATURE REVIEW

INTRODUCTION

This chapter reviewed studies done by various authors on teacher competencies, learners' entry behaviour and learning resources and how these variables affect the learner's academic performance. The literature review was derived from academic journals, magazines, periodicals, newsletters, newspapers and selected texts.

2.1 Empirical Review

2.1.1 Secondary Education in Kenya

The foundation of modern education was laid by missionaries who introduced reading to spread Christianity. Wosanju (2002) noted that the missionaries also taught practical subjects like carpentry and gardening which were useful around the missions. The Frazer Report of 1909 recommended the establishment of separate educational systems for Europeans, Asians and Africans which was maintained until independence in 1963.

The Government of Kenya identified one of the goals of education as the promotion of national unity (KICD, 2002). Promotion of national unity is to be achieved by imparting appropriate knowledge, skills and attitudes in the learners to enable their awareness, appreciation and preservation of their cultural heritage and also their creativity in modifying and even shaping this culture for their benefit and that of their society. Kenya's people belong to different ethnic groups, races and religions but these differences need not divide them. Kenyans must live and interact with each

other although from different ethnic groups as Kenyans. Therefore, it is paramount that education helps the youth acquire this sense of nationhood by removing conflicts and promote positive attitudes of mutual respect which will enable Kenyans to live together in harmony and foster patriotism in order to make a positive contribution to the life of the nation. Newly established schools should ensure that their learners get the right competencies to promote national unity. This is achieved through learners getting an opportunity to be integrated and meet other learners from difference cultures. However, these categories of school are at the village level and thus accessed by learners from a mono-ethnic culture.

Chege and Sifuna (2006) posited that the Kenyan Education should promote respect for and development of Kenya's rich and varied cultures. Therefore education must instil among Kenyans an understanding of past and present cultures and their valid place in the contemporary society. After undergoing the education system, the learner should be able to blend the best of traditional values with the changed requirements that must follow rapid development in order to build a stable and modern society. According to Chege and Sifuna held that education should promote international consciousness and foster positive attitudes towards other nations. This means that the education system recognizes that Kenya is part of the international community. Therefore education should impact on the learner that we are part of a complicated and interdependent network of people and nations. Education should, therefore, ensure that Kenyans accept membership in this international community with all the obligations and responsibilities, rights and benefits that this membership entails.

Mukudi (2004) holds that secondary school education in Kenya is deemed to begin around the age of fourteen. However due to delay primary school entry and limited

educational schools and facilities, many students especially those from rural areas experience late admission into the education system years. Secondary school education in Kenya is aimed at meeting the needs of the students who terminate their education after secondary school and also those who proceed with tertiary education (Mukudi, 2004).

2.1.2 Learning Resources and Academic Performance

Learning resources are the texts and other materials learners and teachers use in class. Mugambi (2006) in enumerating the factors that could be responsible for varying intra-and inter-school/academic achievement, listed the acute scarcity of instructional resources which he said constrained educational systems from responding more fully to new demands. He claimed that, in order to do their part in meeting the crisis in education, educational systems will need real resources that money can buy, they will need a fuller share of the nations' manpower, not merely to carry on the present work of education, but to raise its quality, efficiency and productivity. They will need buildings, equipment and more learning materials.

Hanushek, Kain and Rivkin (2008) carried out a study on the roles of school, teachers and academic performance. In this study, the effect of teaching and learning materials was tested with the quantity and quality of these materials on learners. The study concluded that the quality of teaching and learning materials affected the academic performance of learners. Schools that had more teaching and learning materials per learner posted better results compared to schools that had fewer materials per learner. This study covered the teaching and learning resources available in the newly established secondary schools and assessed if the teaching and learning resources influenced academic performance in these schools in a Kenyan context.

Guloba, Wokadala and Bategeka (2010) carried out a study in Uganda. Among the major findings of this study was that supply of teaching resources is found to have adverse effects on education quality and the government should prioritize effective teaching rather than supply more teaching resources. Omaiyo (2013) carried out a study in Migori Kenya on the effects of instructional resources on children's performance, a study that used a descriptive survey design. A total number of 225 children were selected from a possible population of 750. Using the questionnaire and observation schedule, the study established that there was minimal use of teaching and learning resources in these schools. The study noted that use of teaching and learning resources affected the academic performance of the pre-schoolers and as such recommended that more teaching and learning resources should be applied in order to uplift the academic performance of learners in these schools. However, the area under study, in this case, was a more semi-rural area considering the current study is in a more peri-urban and highly sophisticated region with advanced infrastructure. The current study sought to determine if the teaching and learning resources in the newly established schools influenced academic performance in secondary schools.

A study carried out by Rotich (2004) showed that lack of physical facilities, materials, equipment and tools were among the major problems that primary school head teachers were faced with in Kenya. The study found out that in most schools classes had over 50 pupils. This study showed that free education at the primary level brought about problems related to over- enrolment, lack of physical facilities and inadequate teachers. This study evaluated the physical facilities in primary schools whereas this current study concentrated on the newly established secondary schools. This study will be influenced by the Rotich (2004) in that it will seek to

establish the status of the physical infrastructure in the newly established secondary schools. The current study will evaluate the secondary schools established under the National Government Constituency Development Fund.

Waita (2012) carried out a longitudinal study on pupil-teacher ratio in Kenyan secondary schools. In this study, the researcher used a sample size of 24 secondary schools in the peri-urban setting of Machakos. Majority of the secondary school relied on untrained teachers formed the bulky of the teaching force. The study noted that the student-teacher ratio in the majority of secondary school was low high and called for the Teachers Service Commission to employ more teachers. In the current study, newly established schools take a little longer period before the Teachers Service Commission sends the government teachers in the schools.

2.1.3 Teacher Competency and Academic Performance

Teachers are very important human resources required to achieve the objectives of a school system. Teachers are usually responsible for teaching and learning process in the schools. Orina (2005) posited that teachers are important inputs in the educational system and incorporate highly-skilled labour resources that undergo specific training aimed at achieving maximum results out of the classroom and out of classroom interaction with learners.

In Sweden, Myrberg and Rosen (2004) carried a study on teacher competency and academic performance. They used regression analysis to explore several indicators of teacher quality such as gender, teaching experience; in-service training and co-operation with colleagues and they noted that all this had no significant influence on student achievement. However, in this study, it was discovered that teacher certification for teaching in early grades showed a greater effect on students' mean

reading test scores. This current study will seek to evaluate if teachers certification influence's quality of education in secondary schools. This current study will seek to cement the findings of Myberg and Rosen (2004) by carrying an analysis of teachers' competency and qualifications in the newly established secondary schools.

Marinkovic, Bjekic and Zlatic (2010) carried out a study in Serbia on teacher's competence as an indicator of education quality. In this study, self-evaluation of overall success self-evaluation of role realization, evaluation of overall success by students, evaluation of teacher's role realization by students, the motivation of students for the subject as an indicator of the influence of teacher over a student, average academic achievement. This study concluded that teachers who evaluated their undergraduate education compared to other sources of knowledge, concerning competencies, didn't see their initial education as a dominant source of learning for the teaching profession when it comes to didactical-methodical competencies. These observations were also noted by Rajovi and Radulović (2007) who argued that undergraduate qualification did not necessarily increase a teacher's competence level. It is worthwhile to note that the study was carried out in a developed nation where the circumstances in terms of the state of nation's development, attitudes towards education and other factors might be different compared to this current study in a developing nation.

