

**THE ACADEMIC PERFORMANCE AMONG PRIMARY  
SCHOOL PUPILS IN SCIENCE SUBJECT IN NATIONAL  
EXAMINATIONS**

**A CASE STUDY OF KAMWANGI DIVISION PRIMARY  
SCHOOLS, THIKA DISTRICT- KENYA**

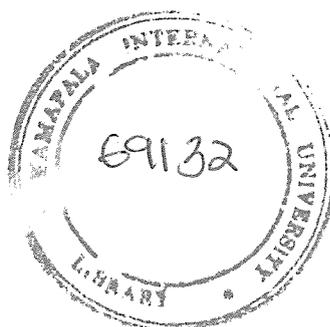
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**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT  
OF THE REQUIREMENT FOR THE AWARD OF A DEGREE  
OF EDUCATION IN EARLY CHILD HOOD OF KAMPALA  
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**NOVEMBER, 2008**



## DECLARATION

I declare that this research report is my personal work and that it has not been prior submitted in any university for the award of a degree.

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## APPROVAL

This research report has been submitted for examination with my approval as University Supervisor.

Signature:

Date:

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MS ONEGO ROSELINE

## **DEDICATION**

I dedicate this dissertation to my entire family members, friends and most especially to my Wife Lucy Kinyanjui and Children Ann Wambui, Eunice NJeri and Bernard Githumu for their care and effort to see me at school and their courage to help complete this research work.

## **Acknowledgement**

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## **LIST OF ACRONYMS**

<b>KCPE</b>	Kenya Certificate of Primary Education
<b>T S C</b>	Teacher service Commission
<b>PDE</b>	Provincial Director of Education
<b>UNESCO</b>	United Nations Educational Scientific Cultural Organization
<b>DEO</b>	District Education Officer

## Definitions of operational terms

**Subject:** Is a unit of study in primary schools

**Science:** Is the study of living organism subject

**Teacher:** Is a person who imparts knowledge in the pupils

**Performance:** Is the analysis of understanding of pupils in related subjects

**Education :** Is the process of acquiring knowledge

**Pupils:** Are the young people acquiring knowledge or undergoing the process of learning an early stage

**Primary:** Is the elementary level of education process

## **ABSTRACT**

The general objective of this study was to assess the learning resources and performance of pre-school children. The study was conducted in Kamwangi Division primary schools, Thika District Kenya. Ten political leaders, 20 pupils, 20 teachers and 30 community inhabitants were interviewed. Teachers, political leaders, pupils and community inhabitants participated in the study. A total of eighty (80) participants therefore participated in the study.

The study question was investigated in line with the research questions of the study. The first research question was “What do you think are the major causes of the fluctuations in the performance of primary school pupils? The study discovered that; Poor learning environment, Poor teacher qualification, Poor academic syllabus, Poor pupils’ attitude toward science subject, Pupils’ absenteeism, Lack science equipment were the factors given under this research question. The second research question was “Of what impact do you think are the fluctuations in the performance of science subject among primary school pupils? The study findings revealed that; Doubt on teacher credibility, Imbalance in academic performance, Low number scientist, and discouragement in the subject were the answers given by the respondents. The third research question was “The third research question was “What do you think the National Examination Board can do to solve the fluctuations of performance among primary school performance?”

The answers to this question were; Provision of science equipment, Emphasis in science subject, Bann unnecessary absenteeism, Employ qualified teachers, Improve on learning environment, were the answers given. Conclusions and recommendations were then made after presenting and interpreting the data.

# CHAPTER ONE

## INTRODUCTION

### 1.0 Introduction

The focus of this research is on the determinants of pupils' performance in science. This chapter will cover, introduction, Background, Statement of the problem, Purpose of the study, Objectives of the study (General objectives and Specific objectives), and Scope of the study and the Significance of the study.

### 1.1 Background of the Study

Science is very important subject, as it is, an exact science which deals with the way our industries operate as well as the body mechanism, i.e., it is a live subject. It is studied in schools as a compulsory subject. The current education system in Kenya is designed to achieve specific national goals. The recommendations of September 1981, saw the introduction of the 8-4-4 System. Kenya is aiming to fully industrialized by the year 2020. If this goal is to be achieved, it means better performance in sciences, of which Science is part and parcel forming the backbone of industries.

Even though Science and its applications are so important in everyday life and in medical profession industrial activities, its performance in Kenya Certificate of Primary Education (K.C.P.E.) continues to be poor. It is a matter of concern to both the government and the general public that few pupils select Science and even those who do perform very poorly. Many people have done research in pupils' performance and have come up with different possibilities that could be leading to poor performance. They have come up with suggestions on how to overcome the problem and it is not clear why up to now the situation has not changed. Most suggestions given by researchers appear not to be effective. Ways and means must be found to ensure that the parties concerned know where the problem lies.

### 1.2 Statement of the Problem

There has been remarkable inconsistency in the performance of primary school pupils for a number of years according to the National Examination Board in the way that the performances have long never been stable. In some years the Board registers increase in the performance yet in some years the same Board registers a decline in the performance of primary school pupils' in science performance. The Board has for long

therefore wondered what actually causes the fluctuation of the pupils' performance in different academic years.

Given that situation therefore, the researcher here intends to examine the determinants of the performance in science subject of primary school pupils. Therefore failure to understand the factors leading to poor performance limits the ability of the policy makers and teachers in general to improve on the 8-4-4 system of education and the science subjects in general. Since the factors leading to the problem have not been researched on, corrective measures have not been given therefore teaching of the subject has not been efficient and performance remains poor. This study aims at exploring more on the scenario.

### **1.3 Purpose of the Study**

In order to identify the problems encountered in learning Science and how these problems either partially or wholly are instrumental in affecting performance, the purpose of the research therefore comes in the way that the researcher intends to address the problems encountered in the study of science as a subject in primary schools. The researcher examined the determinants of pupils' performance in primary schools and identify necessary solutions curb the problem.

