

**THE SCHOOL ENVIRONMENT AND PUPIL  
PERFORMANCE IN SCIENCE IN PRIMARY  
SCHOOLS IN MASINGA DIVISION  
YATTA DISTRICT IN KENYA**

**BY**

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## DECLARATION

I Japheth Mbithi Declare that this Work is my own and it has not been produced elsewhere for any academic award or recognition.


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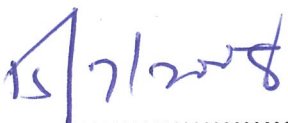
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## ABBREVIATIONS

K.C.P.E	-	Kenya Certificate of Primary Education
K.C.S.E	-	Kenya Certificate of Primary Education
SMASSE	-	Strengthening Mathematics and Science Secondary Education

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## **ABSTRACT**

The performance of science in national exams has been deteriorating over last few years. This is so in majority of primary schools in Kenya and especially Yatta district. The situation may not be different in other districts Kenya. The problem is therefore global concern given that most of the technology is statistical based with a science orientation. Science being a branch of science that deals with precision and quantitative applications is widely appreciated in many fields. These include agriculture, accounting, veterinary practice, public health, and medicines just no mention a few.

The poor performance of science in exams may therefore mean a definite downfall in our technology fields and the collapse of the entire Kanyan economy. This poor performance may be as result of poor motivating, lack of evaluation, physical facilities and to a large extent a negative attitude of students towards the subject. The purpose of this study was to determine factors that affect the performance of mathematics in national exams in some selected primary schools in Masinga division of Yatta district. The study was also used to identify some measures that might be used to predict the performance of primary school pupils studying science.

The sample in the study consisted of 50 pupils from one up to form eight, 10 science teachers and 5 head teachers. The data collection methodology involved questionnaire and observation of all the targeted groups. The information collected will hopefully be used to improve performance in science in examinations.



The Main objective was to assess the factors that affect the performance of primary school pupils in science. The specific objectives were to find out if learners attitude, facilities available, caliber of pupil, class size, evaluation and motivational level of teachers and pupils among other factors affect the learners performance in science. It also looked at relationship between pupils / teachers characteristics.

The study found that there is insufficient quantitative equipment and no trained laboratory assistant in 66% of the population investigated. The workload is too large leading to less time being dedicated to practical work. Also 80% of the pupil had low morale to learn, many of the girls investigated had a general attitude that science being a science subject is difficult and is meant for the boys. Some teachers are very harsh and lack the human face when teaching science and this demoralizes some pupils in studying science. It is however worth nothing that most of the problems cited by the respondents have a workable solution; and if professionally encountered the performance in science examination can greatly be improved.

# CHAPTER ONE

## INTRODUCTION

### *1.1 Background of the study*

Today's world is dynamic and competitive with respect to science applications. The emergent of sophisticated quantities and scientific applications in various fields is an indication that there is massive improvement in science subjects. It has become almost inevitable for every Kenyan to be well versed with the scientific world. Science has been poorly performed by most pupils in Yata district primary schools. The general trend of performance has deteriorated over the past three years. This poor performance in science particularly has driven researchers to investigate and address the declining trend. In the research study to be undertaken here-Nzukini primary School, Ekalakala primary school, Wambo primary School, Mikameni--primary School and-Kakuku primary School constitute the targeted population where the research will aim at finding the factors the affect performance in science in those five schools.

The researcher will be conducted in mind that there is a lot of emphasis which is laid on better performance of science subjects generally in Kenya with specific concerns in science. The reason being that; in terms of the job market, science opens up job candidates to tend to have more paying jobs. Pupils of Masinga division in Yata district are not an exception day.

According to previous studies done in national schools, good performance is achieved through hard work and motivation given to learners. The research will aim at finding where the poor performance is contributed by lack of motivation or by something else. Actual performance is primarily determined by the effort spent but it is also affected by the person's ability to do the job and also by individual's perception of what the required task is. So performance is the responsible factors that lead to intrinsic as well as extrinsic rewards.