Panti, Wubbels and Mainhard (2011) carried out a study on teacher competency and student performance. Several sources of information were incorporated among them research on competencies of high performing teachers; research on competencies of high performing teachers in high poverty schools; interviews with practitioners who select or mentor teachers in high-poverty settings; and interviews with school officials

who directly support the efforts of turnaround teachers. This study noted that teacher's competency as measured by supervisors, principals, learners and peers had a direct effect on their output which directly affected their effect on learners in terms of performance in tests and examinations. The teacher competency in the developed nations might be different since in Kenya some teachers are employed by the BOMs where their qualifications differ from the TSC employed teachers. Therefore this current study explored the teachers' competency levels in newly established secondary schools.

Akinsolu (2010) analysed the number of teachers with pre-requisite qualifications and academic performance in Nigerian Schools. In this study, 21 public schools were selected from a population of 31. Using ANOVA and Spearman's correlation the findings showed that teacher's qualifications, experience and teacher-student ratio were significantly related to students' academic performance. These findings can be used to guide planners on the need for qualified teachers to facilitate effective teaching and learning in secondary schools in Nigeria.

Ministry of Education and Training (2012) compared competence levels of teachers who obtained excellent and average grades in Swaziland. Whereas the academic performance of learners was retrieved from the school records, teachers' competency was measured by student rating of individual teachers. The findings indicated that as the teacher gets older, overall teaching competency, professional teaching competency, and crop production teaching competency get diminishing. However, in female teachers showed a relatively higher teaching competency in farm records. In Kenya, the distribution of teachers is generally stable with employment being done by the Teachers Service Commission based on training and competency levels. However,

there are cases of BOMs appointing teachers on short-term contracts to bridge the gap in teaching. Majority of teachers in the newly established schools are employed by BOMs and as such this study assessed the teachers' competency in teaching.

According to Balogun (2003), a teacher's job does not end at teaching effectively and efficiently only, but he is a model, as his students look up to him both as a mirror and as an instrument of learning, not only does what he says but what he does also matter. The outcomes of their efforts are typically represented by grades. The consequence of these opinions is that well-trained teachers in mathematics if well deployed to the secondary schools will produce students who will perform academically well in mathematics. Mathematics is the pillar of science and technology and its functional roles in the development of science and technology is multi-dimensional that no area of science, technology and business enterprise escapes its application (Okereke, 2006; Okigbo & Osuafor, 2008). Okereke posited mathematics as the backbone of civilization in all the centuries of meticulous calculation, and the most basic discipline for any person who would be truly educated in any science and in many other endeavours. The teachers employed in newly established schools are a mix of TSC staff and BOM employed teachers. This study sought to establish the teachers' competency and content delivery in newly established schools.

2.1.4 Entry Behaviour and Academic Performance

The entry behaviour of learners in secondary schools is the marks which the learners transit from primary school and enters secondary education. Kasirye (2009) in a Ugandan study on determinants of learning achievement noted that children who entered the secondary at a younger age performed better than the older learners. In this study test scores of relatively younger learners and older learners were compared

after tests and the test results indicated that those learners who entered the secondary education at ages between 13-14 showed better results than elder learners.

Sekyere, Sekyere and Akpalu (2013) in a study based in Ghana argued that the learners' entry behaviour affected their overall academic performance. In this study, they note that learners with very high entry marks exhibited high academic achievement in the final secondary examinations. This study analysed the gender and age entry behaviour and academic performance of learners. The study noted that gender does not have any influence on academic performance however the age had an effect on academic performance. This current study sought to establish the entry marks in these newly established schools and assess the output in the last five years in terms of entry grade and transition grade.

Ali, Haider, Munir, Khan and Ahmed (2013) carried a study in Pakistan and in their finding the following factors were shortlisted as having significant effect on the academic identify students' effort, previous schooling, parent's educational background, family income, self-motivation of students, age of student, learning preferences and entry qualification of students as important factors that have effect on student's academic performance in different setting. The utility of these studies lies in the need to undertake corrective measures that improve the academic performance of students.

2.2 Theoretical Review

This study was based on three theories, the CIPP Theory and Interpretive Model of competent performance. These two theories revolve around the two major variables in this study namely the teaching and learning materials, student entry behavior and the teacher's competence.

2.2.1 Context, Input, Process Model

This study was guided by the Context, Input, Process Product (CIPP) theory as explained by Stufflebam and Coryn (2014). This theory explains that the process of delineating, obtaining and providing crucial information to judge alternatives in education and organization assists the decision-making process greatly. This theory is mainly focused on providing information through a meticulous process to assist decision makers to select the best alternative.

Smith and Freeman (2002) noted that context evaluation identifies unmet needs or missed opportunities that bar achievement of human needs. Smith and Freeman also hold that input evaluation is primarily projection and analysis of procedural designs of a decision making process whereas process evaluation assists in monitoring the project operations. Finally, they hold that product evaluation analyses the degree to which objectives desired have been achieved and carrying out an analysis of the process results.

In this study, the learner's entry behaviour in newly established secondary schools presents the inputs of an education system. Stufflebeam and Coryn (2014) posited that the needs and gains of the educational process are important to policy makers. They form the basics of target issues and designing of the educational environment. Stufflebeam and Coryn also noted that educational evaluators must analyse resource allocation since they influence the final product after schooling. A closer attention must be paid to educational plans, budgets, working conditions and terms of staffing as well as cost-effectiveness of the process.

The researcher found this theory relevant in this study because the principal, teachers, students and parents from these newly established schools may be faced with

challenges in their pursuit of provision of quality education and therefore all should have high achievement as per educational objectives. The learners also should to overcome the challenges for example, despite the low marks attained by the students in KCPE, the teachers should have high input quality so that they can reach even the difficult students to help them learn. The researcher was interested to find out the status of the teaching and learning materials in the newly established schools. The researcher was also interested in evaluating the teachers' competency in the new secondary schools. Principals and teachers with high efficacy should view for example lack of physical facilities as something to be mastered instead of one to be avoided (Fan & Williams, 2010).

2.2.2 Interpretive Model for Competent Performance

This model posits that to interpret the teachers' competence we analyse the output in terms of the learners Activities. These include assessment of teachers' class control and classroom management, general teacher-learner relationship, as well as relationship with other stakeholders. A competent teacher is said to provide feedback to the learners through various forms key among them in class activities. This class of feedback is referred to as professional competency. Professional competence according to Akudu (2007) includes preparations prior to attending a teaching and learning session. Also incorporated to professional competence is the teachers' subject knowledge base, content delivery, and use of teaching and learning resources as well as feedback mechanisms used during the teaching and learning sessions.

2.3 Conceptual Framework

The researcher developed a conceptual framework to show the relationship between the study variables as shown in figure 1.1. The Figure establishes the dependent,

intervening and independent variables in this study. The conceptual framework in this study was based on the status of secondary school education in the newly established schools in the provision of quality education.