### **1.4 Objective of the study**

- (i) To examine pupils attitudes towards science subjects
- (ii) To examine the factors responsible for poor academic performance in science subject.
- (iii) To suggest possible solutions to curb the problem.

#### **1.4.1 Research questions**

1. What are the students' attitudes towards science subject?
- 2 what are the possible factors that are responsible for poor performance in science subject?
3. What do you think should be done to improve the students' performance ion science subjects?

### **1.5 Scope of the study**

The study was carried out in Kamwangi- Division Primary schools, namely; Miiri, James Njenga and Mokohoko Primary Schools. It was limited to determinants of pupils' performance in science subjects.

### **1.6 Significance of the study**

Given the research topic, the significance of the study will tend to address the problems related to the fluctuating performance of primary school pupils. If such factors responsible for fluctuation of pupils in Science are found, the education planners, administrators and teachers would be better placed to address themselves to the factors with a view of improving the performance.

The study will help the principle researcher to recommend on appropriate strategies of improving on the performance of primary school pupils in science subject.

The research will however help policy makers come up with appropriate policies of solving the problems of fluctuating performance of primary school pupils. .

The research findings will boost the documented literature resource of Kampala International University.

Having undertaken the study, the researcher will build good experience and attain deeper insight of not only research but also public issues in relation to the performance of primary school pupils.

## CHAPTER TWO

### LITERATURE REVIEW

#### **2.0 Introduction**

This chapter will include looking through the earlier research documents; literature with an aim of identifying a problem of concern eventual number of duplication of early research work is done. Apart from going through other related work, it will also involve critically going through other services of materials that are related to the research topic. Under this chapter, Review of the Related Literature, Literature related to physical facilities, Review related to students' attitude towards Science Review related to teacher attitude, Review related to context

Review related to methodology, and Conclusion are found.

#### **2.1 Review of the Related Literature**

The research here reviews a number of factors that could easily contribute to poor performance in Science. The nature of teaching and learning is confronted with many problems which are experienced by Science teachers and pupils.

The problems that face teachers include, poor facilities, shortage of teaching aids, students with negative attitudes towards Science. Pupils who are poor in English hence may not understand Science concepts due to language barriers. Poor school administrators also contribute to poor performance in Science. Some schools do not even have a laboratory assistant; the teacher has to spend sometime preparing a practical himself. The head teachers claim that they can't afford to pay the laboratory assistant.

The problems that face pupils, include poor teaching methods, lack of text books and library abstracts topics for study, frustrated teachers who are not motivated and the pupils own laziness that makes them not practice numerical questions, in Science or even revise. The above problems faced by researchers and pupils are reviewed in this study.

#### **2.2 Physical facilities**

Availability of the necessary physical facilities plays a role in enhancing good performance in any subject. Sauna (1988 page 21) concurs when he says: "it is generally assumed that better facilities in school should lead to better performance in

examinations.” He further notes that a teacher who has a class with lockable doors and windows for example will be motivated to make a variety of teaching aids, as he knows he can store them quite safely.

Views on the causes of poor performance in examination are many and varied. These views range from lack of teaching facilities, personal discipline, poor administration etc. Writing on ways to help students pass, Nyama (1984 page 7) poses the following questions: What makes students pass? Is it good desks, good buildings, good diets, good books or good teachers?

Though he gives his own answers to these questions, a thorough look is needed to find out the effects of each on performance, since there are many causes mostly unexplored that led to poor performance. This can be discerned from a comment by Oyier (1986) where he laments that despite schools in Thika having qualified staff and permanent physical facilities, the K.C.P.E candidates in the district do not perform well. This comment shows that it is not fair to blame the teachers and facilities for poor performance in schools. Time urgency of rectifying this situation calls for a look at the pupil, the parents and maybe, the environment to explain the deteriorating performance in schools. In this respect Omamo (1992) expressing concern over poor results in Thika district felt disappointed with present generation in Gucha district which does not take education seriously but merely for granted.

On inequitable distribution of facilities and personnel among other factors, Gichaga (1992 page 10) adds “... if the government could give same treatment priority to both rural and urban schools by supplying equipments on time, rural schools could also compete favorably with urban schools.”

There is need for a complete re-appraisal of the kind of experiences provided in the school laboratories. Despite the rigidity of our examination oriented syllabus, it should be realized that more sense can be got over to the students, by use of common apparatus other than elaborate equipment unlikely to be met in later life. Eshiwani (1996 page 6) in one of his studies in science education found that: - “there is need to introduce technology in our science curriculum given the fact that the present Primary school science is geared towards practical education, when the majority of the

candidates sitting these examinations, could become technological entrepreneurs in the rural areas.”

A supportive administration plays a big role in enhancing good performance in schools. This is because the principal controls the finances and could avail a lot of teaching aids for the Science.

Some of the teaching aids include modules, Manila papers, charts, graph papers, Science reference books, apparatus for practical, fund science project for science congress, fund Maths teachers for science seminars. Writing on this issue Mbithi, (1982 page 3) says that “it is important because a curriculum design has practical meaning when the school has the required support materials.” Field trips and practical based teaching, makes Science interesting and more motivating. It gives the pupil confidence in the subject and enhances good performance.

### **2.3 Students attitude towards Science**

The negative attitudes of pupils also contribute to poor performance in Science. Eshiwani (1996 page 348) explains why the pupils develop a negative attitude “The courses are overloaded abstract and each topic is treated superficially with results that, pupils forget what they have learnt.” Bell (1990 page 80) felt that what we learn in school and at home, are very closely tied.

“Attitude and subjects are not learnt separately but simultaneously, through complex interactions.” Therefore whatever happens in school and more so from the teachers, influence the pupils’ attitudes towards everything in school and this may affect the performance.

Therefore teachers should have their continuous attention directed towards creating, developing, maintaining and reinforcing positive attitudes in the pupils.