Obondo (2003) noted that Kenya's present development policy is to achieve rapid economic transformation leading to industrial states by 2020. For the people to acquire this process of productivity, they need to be equipped with knowledge, skills and attitude. Since mathematics is one of the key subjects leading to productivity, its poor performance by pupils in their early years of study led the researcher to undertake the study in order to improve the performance in time to come.

A pupil must have set goals with the guidance of the teachers, which depend on the actions he/she selected in school. The content material and activities as well as the teaching behaviour and strategies direct the pupil's action. But the basis of learner's achievement of set goals in his/her cognitive abilities as well as his/her prior knowledge in things that he/she is taught. This can be presented as shown.

## ***1.2 Statement of the problem***

Despite the performance of the same in national exams has been declining in majority of schools. In Masinga division in Yata district have not been exempted particularly in the five primary schools that comprise the research population. The problem is of major concern and needs immediate investigation and appropriate remedial measures to be taken. A through study was therefore carried out in the five schools addressing the problem in order to serve the future of our country and the fields related to science. If this problem I left unattended; our country risks a major decline in her field related to science.

Despite the performance of science declining in majority of national and provincial schools, schools in Masinga division have not been exempted (MOE, 2005). The problem is of major concern and needs immediate investigation and appropriate remedial measures.

A thorough study will be conducted by the researcher in the five schools addressing the problem in order to save the future of our country in the fields related to science.

One of the fields that interest the researcher is motivation and its effect on performance of science.

## ***1.3. Objectives of the study***

The main purpose of this study is to establish the relationship between the school Environment and performance of pupils in primary schools.

### ***1.3.1 Specific objectives***

1. To establish whether/how physical facilities influence the performance of pupils' in science.
2. To establish how motivation of teachers and learners affect pupil's performance in science.
3. To find how teacher and learners attitude affect pupils' performance in science.
4. To investigate how learners evaluation influences performance in science.

### ***1.4 Research Questions***

The research will be guided by the following questions:-

Do physical facilities influence the performance of pupils in science?

How does the motivation of teachers and pupils affect performance in science?

How does teachers/pupil attitude affect performance in science?

How does learners' evaluation affect pupil performance in science?

### ***1.5 Significance of the study***

To the policy makers, the findings will be useful to the development a curriculum that ensures that pupils are exposed to it and easy to understand so that itself acts as a motivator to their concentration on science subject.

Information collected from the study will be useful to the teachers of science. Also it will be useful to the pupil himself/herself who will use result to the study to improve his/her science performance.

Also the teacher will use the result of the study to know how to handle and approach the teaching of science in a way that will motivate and encourage the learner on need of his/her science performance.

The administrator's knowledge will help in setting cut-off points for pupils who join these institutions so that can set targets. The government will use the findings of the study to create and employ good strategies to improve education and make friendly to pupils.

Also the research findings s\will enable concerned pupils to combine different study habits in order to improve their performance in the subject (science). The community around the schools will benefit by getting good leaders who are intellectually sound on matters of life and its conservation thus encouraging development in the community. The welfare of the parent will be upgraded as these pupils will in future be employed in well paying institutions. The study findings will also enable concerned pupils to combine different habits in order to improve their performance in the subject. At a higher policy level, the findings will be useful to the Kenya National Examination council (KNEC) in that hey could adopt them when setting in order to cater for the different needs of learners.

## ***1.6 Operational definition of terms***

Poor performance :	A grade C (49%) and below in an examination.
Work load :	Number of lessons per week per teacher.
Evaluation :	Giving tests, and end of term exams and assignment to Learners to test their capability in certain areas.
Physical facilities :	These include laboratories, equipment administration, block and libraries
Teaching/learning materials :	Resources that the teachers intend to use so as to facilitate learning e.g. charts, models among others.
Attitude :	How the learners feel or behave towards specific objects.
Syllabus :	A statement of content of a study that is proposed for the Learners to acquire.
Quality of students:	This is the mental ability of students and how they perceive things based on their IQ.
Class size :	The number of learners in the class.
Level of mobility :	How frequent is a teacher out e.g. for games, seminar, clinic workshop
Type of school :	Whether National, Provincial district and Private.