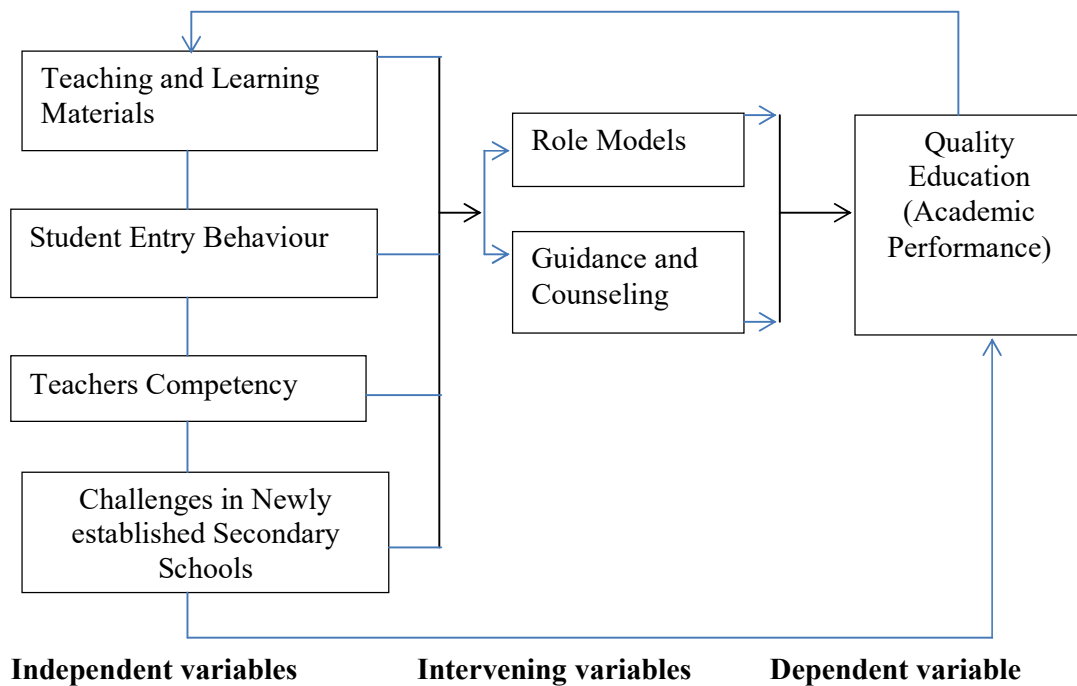


Figure 2.1 Conceptual Framework for the Study

With the introduction of Free Secondary School education, there has been a sharp increase in the number of newly established secondary schools. However, the quality of education in these schools has been affected by the teaching and learning materials available in these schools, the teacher competency and the students' entry behaviour. When learners access the teaching and learning materials, they are able to carry out private study and research-based learning. This, in turn, is reflected in better grades for the learners. However, lack of teaching and learning resources limits learner's research time which in turn is reflected in limited knowledge level and poor grades. The teacher's impact on learning. The competency level which is reflected in the application of teaching methodologies, mastery of teaching content and student a

classroom management affects the learner's rate of comprehension. This is reflected on learner's performance in examinations. However, the presence of role models and guidance and counseling can mitigate the quality of education offered in these schools.

2.4 Chapter Summary

It is evident that secondary schools face some challenges. From the literature discussed above, the established schools face challenges of teacher competency, physical facilities as well as teaching and learning issues. The literature has also shown that the problems are widespread from the first world to less developed countries. This current study, therefore, sought to establish problems associated with newly established schools such as physical infrastructure, teacher-related issues as well as learner entry behaviours. This is the gap that the current study aimed to fill.

CHAPTER THREE

RESEARCH METHODOLOGY

INTRODUCTION

This section describes the research design, location of the study, the target population, sample size and sampling procedures, the research instruments used and the reliability and validity of the instruments. The chapter also highlights the data collection procedures, data analysis and ethical issues in research.

3.1 Research Design

This study employed a descriptive survey design. The descriptive survey is used in preliminary and exploratory studies to allow the researcher to gather information, summarize, present and interpret for the purpose of clarification (Orodho, 2005). Mugenda and Mugenda (2003) give the purpose of the descriptive survey as determining and reporting the way things are.

3.2 Research Philosophy

This research was aimed at assessing the quality of education in newly established schools. It involved collection of information from the newly established schools to establish the situation as it is. This is because in Kenya, the government aims at achieving 100% transition from primary school to secondary school. Thus majority of the learners will access a secondary school in their village or in the neighbouring village. To achieve this almost every primary school has been hived off some part for establishment of a secondary school. Thus this study will ensure that educational policy holders and other users of educational information acknowledge the

importance of the newly established schools in achieving education for all as well as ensure quality of education offered in satisfactory.

Gall, Gall and Borg (2007) noted that descriptive survey design is intended to produce statistical information about aspects of education that interest policy makers and educators. Therefore, this method allowed for the investigations of the educational problems by obtaining facts and opinions about the current conditions of the variables, and as well involved elements of comparison and relationships between variables. The study fitted within the provision of descriptive research design because the researcher collected data and reported the way things were without manipulating the study variables.

3.3 Study Area

The research was conducted in Mathira Constituency, Nyeri County. Mathira Constituency is located approximately 129 Km East of Nairobi along the Nairobi-Nyeri Highway. The constituency has six administrative units called wards. This region was selected since it has a high number of newly established schools. The area was also selected since it is renowned for a history of high academic performance in national examinations.

This location was also selected since in the last three prize giving days, the newly established secondary schools have contributed to a large population of learners who have posted very low grades in the National Examinations. In regional education forums (prize giving days and career days), major issues highlighted by the principals and BOM members for the poor performance include lack of learning resources and lack of adequate trained teachers. Majority of these schools were also housed in dilapidated classrooms carved from existing primary schools. The teachers in these

schools are mostly employed by the Board of Management and mainly comprised of students waiting to join the university; the schools lack general infrastructure such as laboratories, classrooms and instructional materials.

3.4 Target Population

Gall, Gall and Borg (2007) defines the target population as the members of a real or hypothetic set of people, events or objects the researcher wishes to generalize the results of the research. By the time of carrying this research, Mathira Constituency had ten newly established secondary schools. These schools had been established in the last ten years and had been sponsored by local communities and the Constituency Development Fund. The target population was 95 comprising of teachers and principals in the newly established secondary schools in Mathira Constituency. The principals were selected since they were likely to have served as heads of other established schools. The teachers were selected since they were involved in content delivery in the secondary schools. The study also covered two staffing officers serving in Mathira Constituency.

3.5 Sampling Design

The sampling size determination and sampling procedures are discussed below.

3.5.1 Sampling Size

Sampling means selecting a given number of subjects from a defined population as representative of that population. Orodho (2002) noted that any statement made about the sample should also be true of the entire population. It is however argued that the larger the sample the smaller the sampling error (Gay, Mills & Airasian, 2006). This study employed Krejcie-Morgan Table of Sample Size to determine the sample size. From the table, all the ten principals were to be sampled. Out of the 85 teachers, a

sample of 70 was adequate. Two TSC staffing officers also constituted the study sample. The total sample was therefore 82 respondents.

3.5.2 Sampling Procedure

The study used simple random sampling to select the teachers. A list of all teachers and their respective schools was obtained from the County Education Office. The researcher then randomly selected seven teachers per school to make 70 teacher respondents. Purposive sampling was used to select the 10 principals since their population was relatively small and according to Kathuri and Pals Table for Determination of Sample Size, a population of ten requires that all form the sample. This is because it is recommended that for a small population the researcher should use a relatively larger sample size to minimize the sample errors and smaller samples for large populations. The final study sample is summarized in Table 3.1.

Table 3.1: Sample Size

Set	Population	Sample Size
Principals	20	10
Teachers	85	70
Total	105	80

3.6 Data Collection Methods

The study collected qualitative and quantitative data from the various class of respondents. The major source of data used in this study were the principals as the school administrators, the teachers as the main team involved in provision of quality education, the students who are the consumers of educational services.

3.6.1 Research Instruments

The study used a questionnaire, observation guide and interview guides as the primary research instruments. The instruments were designed in a simple and straight forward language making it easy for the respondent to fill. The questionnaire consisted of both open-ended and closed questions which had been designed specifically for members of staff of the schools in line with the research objectives. The researcher visited all the selected secondary schools and issued the questionnaires and collected them back. The observation guide recorded the status of physical facilities in the newly established schools such as the presence of laboratory and laboratory equipment, teaching and learning resources and general school infrastructure.