Another area that has received some attention is the effect of attitude to schooling or altitude to a particular subject on performance .If the parent believe in education, if they support the school, in its efforts and their aims are similar to those of the teacher, then their children will have an advantage over pupils who come from homes with less enthusiastic parents. Kapila (1980 page 30) concurs in his findings is some Nairobi

school that “children whose parents make frequent visits to school did better academically than those whose parents did not pay a visit”

#### **2.4 Teacher attitude, academic, professional qualifications and experience**

The teaching methods of a teacher play an important role in motivating the learners. Eshiwani (1996 page 350) writing on this, observes “The teacher in the classroom should be particularly concerned with personal developments of the child, the stimulation curiosity and a critical outlook. The materials should be presented in such a way that interests pupils and encourages them to think for themselves” ----- Mangy Thou in seminar paper 52 concurs by saying that teaching should be in steps, the lesson building up with the students actively involved. Illustrations, examples and demonstrations should be given relating to the experiences and environment of the child. The teacher should aim at changing the negative attitude in students and could do this by making the lesson more interesting, practical, real and also let the pupils know what jobs to expect in Science related fields. In other words the teacher should market the subject.

Some teachers lack interest in teaching the subject .This may be because they are not motivated properly for their tasks. There is no distinction between hardworking teachers and those who do not take their work seriously, Mangy Thou (1985 page 21) concurs by saying that teachers need to be rewarded for work well done. Their salaries and incentives need to be reviewed from time to time. Otherwise we will be lamenting poor performance of students while we have been ignoring the contributory facts. Trained teachers and those with teaching experience also contribute to good performance. Sidhuks (1882) notes “successful teaching experience is a valuable asset.”

It will enable the teacher to acquire certain commendable characteristics such as promptness, adaptability, efficiency, the ability of arousing and maintaining interests, adequate command of instructional material and ability to face the class since he will use appropriate teaching aids, prepare lesson plans, illustrations, and exercises and give proper instructions to the students.

The Daily Nation Newspaper Editorial of 13/11/2000 quotes in part “not a single month passes without lament from teachers against salary delays, at times 10 days late. More annoying is the fact that despite numerous complaints by teachers, over the matter, the government has done nothing to resolve it .In a story in The Black Board

(Daily Nation Newspaper), the T.S.C. chairman, Mr. Abraham Hussein, says teachers should not blame the commission for the delays .The problems, he says, lies with government computer center. T.S.C secretary, Mr. Gabriel, was quoted attributing the problem to the bureaucratic procedures among T.S.C., Ministry of Education and The Treasury.”

Kihumaba Kamotho of East African Standard 13/11/2000 quotes: “four years ago, UNESCO devoted its 45<sup>th</sup> session on the international conference on education analyzing the role of teachers in a changing world. During the conference, the quality of teachers, their working conditions and their role in a changing world, acquired very significant dimensions. Delegates agreed there was need for re – engineering education, so that learners received an education, based on four pillars of learning. They were learning to be instrumental in this appropriate education .But at the same gathering, one of the salient point to emerge was most of the worlds 60 million work under very difficulty conditions, for very little pay, relative to the task they accomplish.”

Governments argue that due to their number it is not possible to pay them a salary commensurate with the role they perform. Other than the working conditions, the meeting noted that, in some countries, teachers go without salaries for months. In the Daily Nation (15-01-2001), Muse Randomly noted: “religious groups that sponsor schools must not take part in institution management.” Nyanza P/D/E, Rosylene Onyuka, ordered teachers to immediately stop taking orders and direction on how to run the school from sponsors. “ It has come to my knowledge that even the so called sponsors are going to the extent of demanding money from head teachers, some of whom are giving out willingly.” She added that sponsoring churches have gone as far as closing schools illegally and warned that the ministry had powers to close down schools even private ones if they did not meet the necessary requirements .She was speaking to more than 600 school heads, their deputies and other teachers at the Kisumu Polytechnic in Nyanza during the winding up of the from one selection exercise.

On Friday (12-10-2001), three catholic Priests from Gucha district were reported to have defied a government order to re-open five schools until the head teachers were transferred. “Sponsors role in the institution is only spiritual, she quotes. Some

religious denominations have appointed officials known as education secretaries. Be warned that these people do not know anything about education to dictate to you on how to run your institution.” She told D.E.O and secondary school heads to ensure that all members of the schools Board of Governors have a least a form four level of education and the chairmen degree. Mrs. Onyuku said most members of the school boards were illiterate and easily manipulated by errant head teachers. She claimed that many school were doing extremely poor in national examinations because most of their board members are illiterate (East African standard (10/1/201) editorial).

The ministry of education had undertaken one of the most comprehensive transfers of head teachers in recent time. Hundreds of head teachers have been moved in the exercise while others have been demoted. The government says that the move has been necessitated by the persisting inability to perform. Transfer, if well managed, can improve the realization of a country’s educational goals through proper implementation of the curriculum and proper managing of learning activities and facilities, the recent transfers are geared towards that.

## **2.5 Context**

Kizito (1986 page 21) quoted: “ in discussing performance in examinations it might also be in order, to discuss the aims of education and examination, in particular, one of the aims of education, is the training of the man power and examination serve as an instrument for appraising the effectiveness of the educational programmes.” Writing on the worth of national examination, Manyenye (1985 page 11) says in part “curriculum in our schools have been based on European science curriculum which are neither relevant to the east African problems nor appreciative of the socio – cultural background of the average east African, boy or girl.”

Due to the fact that a student does not get the concepts, he gets bored and hates Science and the teacher and hence reduced performance .The language can also be a barrier to understanding Science. When students are poor in English they do not get the concepts. Eshiwani (1996 page 16) concurs when he says: “when the language of instruction is not in mother tongue, particular attention should be given to the language demands of the learner.” He further suggests that the teachers must use the language which is readily understood.