- District : This is a sub section of a district which is headed by District commissioner (DC).
- Division : This is a sub section of a district which is headed by Divisional officer (DO) .
- Questionnaire : A set of given questions meant to obtain information from the respondent.
- K.C.P. E. : Kenya certificate of primary Education



## CHAPTER TWO

### REVIEW OF LITERATURE

#### ***2.1 Introduction***

In this chapter, literature on performance in science was reviewed. The research also looked at the view of other scholars on how lack of information affects the performance.

#### ***2.2 School Environment and Motivation***

Both teachers and learners need to be motivated for performance to improve. The declining trend in mathematics performance is largely due to scarcity of resources either material or human. A teacher requires support from the community otherwise he/she will not be able to deliver effectively. The teacher may be involved in other activities. Eshiwani G.S 1970:20) observed this and wrote “mathematics teachers have other assignments extra curriculum activities. He does all this receives no appreciation from the public or even his own pupil. A good measure of the little appreciation the public has for our teachers.

According to BF Skinner who produced re-enforcement theory holds that by designing the environment properly, individuals can be motivated. Instead of considering internal factors like impression, attitude and other cognitive behavior, individuals are directed by what happens in the environment external to them. Skinner states that work environment should be made suitable to the individuals and that punishment actually leads to frustration

and demotion. Hence the only way to motivate is to keep making positive changes in the external environment of the organization. According to this study the learners in the selected areas will be motivated by things like presents for those who have performed well and also the environment in which they are working to be improved by providing adequate books and enough lab apparatus and material for practical activities.

Macgregor(1960), states that people inside the organization can be managed in two ways. The first is basically negative which falls under category X and the other is positive which falls under category Y. Macgregor concluded that a manager views of the nature of man being is based on a certain grouping of assumptions and that he/she tends to mold his/her behavior towards subordinates. On the analysis of the assumption it can be detected that theory X assumes that lower - order needs dominate individuals and theory Y assumes that higher - order need dominate individuals. An organization ran by theory X tends to be authoritarian in nature while one with theory Y tends to be participative where individuals can achieve their goals by directing their efforts towards success. In this study the researcher intends to apply theory Y to pupils will be set free to do things intrinsically having in mind that the success to be achieved at the end of the course is to their own benefit.

This will make Pupils to be self-motivated and hence no need to be pushed around or followed in order to work. According to Elton Mayo he conducted behavioral experiment at the Hawthorne works of the American Western

Electric Company in Chicago. He made sure some illumination experiments introduced breaks in between the work performance and also introduced refreshments during the pause. On the basis of these, he drew conclusions that motivation was a very complex subject. It was not only pay work condition and morale but also included psychological and factors

Vroom(1964),argues that the strength of a tendency to act in a specific way depend on the strength of expectancy that the act will be followed by a given outcome and on the effectiveness of the outcome to the individual to make this simple. Expectancy theory says that an employee can be motivated to perform better when there is a belief that the better performance will lead to good performance appraisal and that this shall result into realization of personal goals in form of some reward. In this study, the pupil will be made to see that he/she will be the one to benefit from her study and motivation will be provided in order to help him/her achieve what he/she wants. Always the effort put in the right way will always give an output of the same magnitude. These pupils who will work hard will pass the exams as compared to those ones who fail to put effort.

### ***2.3 Relationship between Evaluation and performance***

Ausube(1950') proposed a theory that dealt with meaningful verbal learning and how such learning can be brought about. According to Ausubel, an object has a meaning when it can be related to an idea already present in mind. Therefore, arising from presenting with organized information. According to the Equity theory of J. Stacey Acbinns, people are motivated to



their belief about the reward structure as being fair or unfair, relative to the inputs. People have a tendency to use subjective judgment to balance different individuals accordingly. If people feel that they are not equally rewarded they either reduce the quantity or quality of work or migrate to some other organization. However, if people perceive that they are rewarded higher, they may be motivated to work harder. If students are rewarded more often, they will be pushed to work harder in order to excel.