3.6.1.1 Secondary School Principal's Questionnaire

The study used a secondary school principal questionnaire to collect data from this category of respondent on the status of education in the newly established schools in Mathira Constituency. This questionnaire collected background information from the principal. The questionnaire also contained a section on the status of learning resources in the newly established secondary schools. The third section collected data on teachers' competency level in the newly established secondary schools. The last two sections collected data on the entry behaviour of students in the newly established secondary schools and challenges facing newly established secondary schools in the provision of quality education.

3.6.1.2 Secondary School Teachers Questionnaire

The study applied a Secondary School Teachers Questionnaire (SSTQ) to collect data from the teachers on the status of education in the newly established schools in Mathira Constituency. Section one gathered demographic data, whereas the other four sections gathered data as per the study objectives namely; the status of learning

resources, teacher's competency level and the entry behaviour of students in the newly established district newly established secondary schools and challenges facing newly established schools in the provision of quality education.

3.6.1.3 Interview Guide

An interview guide was designed to collect data from the County TSC Staffing officers since they are the officers concerned with ensuring that schools had trained and competent teachers. The guide collected data on the state of teaching and learning resources and teaching personnel as well as other data that would provide material on the status of newly established secondary schools.

3.6.2 Reliability and Validity of the Research Instruments

Prior to carrying out data collection, the researcher carried out a pilot study in five newly established secondary schools in Mukurweini Sub County in order to ensure the validity and reliability of the test instruments. The researcher selected five schools and issued out the questionnaire. After one week the researcher re-issued the instruments to the same respondents and compared the two results for consistency. The study used the test-retest technique to assist in establishing the reliability of the research instruments.

3.6.2.1 Reliability of the Research Instrument

The research instruments were tested for reliability. Henson (2001) posited that reliability involves the test item consistency and reproducibility. Therefore, reliability is the degree to which one can expect relatively constant deviation scores of individuals across testing situations on the same, or parallel, testing instruments. Trochim (2006) noted that there are two types of error present in any particular testing scenario. These he argued are systematic and random errors. According to Trochim

(2006), systematic error refers to those errors that consistently affect an individual's observed score which might be a function of individual personality, attribute, and quality. In contrast, a random error refers to that error which affects individuals' score purely by chance. The tools were checked for reliability through test-retest method. The pilot questionnaires were divided into two equivalent halves and then a correlation coefficient for the two halves was computed using the Pearson Product Moment Correlation Coefficient was calculated for each questionnaire. Kiess and Bloomquist (1985) postulated that a minimum correlation coefficient of 0.65 is recommended as an indicator of research instruments' reliability. The coefficient of 0.72 and 0.71 was achieved for principals and teachers questionnaires respectively the instruments meaning that the instruments were reliable for research purposes. This indicated the degree to which the two halves of the test provided the same results which correspond to the internal consistency of the instruments.

3.6.2.2 Validity of the Research Instrument

Validity is defined as the accuracy and meaningfulness of inferences, which are based on the research results (Mugenda & Mugenda, 2003). After piloting the research instruments, the researcher estimated the degree of coherence of the responses for each instrument. Face validity refers to whether the tests appear to measure what was intended on the face value. Face validation was checked by the assistance of the research supervisors who were well versed in the area of research. Content validity refers to the extent to which an instrument represents the objectives under study. Construct validity refers to the extent the inferences can be legitimately be made. The pilot study was used to identify any items in the questionnaire that were ambiguous or unclear to the respondents and these were changed, to improve validity. Validity was

established by expert judgment and thus the questionnaire was constructed in close consultation with the university supervisors.

The researcher sought an introduction letter from the University and a research permit from the National Commission for Science, Technology and Innovation. The research authorization letter and a research permit were presented to the County Education Officer to obtain a clearance from the education office to visit the schools. After this, the researcher booked appointments with the schools through the principals to visit and administer the questionnaire. The researcher visited each of the schools and administered the questionnaires.

The researcher strived to be ethical during the research. The researcher sought informed consent of the participants to the study. The respondents were assured that they had the freedom to participate and pull out at any time during the study. The respondents were also assured that they would not be required to indicate their names on the research instruments since the researcher would treat their responses with the utmost confidentiality. This was aimed at ensuring that their rights would not be violated and that the information was strictly for academic purposes.

3.7 Data Analysis Methods

The study used descriptive statistics to analyze data. Descriptive statistics involved the use of frequencies, means, standard deviations and percentages. The process of data analysis required the use of the Statistical Package for Social Sciences (SPSS) was used. The qualitative analysis considered the inferences that might be made from the opinions of the respondents. Qualitative data was analysed qualitatively using content analysis based on analysis of meanings and implications emanating from

respondent information and comparing responses to documented data. The qualitative data was presented thematically in line with the objectives of the study.

3.7 Empirical Model and Hypothesis Testing

This study developed a regression model as stipulated below

$$Q_e = aY_1 + bY_2 + cY_3$$

Where

a, b, c are constants

Y₁, Y₂ and Y₃ represent the independent variables.

The analysis therefore shows that the quality of education in newly established secondary schools is influenced by the teaching and learning resources, the teachers competency as well as the learners entry behavior.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

INTRODUCTION

This chapter presents the data analysis and discussion of findings. The study was guided by the following research objectives; assess the status of learning resources in the newly established secondary schools, analyse the entry behaviour of students in the newly established secondary schools, assess teachers' competency level in the newly established secondary schools and to evaluate the challenges facing newly established secondary schools in Mathira Constituency. The data collected is presented in this chapter.

4.1 Response Rate

The researcher issued 80 questionnaires and had a response rate of 85%. This was due to the busy schedules and teachers having many lessons to attend. This proved a challenge to collect all instruments distributed to teachers.

Table 4.1: Response Rate

	Issued	Returned	Percent
Principals	10	10	100.0%
Teachers	70	58	83.0%
Total	80	68	85.0%

4.2 Demographic Analysis

The researcher sought some background information with the aim of gaining some understanding of the sample.

4.2.1 Gender of Respondents

The researcher asked the respondents to indicate their gender as summarized in Table 4.2 below.

Table 4.2: Gender of Respondents

	School Heads		Teachers	
	Frequency	Percent	Frequency	Percent
Male	6	60.0%	37	63.8%
Female	4	40.0%	21	36.2%
Total	10	100.0%	58	100.0%

Data in Table 4.2 shows that the majority of the principals and teachers were male. The study found out that the gender distribution of teachers and principals was biased towards male gender. Thus the gender balance in newly established schools meets the Kenyan Constitutional two third rules and shows that the region has quite a relatively higher number of female teachers and principals.

4.2.2 Experience in Teaching and Headship

The researcher asked the respondents to indicate their experience as principals and teachers respectively. This information is summarized in Table 4.3.

Table 4.3: Experience in School Headship in Current School

Time Frame	Frequency	Percent
1-5 Yrs	6	60.0%
6-10 Yrs	3	30.0%
11-15 Yrs	1	10.0%
Total	10	100.0%

The results show that the majority of the principals had headed their current schools for less than five years with another 30% had headed their current schools for less than ten years. All the principals indicated that they were the ones stationed in the school since inception. The study established that the majority of the school heads had served the schools since they were established. They, therefore, were in a better position to provide reliable data for the study.

4.2.3 Teaching Subjects in Newly Established Secondary Schools

There was need to find out the distribution of teachers according to the various departments in newly established secondary schools as provided in the Ministry of Education, Science and Technology. The data is summarized in Table 4.4.