## 2.6 Conclusion

From the reviews, it is evident that many studies have been carried out to find out the factors that have led to poor performance in Science, among pupils in Primary schools. The researchers aim is to find out if those factors apply to Kamwangi- Division primary schools. The researchers will use questionnaires to collect data from pupils and from Science teachers. Since most of the problems facing performance are common to many schools in Kenya, it is important that the sessions, involving pupils, parents and teachers be held in order to create awareness and decide on solutions which could be implemented to reverse them. Even with this realization, there are yet other causes of poor performance that have remained elusive. Awino (1986 page 3) cited the case of Lwak Girls Primary school which has been the pride of Kamwangi Division in both K.C.P.E but the tread is no longer the same. “What reasons are behind such a rapid decline in performance”, she asks.

Kizito (1986 page 23) quotes: “research into the study of science and the improvement of science teaching methods, has been of interest to researchers, as well as from various journals and books in this subject .The findings of these studies, have centered on such areas as relevance of science curricular, teaching methods facilities for teaching subject and the school environment” on the question of relevance of science education being offered in our schools.”



## CHAPTER THREE

### METHODOLOGY

#### 3.0 Introduction

This chapter will include the methodology of the study. It entails research design, geographical location/area and population, sampling design, data collection methods and instruments, data analysis and processing and the limitations of the study.

#### 3.1 Research Design

The research intends to use descriptive and analytical research design. These are selected because they are effective ways of research presentation. It will be survey-based on quantitative and qualitative data analysis.

#### 3.2 Area and Population of Study

The research will be conducted in one area that is Kamwangi Division primary school in Thika District which is found in the central province of Kenya-Nairobi. Thika District has an approximate population of 700,000 people. The most spoken languages are: kikuyu, Kiswahili and English and The respondents will consist of local population especially adults, opinion leaders. The area has been basically chosen because the researcher is familiar with the area and is able to speak English and Kiswahili which are the most dominant languages and also because the District.

#### 3.3 Sample Design

The researcher intends to use purposive sampling technique since it ensures that the only predetermined and chosen respondents are approached, hence getting relevant, correct and adequate information. However, through this sampling technique is chosen, it has a weakness that inadequate information can sometimes be given because the selected respondents may be less informed on the topic of research.

The sample size of 80 respondents will be chosen and this will be arrived at as:-

Category	Number of Respondents
Political leaders	10
Pupils	20
Teachers	20
Community inhabitants	30
<b>Total</b>	<b>80</b>

### **3.4 Data Collection Methods And Instruments**

#### **3.4.1 Method**

The researcher will collect/get data from both primary and secondary sources.

##### **Primary and secondary data collection methods**

This may be sourced by physical and visiting of the files and collecting data through variable tools.

This will be sourced by reviewing of documented resources as newspapers, reports, presentations, magazines and online publications.

#### **3.4.2 Instruments**

The following data collection instruments will be used:-

##### **(a) Questionnaire**

This will be designed in line with the topic, objectives and hypothesis. They will include both open and closed-ended questions. This instrument has been selected because it is efficient and convenient in a way that the respondent is given time to consult the documents before answering the questions. It is also because the respondent can give unbiased answers since she/he is given to write whatever she/he would like to write which would otherwise be hard for the respondent to write if the researcher is present.

##### **(b) Focus Group Discussions**

The instrument is being chosen because the respondents give instant answers and the data collected can easily be edited since the researcher will have heard when the respondent is communicating (answering) the question. The researcher is saved from misinterpretation of questions since he can rephrase the question if not fully heard or answered so that he can get the relevant information wanted.

##### **(c) Documentary Review**

This will include detailed review of already existing literature. The tool is selected because it gives accurate, correct and historical data, which may be used for future aspects.

### **3.5 Data Analysis**

#### **3.5.1 Quantitative Data Analysis**

Editing of the information from the respondents will be done. This is before leaving the respondent purposely to avoid the loss of material, misinformation and also to check for uniformity, consistency, accuracy and comprehensibility.

#### **3.5.2 Qualitative Data Analysis**

Data will be analyzed before, during and after collection. Before data collection, tentative themes will be identified. The tentative themes are social, economic and political factors associated with the performance of primary pupils in science subjects. After data collection, information of the same code will be assembled together and a report will be written.

### **3.6 Data presentation**

To facilitate presentation and analysis of data, tabular layouts will be used (descriptive analysis methods) then calculating percentages and through tabulation method and pictorials the data be analyzed. The additional information will appear under the relevant sub-section below the tables followed by the conclusion .The results will be presented as per the identified factor and those that the researcher intended to discuss. The information which will be obtained from the principal or the physical facilities will also be included.

## CHAPTER FOUR

### FINDINGS, PRESENTATION AND ANALYSIS

#### **4.0 Introduction**

The data was collected using both quantitative and qualitative methods which was then analyzed and processed to make it useful and understandable. Data was collected, tabulated and then analyzed.

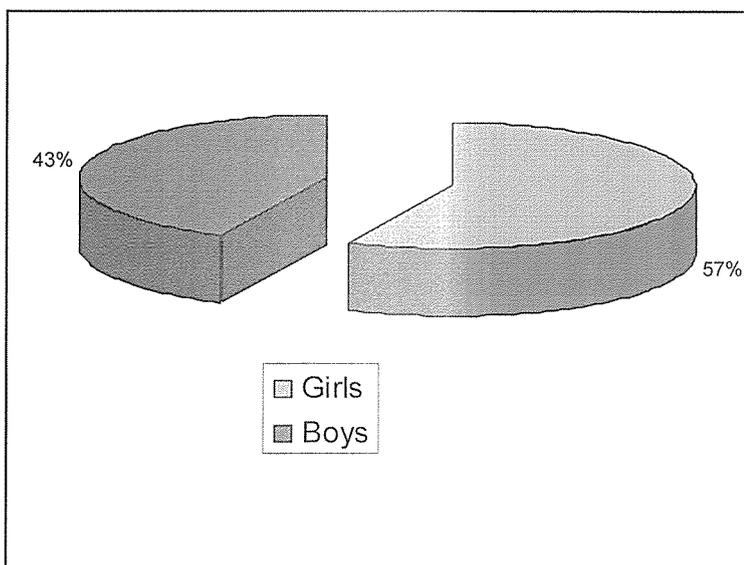
#### **Teacher qualification**

One of the reasons why there is fluctuating performance of primary school pupils in science subject is due to teachers' qualification. This according to the respondents is mainly caused due to corruption, which has rocked many of the Kenyan schools in the way, that the schools Administrators do employ people who are semi-qualified in the name of teachers. This has been a problem because the performances of the pupils have dramatically been low and this is why the performance is fluctuating form time to time and from year to year. As long as the teachers ate not qualified enough to handle education, there will always be inconsistency in the performance of the pupils in the science subject because the teachers who teach the pupils are themselves not well trained but they teach because they have been employed.