#### ***2.4 The interdependence between Attitude and performance***

Most students have it in their mind that science is a tough subject and whenever there are calculations in any subject the students find themselves failing. Macharia C.m (2000:10) avers that:

According to Galloway, (1990) students of chemistry, physics, and Biology need some mathematical understanding and these subjects area mastered enormous importance of mathematics in the science world.

Skinner who propounded the reinforcement theory that by designing the environment properly, individuals can be motivated. Instead of considering internal factors like impression, feelings, attitude, and other cognitive behavior, individuals are directed by what happens in the environment external to them. Skinner states that work environment should be made suitable to the individuals and punishment actually leads to frustration and de-motivation. Hence, the only way to motivate is to keep on making positive changes in the external environment of the organization. David McClelland has developed a theory on three types of motivating needs.

Basically, people for high need for power are inclined towards influence and control. They like to be the center and are good orators. They are demanding in nature forceful in manners and ambitions in life. They can be motivated to perform if they are given key positions.

People who are social in nature try to affiliate themselves with groups and individuals. They are driven by love and faith. They like to build a friendly environment around themselves. Social recognition and affiliation with others provide them motivation. People are also driven by the challenges and fear of failure. Their need for achievement is moderate and they set for themselves moderately difficult tasks. They are analytical in nature and take calculated risks. Such people are motivated to perform when they see at least some chances of success.

According to cognitive evaluation theory, a shift from external rewards to internal rewards results into motivation. It believes that even after a stoppage of external stimulus, internal stimulus services. Instead of treating external factors and internal factors separately, they should be treated as contemporary to each other. The cognition is to be such that even when external motivations are not there the internal motivation continues.

The performance in science subjects has been one of much worry in the past. Researchers have puzzled by this trend and tried to unearth the main cause of the same. Different attributes have been given to the problem.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### ***3.1 Introduction***

This chapter deals with the steps that were followed in the research work to gather data. This includes the location of the study as well as the type of the research instrument that were employed to gather with the population size that was investigated will be discussed here. Also the method of sampling the population and actual data collection will be discussed. Others will sample and sampling procedures.

#### ***3.2 Research design***

A descriptive research design was used to carry out this study. The researcher used survey to enable him to collecting formation from a wide population within the district day schools in Yata District, so as to determine the current state on the factors that affect pupil performance of mathematics. The researcher selected the following among the primary schools in Masinga division, Wamboo, Nzukini, Ekalakala, Kakuku, and Mikameni. The schools offered easier accessibility to the researcher since as explained earlier she had not enough funds to reach all the schools in the division.

#### ***3.3 Study population***

This comprised the district primary schools in Masinga Division. the pupils of district primary schools in Masinga Division. the head teachers and staff of district primary schools in Masinga division The researcher targeted the

primary schools because they have similar administrative characteristics and all of them use the revised primary school science syllabus.

### **3.4 Sampling Techniques and procedure**

The sample of the study consists of: -Six-district primary schools In Masinga Division, Yata District (500 pupils, Ten (10) teachers, Five (head teachers. The five-district primary schools were selected using random sampling procedure. All the head teachers of the five schools were part of the sample. The pupils in the sampled schools were stratified on the basis of the sex. Using stratified random sampling for the purpose of eliminating biasness. The method was deemed appropriate since the schools under study had mixed pupils (boys and girls) population. To help the researcher get the data properly, the sampling fraction (f) was obtained.

$$\text{Sampling fraction (f) = } \frac{\text{sample size (n)}}{\text{Total population (N)}}$$

$$\text{i.e. } f = \frac{50}{300} = \frac{1}{6}$$

To get the sample size of each stratum, the target population for each stratum was multiplied by the sampling fraction as in the table. The sample size for each school is indicated in the brackets.