Table 4.4: Teaching Subjects in Newly Established Secondary Schools

Departments	Frequency	Percent
Languages (English & Kiswahili)	22	37.9%
Sciences (Mathematics, Biology, Chemistry, Physics)	19	32.8%
Humanities & Applied Sciences (Business Studies, Geography, History, Agriculture and Religious Education)	17	29.3%
Total	58	100.0%

The results showed that the teachers who participated in this study were well distributed among the school departments from Languages Department (37.9%), sciences department (32.8%) and Humanities and Applied Sciences department (29.3%). Therefore the study had a representative sample from all departments in secondary schools.

4.3 Findings from the Study

4.3.1 Learning Resources and Provision of Quality Education in the Newly Established Secondary Schools

The first objective of this study was to assess the status of learning resources in the newly established secondary schools and its effect on the quality of education. The study sought to answer the research on the effect of learning resources in the newly established secondary schools in the provision of quality education in Mathira Constituency.

4.3.1.1 Adequacy of Books and Reading Materials in Newly Established Secondary Schools

The study sought to assess the status of reading and learning materials in newly established secondary schools and the results are indicated in Table 4.5 below.

Table 4.5: Adequacy of Text Books in Newly established secondary Schools

Response	Frequency	Percent
Adequate	26	44.8%
Inadequate	32	55.2%
Total	58	100.0%

The teachers were asked if the text books in newly established secondary schools were adequate. Data showed that majority of the teachers (55.2%) noted that the teaching and learning materials in the newly established secondary schools were inadequate with a minority (44.8%) indicating they were adequate. The interview with education officials indicated that newly established schools did not have enough funds to buy the teaching and learning materials.

“I know of schools that spend considerable amounts to buy teaching and learning materials. However, the schools cannot afford to buy all the requirements and in some cases, some schools hire materials from schools that are well established” EOI

The researcher noted that in some subjects there were five and fewer books being shared by over twenty learners. The study thus established that text books in newly established district newly established secondary schools were inadequate.

The findings concur with Hanushek, Kain and Rivkin (2008) that teaching and learning materials should be adequate if quality learning was to occur in educational institutions. An inadequate supply of teaching resources was found to have adverse

effects on education quality and the government should emphasize more on effective teaching rather than supplying more teaching resources. The inadequacy of the textbooks could be explained by lack of finances to buy the textbooks. The newly established secondary schools do not have strong alumni to assist the schools to acquire teaching and learning materials. Most of the finances in the newly established schools went to the construction of necessary physical infrastructure.

4.3.1.2 Classrooms in Newly Established Secondary Schools

The researcher asked the teachers if there were enough classrooms for learners in the newly established secondary schools and the responses are summarized in Table 4.6 below.

Table 4.6: Classrooms in Newly Established Secondary Schools

Response	Frequency	Percent
Quite adequate	5	8.6%
Adequate	16	27.6%
Inadequate	17	29.3%
Quite Inadequate	20	34.5%
Total	58	100.0%

Data showed that majority (63.8%) of the teachers noted that classrooms available in newly established secondary schools were inadequate. The researcher observed that some subjects were taught in the dining hall particularly when there were split subjects such as Geography and History, Business Studies and Agriculture and Biology/Physics. These subjects required one group of learners to find an alternative room for teaching and learning to take place. The newly established schools were housed in the adjacent primary schools who donated part of their classrooms to accommodate the secondary school students. As one of the education officials noted,

some schools used the classrooms as dining halls since they only had a makeshift kitchen and thus students could only move with food to their classrooms. The study established that the inadequacy of classrooms affected teaching and learning in newly established secondary schools. The findings concur with Omaiyo (2013) who noted that lack of adequate school resources contributed to low-quality learning in Kenyan schools.

4.3.1.3 Presence of Laboratories in Newly Established Secondary Schools

The researcher sought to find out if the newly established secondary schools had a working laboratory for science-related subjects such as biology, physics and chemistry and the results are summarized in Table 4.7 below.

Table 4.7: Presence of an Equipped Science Subject Laboratory

Response	Frequency	Percent
Agree	2	20.0%
Strongly Disagree	3	30.0%
Disagree	5	50.0%
Total	10	100.0%

Data in Table 4.7 shows that 20% of the principals indicated that they had an equipped science laboratory. However, 80% of the principals indicated that their schools did not have well-equipped laboratories. The researcher observed that in some schools the school laboratory comprised of a standard classroom with long tables and benches with a single tap placed at one end of the room. A laboratory is one of the essential facilities required to teach science-based subjects in secondary school effectively. However, in two schools the National Government Constituency Development Fund had started construction of the laboratories. The teaching of

science-related subjects was therefore affected by lack of the required physical facilities. The study agrees with the findings of Rotich (2004) that lack of physical facilities, materials, equipment and tools were among the major problems that schools in Kenya face.

4.3.1.4 Number of Teachers in the Newly Established Secondary Schools

The principals were asked to indicate the number of teachers in their schools and the responses are summarized in Table 4.8 below.

Table 4.8: Number of Teachers in the Newly Established Secondary Schools

No. of Teachers	Frequency	Percent
1-7	1	10.0%
7-12	7	70.0%
more than 12	2	20.0%
Total	10	100.0%

Data showed that the majority of the newly established secondary schools (80%) had less than twelve teachers and a significantly low minority (20%) had more than twelve teachers. Since the majority of the school populations were observed to be around 250 learners, the teacher-student ratio was below the national standards of one teacher to thirty learners. The two education officials noted that newly established schools did not have an adequate number of teachers. The study thus established that the majority of the newly established schools had a lower number of teachers to teach the large classrooms. The findings concur with Waita (2012) that teachers in Kenyan secondary schools did not meet the international ratio of one teacher to twenty learners. The Ministry of Education, Science and Technology CBE indicates that a single streamed school should have nine teachers. However, more than half of the

teachers in newly established secondary schools were under the employment of the respective BOMs. Lack of an adequate number of teachers in newly established schools led to high costs in running these schools since Boards of Management had to recruit and pay salaries to teachers in their schools. The schools also had low quality of education due to lack of trained personnel to undertake to teach in the schools. The learners in newly established schools were taught by untrained teachers and this compromised the quality of education in the newly established schools.

4.3.1.5 Student/Teacher Ratio in Newly Established Secondary Schools

The principals were asked to provide a teacher-student ratio in their schools and the analysis of the responses are provided in Table 4.9 below.

Table 4.9: Student/Teacher Ratio in Newly established secondary Schools

Student /Teacher ratio	Frequency	Percent
25:1	1	10.0%
36:1	3	30.0%
45:1	1	10.0%
50:1	5	50.0%
Total	10	100.0%

The data analyzed showed that majority (60%) of the schools had a student-teacher ratio of more than 45 students to one teacher against the recommended 40:1 for developing nations as dictated by UNESCO as cited in Okigbo and Osuafor (2008). The study established that the student-teacher ratio in newly established secondary schools is very high for effective teaching and learning. The study noted that the United Nations Pupil-Teacher ratio is 29:1 in developed nations and 40:1 for

developing nations. However, the findings showed that majority of the schools had high pupil-teacher ratio.

Okigbo and Osuafor (2008) argued that schools with very high student-teacher ratio performed poorly since teachers were overwhelmed by the high number of learners. Akinsolu (2010) used ANOVA and Spearman's correlation to show that teachers' experience and teacher-student ratio was significantly related to students' academic performance. The students in newly established secondary schools experience large classroom effects since the teachers give general class instructions instead of individual student instruction. Therefore, students in large classes post low scores and also exhibit a greater variance between individual performances.

4.3.2 Teachers Competency Level and Provision of Quality Education

The second objective of this study was to assess teachers' competency level in the newly established secondary schools in Mathira Constituency, Kenya. The respondents were asked to respond to a series of statements and the responses are summarized below.