#### **Learning environment**

Learning environment has also been noted as another cause of the fluctuating performance of primary school pupils in science subjects. The respondents here stated that there are many schools that are poorly built in confined and congested places where the pupils have no space to even play are relax. Such places according to the respondents are very dangerous for learning because effective learning has to take place in a conducive environment free from congestion and poor environment which due to lack of compounds. The environment into which an individual is brought up matters a lot in the shaping of those persons' behavior and general response to the given situation. The respondent emphasized that the environment in which the pupils study from do affect them in one way or the other but the effect is so much witnessed in the performance of the pupils.

**Figure I. Pie-chart showing percentage of science performance by sex**



**Source:** Field work data

### **Pupil attendance**

Pupils' attendance was also mentioned as another factor responsible for the fluctuating performance of primary school pupils in the way that there are many pupils who forego school for many days in a week. The pupils do not attend classes and their performance can therefore not be compared with those that attend class regularly because those who miss class for some time do a lot of time to catch up with those whose attendance is regular. Many of these pupils deliberately do not want to go to school or many of them are being overloaded with work from their parents who do not spare the pupils or who do not consider studies as something very essential and important. Given this kind of situation, there has been low performance for example in the performance of science subject which in many cases are practical that theoretical in its teaching and learning by the teachers and the pupils respectively.

### **Science equipment**

The inadequate science teaching equipment in primary schools has equally contributed to the performance of the subject in a negative way rather than in a positive way. The respondents here noted that there are quite a number of schools without primary science books and other related materials necessary for the teaching of the subject in primary schools. The absence of these equipment have led to poor performance of the subject

for many years and the pupils carry less blame here because they have little knowledge of what ought to be done in order to improve their performance in science subject compared to other subjects that they study. The absence of this equipment in the teaching of the subject made the pupils' performance to lag behind in the performance of the subject since the pupils tend to believe that that it is the way the subject appears.

**Figure II:** Table showing respondents views on the causes of fluctuation in science performance in primary schools

<b>Factor</b>	<b>Number of respondents</b>	<b>Age of respondents</b>	<b>Percentage</b>
Teacher qualification	25	40-75	30
Pupil attendance	20	27-63	25
Inadequate science equipment	24	25-70	29
Learning environment	10	35-72	12.5
No idea	6	30-52	10.5
<b>Total</b>	<b>80</b>		<b>100</b>

**Source:** Field work data

### **Low number of scientists**

There has been remarkable low number of scientists in Kenya because of the elementary failing of science subject in primary schools. Many of the students have resorted to the studying or Arts courses where they are now congested and few of the students have taken the initiative to study science subject and science related courses in their advanced levels of studies. The whole of Thika district and country of Kenya in general is in lack of scientists simply because of pupils' less concentration in science subject, due to poor background of the subject. There will be more lack of the scientists in the field of science and technology which is now at a very high demand because many of the Thika district pupils and Kenya at large do give little emphasis to the study of science in primary level and eventual doing of science course in advance academic levels.

### **Discouragement of the subject**

Discouragement in the subject is cited as one of the immediate effects that Thika district is most likely to face in the study of science subjects in primary schools. The pupils here will be discouraged from the study the subject because of the poor record that the subject has in the district. So the would be scientists due to the elementary study of science course will be totally discouraged as many of them will assume that the subject is generally hard because of few scores in its study through out the years. Once the subject gets poor publicity from the pupils, there will be further reduction in the number of students willing to under take the subject as their academic career.

### **Doubt on teacher credibility**

Another notable effect of the fluctuation of the performance in science course is the doubt on the credibility of the teachers by mainly the parents, ministry of education, the National Examination Board and the community at large because they are the stakeholders in education system of Thika district and Kenya as a country. Much of the blames will be levied so much on the teachers and there will be little consideration on the role the pupils play in their poor performance of science subject in primary schools. The teachers will be doubted a lot and the stakeholders here will from time to time question whether the teachers really passed through the clear channel in their studies because their studies would be evidenced in the improved performance of the pupils in the study of science subject.

**Figure III:** Table showing respondents views on the effects of science performance in primary schools

<b>Factor</b>	<b>Number of respondents</b>	<b>Age of respondents</b>	<b>Percentage</b>
Low number of scientist	30	30-70	40
Discouragement of the subject	10	20-53	20
Doubt on teacher credibility	17	25-60	23
No idea	23	55-67	27
<b>Total</b>	<b>80</b>		<b>100</b>