**Table 3.1: Calculation of Sample Size**

SCHOOL	Primary seven		primary five		primary Three		Primary one		Total
	Males	Females	Males	Females	Males	Females	Males	Females	
Wambo	12(2)	6(1)	12(2)	6(1)	6(1)	6(1)	6(1)	6(1)	60(10)
Nzukini	12(2)	6(1)	12(2)	6(1)	6(1)	6(1)	6(1)	6(1)	60(10)
Ekalakala	12(2)	6(1)	12(2)	6(1)	6(1)	6(1)	6(1)	6(1)	60(10)
Kakuku	12(2)	6(1)	12(2)	6(1)	6(1)	6(1)	6(1)	6(1)	60(10)
Mikameni	12(2)	6(1)	12(2)	6(1)	6(1)	6(1)	6(1)	6(1)	60(10)
<b>TOTAL</b>	60(10)	30(6)	60(10)	30(6)	30(6)	30(6)	30(6)	30(6)	300(50)

Source: Primary Data

Through the use of systematic random sampling, the researcher ensured a total of ten pupils from each school participated in the study. The teachers were also stratified on the basis of the sex. Sample population of teachers composed of ten teachers where two teachers were selected from each school. To sample the two teachers from each school, the researcher used the lottery method. All the head teachers from five schools were required as respondents in the study. The sample population was represented in the table as follows.

### **3.5 Data Collection Methods**

The researcher used the questionnaire type of research instrument as time was limiting him from using other types of instruments such as schedules. Observation was however employed in some cases guidelines. Three



questionnaires were developed one for the pupils, one for the teachers and the other one for the heads. The questionnaire comprised of closed and open-ended questions. The questionnaire contained the following information, which assisted the researcher in answering most of his research questions. By using the questionnaire, it was assumed that the whole population was literate and they would cooperate in giving the required information.

The questionnaire consisted of a brief introduction on how the respondents will respond to items in the questionnaire. The questions were seeking the mathematics data, attitudes and affects of motivation on performance of the respondents.

## CHAPTER FOUR

### PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

#### *4.1 Introduction*

This chapter deals with the presentation of the findings based on the data collected from the sampled schools. The data collected from the questionnaire and observations were critically analyzed with view to find out whether the objectives of the study were realized or not and to what extent they were met} the analysis was done according to the research objectives and questions.

#### *4.2 Demographic information of the respondents*

There were three categories of respondents who participated in the study and their demography information is as indicated in table 4.1

**Table 4.1: Demographic information of the respondents**

<b>Respondents</b>	<b>Frequency</b>	<b>Percentage</b>
Head teachers	5	7.7%
Teachers	10	15.3%
Pupils	50	76.92%
<b>TOTAL</b>	<b>6105</b>	<b>100%</b>

**Source: Primary Data**

The table 4.1 indicates that those who participated in the study were 5 head teachers, 10 teachers and 50 pupils from the five selected schools.

### 4.2.1 Demographical information of the pupils

The demographic information of the pupils displayed the distribution of the pupils by sex and class level as shown in the tables 4.2 and 4.3.

**Table 4.2: Distribution of pupils by sex**

Gender	Frequency	Percentage
Male	30	60%
Female	20	40%
<b>Total</b>	<b>50</b>	<b>100%</b>

**Source: field Data**

The table 4.2 shows that 60% of the pupils were male while 40% were female. There were more males than females in the schools and also at the end of the course of study greater percentage of boys fail mathematics.

**Table4. 3: Distribution of pupils by class level**

Class	Frequency	Percentage
1	10	20%
3	10	20%
5	15	30%
7	15	30%
<b>Total</b>	<b>50</b>	<b>100%</b>

**Source: field Data**

Data in table 4.3 shows that majority of the pupils who participated in the study were from primary 5 and 7 each containing 30% while primary 1 and 3 each had 20% .

#### **4.2.2 Demographic information of the teachers**

The Demographic information of the teachers displayed the distribution of the teachers by sex, academic qualification and years of teaching experience as indicated in table 4.4, 4.5 and 4.6.