4.3.2.1 Teachers Qualifications

The study sought to establish the number of qualified teachers teaching in the newly established secondary schools and the analysis of the responses are detailed in Table 4.10.

Table 4.10: Teachers Qualifications

Teachers Qualification	Frequency	Percent
KCSE Certificate	12	20.7%
Diploma in Education	8	13.8%
Bachelor's Degree	35	60.3%
Master's degree	3	5.2%
Total	58	100.0%

Analysis of results showed that 20.7% of teachers had KCSE certificate, 13.8% had a diploma in education, 60.3% held a bachelor's degree with 5.2% possessing a master's degree. The study shows that the majority of the teachers in newly established secondary schools were qualified. However, data showed that there were a significant number of untrained teachers teaching in the newly established secondary schools. These teachers were employed by the School Boards of Management to cater for staff shortage in schools and mainly were old students contracted to teach in these schools.

The low teachers' qualification arises from many teachers who are engaged by the Boards of Managements of the newly established schools. These teachers have low subject mastery which compromises the quality of teaching and learning. Therefore students in newly established secondary school post very low grades in the National Examinations. The findings concur with Akinsolu (2010) who argued that presence of untrained teachers compromised the education quality in educational institutions since these class of teachers were not well acquainted with teaching strategies, concepts and methodologies and were neither experts in the fields they were engaged in.

The principals were asked to gauge their teachers' subject content mastery and the results are summarized in the Table 4.11.

Table 4.11: Teachers Subject Content Mastery

Teachers Qualification	Frequency	Percent
Very high	7	70.0%
High	2	20.0%
Average	1	10.0%
Low	0	0.0%
Very low	0	0.0%
Total	0	100.0%

Analysis of responses showed that 70% of the principals ranked high their teachers subject content mastery very high, 20% rated high and 10% rated their teachers as average. The study concludes that the teachers in newly established secondary schools had high levels of subject mastery necessary for quality learning. Although the teachers' content mastery was showed as being very high, this does not correspond to the teachers' qualifications. This contradiction arises since the majority of the principals could not indicate their teachers had low content mastery. The study concurs with Akinsolu (2010) and Okereke (2006) that teachers' mastery of content and teaching experience contributed to high performance and quality teaching and learning in schools.

4.3.3 Learners Entry Behaviour and Provision of Quality Education

The third objective was to analyse the entry behaviour of students in the newly established secondary schools in Mathira Constituency, Kenya.

4.3.3.1 Influence of FSE on Entry Behaviour in Secondary Schools

Kenya has a subsidized newly established secondary school education and the researcher asked the respondents how the Free Secondary Education has influenced the entry behaviour in newly established secondary schools.

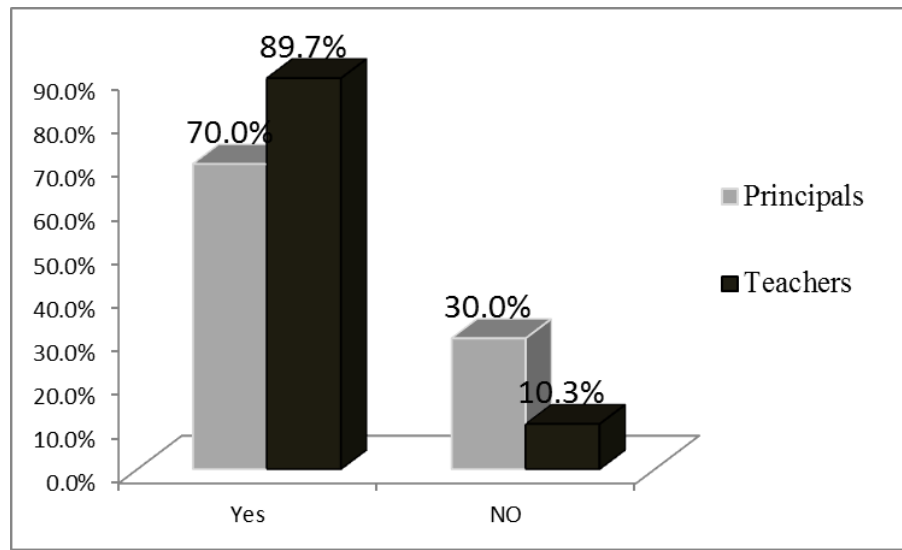


Figure 4.1: Influence of FSE to Entry in Secondary Schools

Data in Figure 4.1 shows that FSE has contributed to low entry behaviours in secondary schools. Data showed that 89.7% of the teachers and 70.0% of the principals concurred that FSE has contributed to schools admitting learners' with very low entry grades. As one principal observed the entry level at times is 150, way below what the Education officials announce to the media.

As the researcher found out from the principals, some parents preferred their children to attend "higher and more established" newly established secondary schools which had been charging higher school fees before harmonization and implementation of subsidized newly established secondary school education. Kasirye (2009) noted that lower entry behaviour contributed primarily to lower academic achievement later on in education. The authors argued that lower entry behaviour meant that some learners

had missed on key components that are tested later at higher levels of education and therefore takes longer for learners with lower pass marks to catch up with those with higher marks.

4.3.3.2 KCPE Entry Level in Newly Established Secondary Schools

The respondents were asked to indicate the KCPE entry level in the newly established secondary schools and the responses are summarized in Table 4.12 below.

Table 4.12: KCPE Entry Level in Newly Established Secondary Schools

Entry Marks	Frequency	Percent
100-149	4	40.0%
150-199	3	30.0%
200-250	2	20.0%
Over 250	1	10.0%
Total	10	100.0

Analysis of principals' responses showed that 40% of the secondary schools had learner's entry marks below 150 marks; 30% had 150-199 marks; 20% had 200-250 marks with 10% having more than 250 marks. The study, therefore, noted that the newly established secondary schools entry behaviour for learners was below the average marks of 250 in the KCPE examination. Sekyere and Akpalu (2013) in a study based in Ghana argued that the learners' entry behaviour affected their overall academic performance. The study noted that learners with very high entry marks exhibited high academic achievement in the final secondary examinations. The conclusion in that newly established secondary schools will continue posting lower marks in national examinations due to low entry behaviour. The secondary schools

need to improve their entry marks so that they can motivate learners in the primary schools to work harder to post better scores. Low entry scores make it difficult for teachers in secondary schools to teach this class of learners thus the speed of syllabus coverage is compromised.

Ali, Haider, Munir, Khan and Ahmed (2013) noted that previous schooling, parent's educational background, family income, self-motivation of students, age of student, learning preferences and entry qualification of students are important factors that have effects on student's academic performance in different settings and these contributed greatly to low academic performance by learners in newly established secondary schools.

4.3.4 Challenges Facing Newly Established Secondary Schools

The fourth objective of this study was to evaluate the challenges facing newly established secondary schools in Mathira Constituency, Kenya. The challenges are discussed below.

4.3.4.1 Lack of Physical Facilities

The researcher asked the principals and teachers if the lack of physical facilities inhibited quality teaching and learning in newly established secondary schools. The responses are summarized in Table 4.13.

Table 4.13: Lack of Physical Facilities

Responses	Principals		Teachers	
	Frequency	Percent	Frequency	Percent
Yes	9	90.0	50	86.2
No	1	10.0	8	3.8
Total	10	100.0	100.0	100.0

Data summarized in Table 4.13 shows that majority of the principals (90%) and teachers (86.2%) indicated that lack of school physical facilities such as classrooms, dining halls and laboratories posed a great challenge to newly established secondary school objective of providing quality education. As earlier noted, the newly established schools lacked basic infrastructure such as classrooms, laboratories and teaching and learning materials. The observations concur with Hanushek, Kain and Rivkin (2008) that lack of necessary physical resources which includes laboratory equipment inhibit learning.