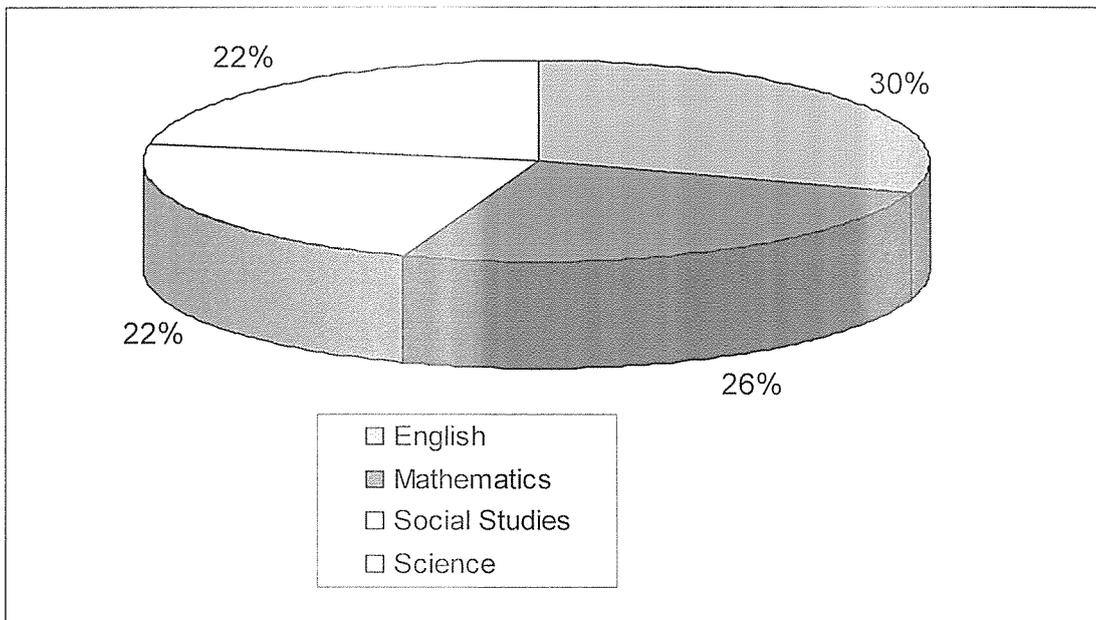
Source: Field work data

### Ways through Which Pupils Performance Can Be Improved In Science Subjects

#### Ban unnecessary pupil absenteeism

Banning of unnecessary pupil absenteeism is one of the immediate solutions advanced by respondents as a solution to the fluctuating performance of primary school pupils in science subject. The respondents in this case stated that the school administrations should come up with strict laws prohibiting unnecessary absenteeism, which is so rampant among primary school pupils in Thika district. It has been found that there are many pupils who deliberately do not want to go school despite of the fact that they have left home for studies. Many of these children do leave home very early in the morning and they do not reach school but rather end up wondering around until the time of departure, which they know very well. The school administrators are therefore advised here to totally keep a close look at those pupils who dodge studies if they are to improve on the performance of their pupils in science subject.

Figure IV: A pie-chart showing the performance of pupils in primary school in four subjects



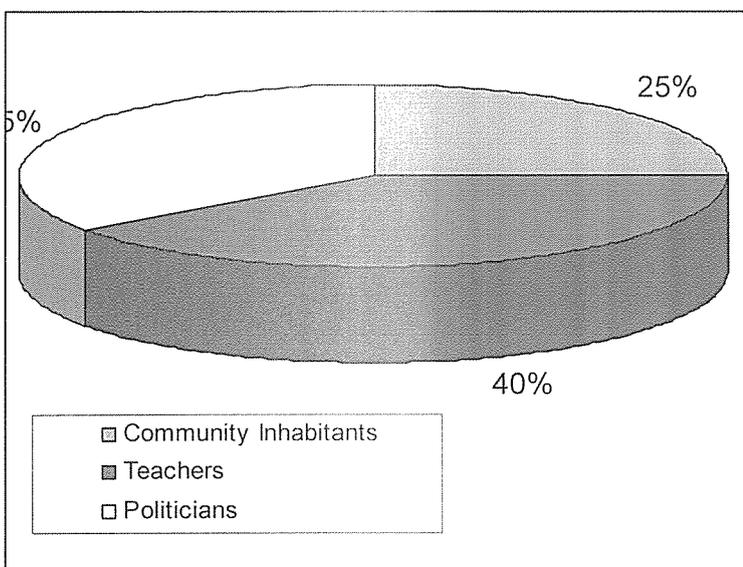
Source: Field work data

#### Employ qualified teaching staff

Employment of qualified teaching staffs by the school administration is yet another solution given by the respondents as the way forward in improving the performance of

science subject in primary schools in Thika district. This solution follows the identification that many of the school teaching staffs are not qualified at all despite of the fact that they are learnt. Many of the staffs are there because of unemployment since they failed to get jobs in their various fields of study in different disciplines. Many of the teachers are not teachers because they did not do education as their profession but rather studied different courses like in social sciences, arts among other disciplines of study.

**Figure V. Pie-chart representing the respondents concern of pupils' poor performance in primary schools**



**Source:** Field work data

### **Develop good learning environment**

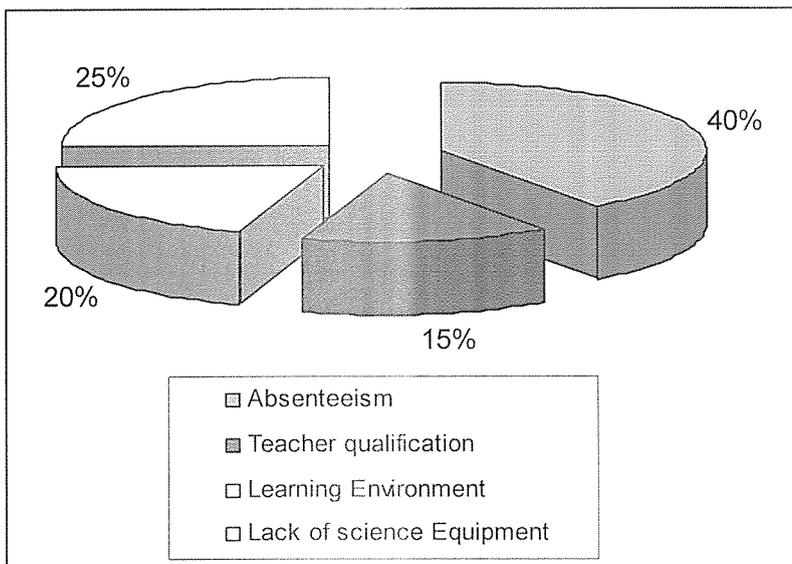
Development of good learning environment has also been given as a solution to the poor performance of primary school pupils in science subject. Schools have been advised here to consider that learning conditions available to the students and that enough emphasis ought to be given to environment in which the pupils study. Under this, the schools must ensure that there is enough compound that is enough for recreational activities like sports, athletics, and other activities that the pupils can get involved in so as to relax their minds or refresh their minds in order to perform well. This is quite essential in the performance of the pupils in their studies especially in

science subject, which is so far the worst performed subject in Thika district and the other part of Kenya.