**Table 4.4: Distribution of teachers by sex**

<b>Sex</b>	<b>Frequency</b>	<b>Percentage</b>
Male	7	70%
Female	3	30%
<b>Total</b>	<b>10</b>	<b>100%</b>

**Source: Field Data**

Table 4.4 shows that 70% of the teachers were male while 30% were female because in the selected schools there more male for sciences than female teachers.

**Table 4.5: Distribution of teachers by the years of teaching experience**

<b>Category of years</b>	<b>Frequency</b>	<b>Percentage</b>
0-5 years	4	40%
6-10 years	5	50%
11 years and above	1	10%
<b>Total</b>	<b>10</b>	<b>100%</b>

**Source: Primary Data**

Table 4.5 indicates that 50% of teachers had a working experience between 6-10 years. This revealed that most teachers teaching science are young and are attaining / gaining experience in managing the subject adequately 40% of teachers had working experience between 0-5 years while 10% over 10 years.

#### **4.2.3 Demographic information of the Head Teachers**

The biographic information of the head teachers displayed the distribution by their sex and working experience.

**Table4.6: Distribution of Head teachers by sex**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	3	60%
Female	2	40%
<b>Total</b>	<b>5</b>	<b>100%</b>

**Source: Primary Data**

Table 4.6 Shows those 3 headteachers were male while 2 were female. The reason is that most schools in Masinga Division, Yata District are headed by male teachers. 60% of the schools in the Division are headed by male head teachers.

**Table 4.7: Distribution of head teachers by years of working experience in their work station**

Years of working experience	Frequency	Percentage
0-5	1	20%
6-10	0	80%
10 and above	4	0%
<b>Total</b>	<b>5</b>	<b>100%</b>

**Source: Primary Data**

The table 4.7 shows that, 80% of the head teachers had worked for over 5 years in their current work station while 20% had below 5 years in their work station. This is an indication that most school head teachers half adequate experience in teaching.

### **4.3. Physical Facilities and their Influence on the Performance in Science**

The level of adequacy or inadequacy of other physical facilities such as classroom was also look at was found out that all the schools under the study had adequate classroom for the number learning science. Also investigated was whether the school had libraries / reading Rooms, Textbooks and other teaching / learning materials. Thus was summarized in a table shown below

**Table 4.8: Distribution of physical facilities in a selected school**

School	Laboratories	Library	Classroom	Textbook	Teaching Aid
Wambo	Adequate	Adequate	Adequate	Inadequate	Inadequate
Nzukini	Inadequate	Not there	Adequate	Inadequate	Inadequate
Ekalakala	Adequate	Inadequate	Adequate	Inadequate	Adequate
Kakuku	Inadequate	Inadequate	Adequate	Adequate	Adequate
Mikameni	Inadequate	Not there	Adequate	Inadequate	Inadequate

**Source: Field Data**

From the table 4.8, it can be noted that 2/5 of the schools had adequate office blocks while 3/5 had inadequate laboratories. 4/5 of the schools had textbooks which were enough for the proper learning. 3/5 of the schools investigated had scarce teaching / learning resources.

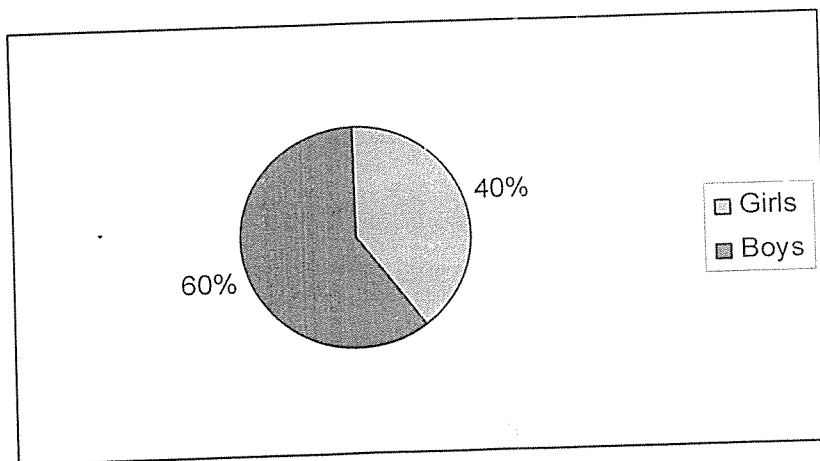
#### ***4.4 Teachers and Learners Attitude towards Each Other and To Science***