The respondents were asked to indicate other challenges that newly established secondary school faced in the provision of quality education and the analysis of the responses are presented in Table 4.14.

Table 4.14: Other Challenges Facing Newly Established Secondary Schools

Item	Principals		Teachers	
	Frequency	Percent	Frequency	Percent
Lack of facilities & equipment	10	100.0	58	86.2
Lack of interest by learners	7	70.0	42	72.4
Others (lack of time for activities among other issues)	4	40.0	31	53.4

Analysis of teachers and principals' responses showed that all the principals (100%) and 86.2% of teachers rated lack of facilities in the schools as a great challenge. Data also showed that 70% of principals' and 72.4% of teachers rated lack of interest by learners as a great challenge to the provision of quality educations. The study concludes that newly established secondary schools face many challenges key among them being lack of physical infrastructure and interest by learners. The findings concur with Guloba, Wokadala and Bategeka (2010) that educational institutions not only lacked the physical infrastructure for quality learning but rather learners themselves were a challenge in the acquisition of education.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

INTRODUCTION

This chapter presents a summary of major findings from the study, gives the conclusions reached by the researcher as well as recommendations based on the findings. The chapter also outlines the areas that the researcher came across in the course of the study that needs further research.

5.1 Summary of Findings

In order to capture the issues of concern raised and handled in the study, a focus on the previous discussed chapter is essential. The principal concern of the study was to investigate the factors influencing the quality of education in newly established secondary schools in Kenya. This section outlines the summary of each study objective.

5.1.1 Learning Resources and Provision of Quality Education

The study established that lack of adequate physical facilities in newly established secondary schools hampered the provision of quality education. Among the physical facilities noted to be inadequate were physical buildings, text books among others. This interfered with teaching and learning in newly established secondary schools. The researcher observed that some subjects were taught in makeshift dining hall particularly when there were split subjects such as Geography and History, Business Studies and Agriculture and Biology/Physics.

The student-teacher ratio in newly established secondary schools was noted to be very high for effective teaching and learning. This limited individual learner management by teachers and it was noted that schools with very high student-teacher ratio performed poorly since teachers were overwhelmed by the high number of learners.

5.1.2 Teachers Competency Level and Provision of Quality Education

There were a significant number of trained teachers teaching in newly established secondary schools. However, close to 20% of the teachers were untrained and although it is a small percentage, it influences greatly the performance of learners. These teachers were employed by the School Boards of Management to cater for staff shortage in schools and they mainly were old students contracted to teach in the schools as teachers.

5.1.3 Learners Entry Behaviour and Provision of Quality Education

FSE has contributed to low entry behaviours in secondary schools. As the researcher found out from the principals, some parents preferred their children to attend “higher and more established” newly established secondary schools which had been charging higher school fees before harmonization and implementation of subsidized newly established secondary school education. Data showed that 40% of the secondary schools had entry marks below 150 marks; 30% had 150-199 marks; 20% had 200-250 marks with 10% having more than 250 marks.

5.2 Conclusions

The study concludes that newly established secondary schools lack the necessary physical facilities needed for effective teaching and learning. Among the key physical resources absent in newly established secondary schools included working laboratories, reading materials among others. Newly established secondary schools

lacked adequate teaching staff and this had made the schools rely on untrained form four leavers to meet the teacher shortage.

One of the detriments of Free Newly established secondary School policy was low entry behaviour among learners. This made the teachers work extremely difficult and resulted in low quality of learning in newly established secondary schools. Parents were also observed to prefer the long-established newly established secondary schools in place of the newly established secondary schools. The average entry grade to a newly established secondary schools was noted to be below 200 marks.

5.3 Recommendations

The study recommends the following;

- i. The Ministry of Education Science and Technology should speedily ensure that the newly established secondary schools get funding to construct and equip schools with physical facilities required for quality learning.
- ii. The Teachers Service Commission should prioritize recruitment and deployment of teachers into newly established secondary schools. This would ensure that schools do not have untrained teachers who compromise the quality of learning.
- iii. The government should raise the entry grade level in newly established secondary schools to enhance teaching and learning. By encouraging learners with lower than 200 marks to join vocational training and only those with over 200 marks joins newly established schools the government will save a lot of resources. This would also ensure that learners gaining entry to newly established secondary schools have acquired basic skills at primary level and assist in quality education at secondary level.

5.4 Research Gaps

In the course of this study, the researcher came across these areas that need further research;

- i. The level and role of parental involvement in school activities on the academic performance of learners in newly established secondary schools. It was noted that the parents in newly established secondary schools did not participate in the school activities. Very few checked their children academic performance despite some neighbouring the secondary schools.
- ii. The principals' management style on academic performance of newly established secondary schools. It was noted that the newly established secondary school did not have pre-requisite structures of governance as most had less than eight teachers whereas the examinable subjects were eight.
- iii. In the course of the study, the research came across the Teachers Performance Appraisal Development Tools (TPAD) which was touted as a great tool to enhance quality teaching and learning in Kenyan Schools. There is need to evaluate the impact on TPAD in teaching and learning in secondary schools.

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APPENDICES

Appendix 1: Introduction Letter

Dear Respondent,

RE: REQUEST TO PROVIDE DATA ON ANALYSIS OF FACTORS INFLUENCING QUALITY EDUCATION PROVISION IN NEWLY ESTABLISHED SECONDARY SCHOOLS IN MATHIRA CONSTITUENCY, KENYA.

I am a post graduate student at Karatina University. I am conducting a study on the status of secondary education in the newly established secondary schools in the provision of quality education in Mathira Constituency, Kenya. I am requesting that you provide data by filling the attached questionnaire. This study is purely academic and I can assure you that the data you provide will be used for academic purpose only. By accepting to fill out this questionnaire, I wish to bring to your attention that you will be granting the researcher authority to use the data and also expressing willingness to participate in this study.

Kindly note that any information provided will also be treated with utmost confidentiality. Your assistance and cooperation will be highly acknowledged.

Thank You.

Yours faithfully,

Maina Sammy Njagi
Mobile: 0722 380 630

Appendix II: Questionnaire for Principals

This research is meant for academic purposes only. It will try to find out the effects of Free Secondary Education in the newly established secondary schools. You are kindly requested to provide answers to these questions honestly and precisely as possible. Please do not write your name or that of your school anywhere on the questionnaire. Please tick where appropriate or fill in the required information on the spaces provided.

Section A

1. Your gender Male () Female ()

2. Your experience in headship in years

1-5 Yrs () 6-10 Yrs () 10-15 Yrs () Over 15 Yrs ()

3. Your experience in headship in the current school
1-5 Yrs () 6-10 Yrs () 10-15 Yrs () Over 15 Yrs ()

4. Are you the founding head of this school?

Yes () No ()

Section B: Background information of the school

5. How long has the school been in existence?.....years

6. From the records who initiated the establishment of the school

The Central government () Local government ()
Local community () An individual ()
A church organization ()
Any other (please specify).....

7. In your opinion what was/ were the main reasons for starting the school? If more than one, kindly indicate them in order of importance.
Most important (a).....
(b).....

(c).....

Less important (d).....

8. Has the school been duly registered by the Ministry of Education?

Yes () No ()

Registration in progress ()

9. Who financed the establishment of the school?

(Tick all that are applicable, if more than one)

The Central Government () The local government ()

The local community () An individual ()

A church organization () Any other (specify) ()

Section C: Status of Physical Facilities and Instructional Materials

10. (a) In your own opinion, was the FSE funds adequate to provide the physical facilities and instructional materials required at the inception of the school?

Yes () No ()

(b) If the answer to (a) above is no, have more facilities been added?