### Purchase of science equipment

Purchase of science teaching equipment is yet another solution suggested by the respondents as another solution to the fluctuating performance of science subject in Thika district. The respondents here stated that the schools should have the capacity to have science teaching equipment because science is a practical course which does not need theoretical way of teaching but rather scientific way of teaching. It was found that there is no way how the teacher can just explain the appearance of some objects like a chemical yet he/she cannot afford to show the pupils how that liquid for example looks like. The schools therefore need to have the science teaching equipment if they are to improve on the performance of science subject in primary schools.

**Figure VI. Pie-chart showing the four major course pupils failure in science subject**



**Source:** Field work data

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATION

#### 5.0 Introduction

This chapter was concerned with the summary of the study, conclusion and recommendation.

#### 5.1 Summary of the study

The major objective was the assessment of the determinants of pupils' academic performance in science among primary school pupils. The study was conducted in Kamwangi Division primary schools, Thika District Kenya. 10 political leaders, 20 pupils, 20 teachers and 30 community inhabitants were interviewed.

Teachers, political leaders, pupils and community inhabitants participated in the study. A total of eighty (80) participants therefore participated in the study. The study question was investigated in line with the research questions of the study. "The first research question was "What do you think are the major causes of the fluctuations in the performance of primary school pupils?"

The study discovered that; learning environment, teacher qualification, academic syllabus, pupils' attitude toward science subject, Pupils' attendance, inadequate science equipment were the factors given under this research question.

The second research question was "Of what impact do you think are the fluctuations in the performance of science subject among primary school pupils? The study findings revealed that; Doubt on teacher credibility, Imbalance in academic performance, Low number scientist, and discouragement in the subject were the answers given by the respondents.

The third research question was "The third research question was "What do you think the National Examination Board can do to solve the fluctuations of performance among primary school performance?"

The answers to this question were; Provision of science equipment, Emphasis in science subject, Ban unnecessary absenteeism, Employ qualified teachers, Improve on learning environment, were the answers given.

Conclusions and recommendations were then made after presenting and interpreting the data.

## **5.2 CONCLUSION**

The conclusion was made in line with the various themes of the study and was based on the findings of the study. “The first research question was “What do you think are the major causes of the fluctuations in the performance of primary school pupils?

The study discovered that; learning environment, teacher qualification, academic syllabus, pupils’ attitude toward science subject, Pupils’ attendance, inadequate science equipment were the factors given under this research question.

The second research question was “Of what impact do you think are the fluctuations in the performance of science subject among primary school pupils? The study findings revealed that; Doubt on teacher credibility, Imbalance in academic performance, Low number scientist, and discouragement in the subject were the answers given by the respondents.

The third research question was “What do you think the National Examination Board can do to solve the fluctuations of performance among primary school performance? The answers to this question were; Provision of science equipment, Emphasis in science subject, Bann unnecessary absenteeism, Employ qualified teachers, Improve on learning environment, were the answers given.

## **5.3 RECOMMENDATIONS**

The recommendations were made in relation to the findings and conclusions. The researcher therefore came up with the following recommendations in an attempt to address the fluctuation of performance among primary school pupils in science subject.

### **Government funding of schools**

The researcher came up with the recommendation that the Government of the Republic of Kenya should fund primary schools so that they can afford to the run the schools in a given requirement be the Kenya National Examination Board. The researcher noted that there are many schools whose pupils poorly perform because of lack of the facilities that are necessary for the better performance of the pupils. It is true that the Government minds less of these schools that are privately owned yet there are the ones that are more than those of the Government and this have for sure reduced pressure in

Government owned schools as they used to be for the past days. When this recommendation is put into consideration, there will indeed be improved performance of primary school pupils in science subject.

#### **Emphasis of science from nursery level**

Another recommendation put forward by the principle researcher is that there should be strong emphasis of science subject right from nursery school so as to boost the performance of primary school pupils in science subject. The researcher found from respondents that there are many of the pupils who fail science subjects because the subject is not emphasized from the elementary level of education and this is why the researcher came up with this recommendation. There should be emphasis of science subject right from nursery level because it becomes easy to get familiar to the subject right from the time the pupil is introduced to the education system than when the subject is found on the way like in primary three as it has happened for long. This calls for the ministry of Education to make the emphasis in conjunction with the school heads.

#### **Compulsory teaching of science subject**

The researcher also came up with the recommendation of compulsory teaching of science subject so that the pupils can get to know that they will not have any way out of the study of science as a subject other than getting to know that they will drop the subject ahead of their studies. When there is compulsory studying of the subject even to the higher level of education, the pupils in the lower level get immune with the system of the study and they rather pick interest in the subject of the study. Through out their period of study, the pupils will have in mind that science is compulsory and this will make them cultivate the desire of the subject that when it would be when no emphasis is made of the study of the subject by the policy makers which is usually the Examination Board and the Ministry of Education.

#### **Periodic inspection of primary schools**

The periodic inspection of primary schools by the Inspector of schools is yet another recommendation put forward by the researcher on the science performance by primary school pupils. The researcher found out that the schools are irregularly inspected by the Inspection body which is responsible for the performance, operation and general

running of the schools in Thika District which is the area of the study for this research. The Inspector of schools in many cases takes a lot of time without visiting schools yet there are many schools in very poor conditions and shapes which are not favorable for learning conditions. The researcher here therefore recommends that the Inspector of schools take the initiative to reach out to all the schools that are under his/her control so there can be seriousness for example on the side of the school operators who would put more emphasis to improve on the performance of primary school pupils in science subject.

#### **Set standards to be met by primary school administrators**

Another recommendation that the researcher give to this topic of study is the setting of standard by the National Examination Council and the Ministry of Education to be met by the pupils in primary schools and the standard to be met by the proprietors of schools since they are all involved in the school performances. There should be a standard to be met and nothing less than the set standard should be compromised with by the regulatory body. There should therefore be constant check of the schools' performances in Thika district so as to control the study performance of the pupils in this case. The schools operating should meet this set standard if they are to operate effectively in the district and this will surely regulate the performance of the pupils.

#### **Parental responsibilities**

Parental responsibility in the performance of their children is yet another recommendation that the researcher has come up with if there is to be steady performance of the pupils in Kamwangi division-Thika district. Parents are called upon to ensure that their children for example do not deliberately dodge school as they have done for a very long period of time. Pupils' inconsistency in class attendance does a lot in their failures in science subjects yet many of the pupils do not realize this as a problem. The parents are therefore called upon to take action against pupils who dodge classes because their involvement in the fight against pupils' failure in science subject is very vital and needed if the performances of the pupils are to be improved.

The given recommendations by the researcher are based on the findings which are very important in filling the research gaps in this study. The researcher therefore based his argument in the solution of the failures in the science subject in primary schools given

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the fact that there have been fluctuations in the performance of primary school pupils in science subject in Kamwangi Divisions primary schools, Thika district-Kenya.

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**APPENDIX A**  
**QUESTIONNAIRE**

I GITHUMU KINYANJUI JAMES a student of Kampala International University pursuing a Bachelor's Degree of Education in Early Child Hood and primary Education kindly requests you to answer these questions in utmost faith that would really help me successfully finish my course as a partial fulfillment of the award of Bachelor Degree of Education in Early Child Hood and primary Education (BED). I therefore affirm that this information is purely for the academic purpose.

**SECTION A**

1) Sex

(a) Male  (b) Female

2) Age

(a) 20-25  (b) 25-30

(c) 30-40  (d) 41-50

(e) 50-60  (f) 61-70

3) Marital Status

(a) Married  (b) Single

(c) Widower  (d) Widow

4) Religion

(a) Catholic  (b) Protestant

(c) Muslim  (d) Others (Specify) .....

5) Educational Level

(a) None  (b) Primary

(c) Secondary  (d) Post Secondary

**SECTION B**

1) Do you have children?

(a) Yes  (b) No

2) Do you agree that there are fluctuations in performance of primary school pupils?

(a) Yes  (b) No

(c) If yes, state why there is fluctuation.

- (a) .....
- (b) .....
- (c) .....
- (d) .....
- (e) .....
- (f) .....

**SECTION C**

1) What do you think are the major causes of the fluctuations in the performance of primary school pupils?

- (a) .....
- (b) .....
- (c) .....
- (d) .....
- (e) .....
- (f) .....

2) Of what impact do you think are the fluctuations in the performance of science subject among primary school pupils?

- (a) .....
- (b) .....
- (c) .....
- (d) .....
- (e) .....
- (f) .....

3) What do you think the National Examination Board can do to solve the fluctuations of performance among primary school performance?

- (a) .....

- (b) .....
- (c) .....
- (d) .....
- (e) .....
- (f) .....

**THANK YOU**

**APPENDIX B: BUDGET**

<b>ITEM</b>	<b>COST (UGSH)</b>
Stationary and other related costs	100,000
Transport	150,000
Communication	20,000
Photocopy	10,000
Typesetting and binding	30,000
Internet	15,000
Subsistence	25,000
Miscellaneous	35,000
<b>Total</b>	<b>400,000</b>

**APPENDIX C**  
**QUESTIONNAIRE**

I GITHUMU KINYANJUI JAMES a student of Kampala International University pursuing a Bachelor's Degree of Education in Early Child Hood and primary Education kindly requests you to answer these questions in utmost faith that would really help me successfully finish my course as a partial fulfillment of the award of Bachelor Degree of Education in Early Child Hood and primary Education (BED). I therefore affirm that this information is purely for the academic purpose.

**SECTION A**

6) Sex

- (a) Male                       (b) Female

7) Age

- (a) 20-25                       (b) 25-30   
(c) 30-40                       (d) 41-50   
(e) 50-60                       (f) 61-70

8) Marital Status

- (a) Married                       (b) Single   
(c) Widower                       (d) Widow

9) Religion

- (a) Catholic                       (b) Protestant   
(c) Muslim                       (d) Others (Specify) .....

10) Educational Level

- (a) None                       (b) Primary   
(c) Secondary                       (d) Post Secondary

**SECTION B**

3) Do you have children?

(a) Yes  (b) No

4) Do you agree that there are fluctuations in performance of primary school pupils?

(a) Yes  (b) No

(c) If yes, state why there is fluctuation.

- (a) .....
- (b) .....
- (c) .....
- (d) .....
- (e) .....
- (f) .....

**SECTION C**

4) What do you think are the major causes of the fluctuations in the performance of primary school pupils?

- (a) .....
- (b) .....
- (c) .....
- (d) .....
- (e) .....
- (f) .....

5) Of what impact do you think are the fluctuations in the performance of science subject among primary school pupils?

- (a) .....
- (b) .....
- (c) .....
- (d) .....
- (e) .....
- (f) .....

6) What do you think the National Examination Board can do to solve the fluctuations of performance among primary school performance?

- (a) .....
- (b) .....
- (c) .....
- (d) .....
- (e) .....
- (f) .....

**THANK YOU**

## APPENDIX B: BUDGET

ITEM	COST (UGSH)
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