Yes () No ()

Please indicate your response concerning the facilities available in the school where Strongly Agree=5, Agree=4 undecided =3 Disagree= 4 Strongly Disagree =1

	Statement	1	2	3	4	5
a)	The classrooms are well suited for learning					
b)	The classrooms accommodate all learners comfortable					
c)	There is a library that is well stocked with curriculum content					
d)	There is a functional science laboratory					
e)	There is an administration block in the school well equipped and designed for learning					

f)	The school has a computer lab					
g)	The dining hall is large enough for all learners to enjoy meals comfortably					
h)	The school has a well-maintained playground					

if physical facilities and instructional materials provided through FSE are inadequate, give other possible sources of funds.

.....

Section C: Teacher Personnel

1. (a) What is the total number of teachers in your school?.....

Male..... Female.....

(b). Are all the teachers in your school employed by the Teachers Service Commission?

Yes [] No []

(c) . If the answer to (b) above is no, how many are employed by the Board Of Governors?

Male..... Female.....

(d) Give the current teacher-student ratio in your school, please.....

2. What is the level of your teachers content mastery:

Very High () High () Medium () Low ()

3. (a) Does the school have enough number of teachers

Yes [] No []

(b). If no, how do you cope with the shortage?

Combine classes ()

Use of volunteer teachers ()

Left untaught ()

Others (specify).....

(c) Give the number of trained and untrained teachers in the school

Trained Untrained.....

(d) List the problems you experience in relation to teacher management in your school in the provision of quality education.

.....
.....
.....
.....

Section D: Enrollment and Admission

4. How many streams are there in your school.....

5. What is the average number of students per class

20—29	{	}	30—39	{	}
40—49	{	}	50—59	{	}
60 and above	{	}			

6. How as subsidized secondary education affected entry behaviour in your schools.

- a. Lower entry marks ()
- b. Lower demand for secondary education ()
- c. Others (explain).....

7. (a)What is the average entry KCPE marks of your students

100—149	{	}	150—199	{	}
200—249	{	}	250—299	{	}
300—349	{	}	350 and above	{	}

(b) In your own opinion, do you think the introduction of FSE has affected the KCPE entry marks of students in your school?

Yes { } No { }

(c)If the answer to (b) above is ‘yes’ please explain briefly how the entry mark of the students in relation to KCPE performance has affected the provision of quality education in your school in terms of academic performance and co-curricular activities?

Games [] Drama [] Music []

(c) Does the government through the FSE initiative provide funds for the promotion of co-curricular activities?

Yes () No ()

(d) If the answer to c above is 'yes', are the funds enough?

Yes () No ()

(e) If the answer to 'd' above is 'no', please explain how you manage the co-curricular activities.

.....
.....
.....

(c) Identify the challenges experienced if any in the promotion of these activities and give possible solutions

.....
.....
.....
.....
.....
.....

*End of questionnaire
Thank you for your participation*

Appendix III: Questionnaires for the Teachers

This research is meant for academic purposes only. It will try to find out the effects of Free Secondary Education in the newly established day secondary schools. You are kindly requested to provide answers to these questions honestly and precisely as possible. Responses to these questions will be treated as confidential and will be used for this research only. Please do not write your name or that of your school anywhere on the questionnaire. Please tick where appropriate or fill in the required information on the spaces provided.

SECTION A: Background Information of Teacher

Please indicate your response by ticking in the appropriate box

1. Gender Male [] Female []
2. Which subjects do you teach?.....
3. How long have you been in this school..... Years
4. What are your qualifications:
 - a. KCSE Certificate
 - b. Diploma in Education
 - c. Bachelors Degree
 - d. Masters Degree

SECTION II: Teaching and Learning Resources

5. (a) Who provides subject textbooks for the students
School [] Parents [] Any other (specify) []
- (b). In your own opinion, are the textbooks in your subject/s adequate?
Yes [] No []
- (c) . Are the textbooks of the recommended/approved type?
Yes [] No []
6. How do you acquire the necessary teaching resources for your subject/s?
School provides []
Teachers buy their own []
Any other (specify) []

7. Rate the adequacy of facility (s) in your school by circling the number under the phrase that best describes your opinion.

	Quite adequate	Adequate	Inadequate	Quite inadequate
Classrooms	1	2	3	4
Laboratories	1	2	3	4
Library	1	2	3	4
Reference books	1	2	3	4

8. How many teachers are there in your subject.....

9. Are they adequate to handle the subject in the school Yes No

10. If the answer to 9 above is No how do you handle the deficit.....

11. Do you think the FSE Policy has influenced the kind of students admitted in your school in relation to their KCPE marks Yes.....

No.....

12. In your own opinion, how do the kind of students admitted in your school affect the KCSE performance

13. In your own opinion, which phrase describes last year's candidates in your school?

Above average []

Average []

Below average []

14. Please indicate the KCSE mean score of your subject in the last three years

Year			
Mean Score			

15. (a) In your own opinion, do you think the FSE has affected the partnership or the support the parents give to the principal and teachers in your school?
 Yes [] No []

16. (b) If the answer to (a) above is Yes please indicate how this partnership has influenced the quality of education offered in the school.

.....

17. If the answer to (a) above is No, what do you think are the reasons.

.....

Appendix IV: Interview Guide for the Sub County Education Officer

The researcher would like to gather information on the effects of Free Secondary Education in the newly established day Secondary Schools in your Sub County. Please respond as frankly as possible to all questions. The information obtained will be used for this study only and will be treated with confidentiality.

1. How long have you been working in the present Sub County?.....
.....
.....
2. How many teachers are employed by the TSC in the newly established secondary schools and are the teachers adequate?
.....
.....
.....
3. If the teachers are inadequate, how do the new schools cope with the shortages?.....
.....
.....
4. In your view, are the available secondary schools adequate in meeting demand for education at this level?
.....
.....
.....
5. What is your view regarding the establishment of new newly established secondary schools in the Sub County?
.....
.....
.....
6. Would you advocate for the establishment of more newly established secondary schools in your Sub County?
.....
.....
.....

7. What measures are used by your office to check the quality of education provided in these newly established newly established secondary schools?.....
.....
.....
8. In your own opinion do you think the FSE has provided adequate learning and instructional resources in these new newly established secondary schools?.....
.....
.....
9. If the answer to the question Number 10 is no has the quality of education in the newly established newly established secondary schools been compromised?.....
.....
.....
10. Do you think the FSE Policy has an impact on the type of students admitted in these new day secondary schools in relation to their KCPE marks and have this affected the performance of KCSE in the Sub County?
.....
.....
.....

*End of questionnaire
Thank you for your participation*

Appendix V: Kathuri and Pals Table of Sample Size Determination

N	S	N	S	
<u>10</u>	<u>10</u>	60	52	
15	14	65	56	
20	19	70	59	
25	24	75	63	
30	28	80	66	
35	32	<u>85</u>	<u>70</u>	
40	36	90	73	
45	40	95	76	N= Population
50	44	100	80	S=Sample Size
55	48	110	86	

Sample Size Determination table adapted from Kathuri & Pals (1993)

Appendix VI: Research Authorisation Letter



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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

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

Ref. No.
NACOSTI/P/17/58766/2564

Date:
06th November, 2016

MR SAMMY MAINA NJAGI
P.O BOX 1957 - 10101
KARATINA

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on: **“Factors Affecting the Quality of Education in the Newly Established Schools in Mathira Constituency”** I am pleased to inform you that you have been authorized to undertake research in Nyeri County for a period ending 20th September, 2017.

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

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


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

Copy to:

The County Commissioner
Nyeri County.

The County Director of Education
Nyeri County.

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