The researcher study found out that a major factor that does not seem to be there but plays a vital role in the kind of learners we bring up, is the social interaction between teachers and pupils. This contributes to pupils hating the subject and the teacher loses touch with his/her pupils. From the study 65% of the learners revealed that many science teachers lack the human face and they are said to be harsh to the pupils. This demoralizes and scarce a greater percentage of learners from pursuing science. Other teachers were said to be anti social and still there are those who make

negative comment about their pupils. This also disclosed that some pupils failed because of the negative attitudes they have about their science teachers.

Majority the learners under study rarely involve themselves in extra work in science. Most of them who performed poorly in mathematics examination were those with low self-image esteem and lacked internal drive / motivation. Such pupils do others things rather than settle problems on their own or even in groups. Out of the whole target population 40% were girls upon investigation of the past examination (KPLE) it was revealed that 75% of those who performed poorly in science were girls, it was found out that girls argued that the scientific terms used were hard to recall as well as explanation of most scientific concepts. This makes them develop a negative attitude which makes them to perform poorly in science.

**Figure 4.2: Pie chart showing representation of girls under study**



**Source: Primary Data**



45% of the teachers agreed that they had never completed the syllabus at the end of every year reason being the curriculum was broad and some concepts are very difficult for pupils to understand e.g. topics like cell physiology in term one. 35% of the teachers indicated that they usually complete the syllabus though in a hurry. Mostly pupils as they always end up having a lot of materials in the books of which they don't understand pupils end up performing poorly.

#### ***4.6 Pupils Evaluation and performance***

All the pupils conceded that they are tested regularly 90% of the pupils reported that their teachers used very difficult language when asking them questions in the exams. Difficult words used discourage the learners. 40% of the pupils agreed that when their teachers test them in small bits in succession they fared better as to compared when they were tested only during half term and at the end of the term, thus better chances of performing was there. Teachers also argued that giving tests over the whole of the term was much better as it would keep the learners on their toes all through. All the teachers reported that the classes were usually too large in terms of number of pupils and giving them individual attention was not possible especially when the pupils required a lot of guidance and supervision.

Evaluating a large class also demanding in terms of time given that the teacher had other responsibilities e.g. games, clubs, etc such activities demanded a lot of time and at times this was done at the expense of the

learners. It was suggested that such teachers ought to be given lighter workload than others in order to have time with pupils, motivate them and show the needed seriousness in their work.

All these duties and responsibilities meant that the teachers had no time for the evaluating the learner leading to poor performance as pupils had not built confidence to face the exam especially the final exams (K.C.P.E).

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATION

#### ***5.1 Introduction***

This chapter of the research project presents in a precise way the summary, conclusion and recommendation suggestions for further research.

From the analysis of the research findings, it is clear that poor performance in science is prevalent in our primary schools. After a thorough study, the researcher found out that the problem is not isolated but amongst majority of the learner. Many factors have been seen to influence the performance of science and demotivate learners and sometimes teachers leading to this worrying problem of poor performance. This must leave is more depressed than impressed.

#### ***5.2 Summary***

The purpose of the study was to investigate factors that influence performance of mathematics in primary schools in Masinga division, Yata District. The study looked at four factors that largely influence performance of science. The sample included 50 pupils, 10 teachers and 5 head teachers all from the five day schools. Three research instruments were used which are; head teachers questionnaire, teachers questionnaire and pupils questionnaire. Also observation was used. Tabulation and descriptive statistics were used to analyze the data.

### **5.2.3 Attitude and performance**

Researcher found out that pupils had a very negative attitude towards learning of science. It was also clear that student. Also the analysis most science teachers have other responsibilities e.g. games, clubs hence lack enough time to be with pupil to consolidate what they have learnt during class time. This leads the pupils having a negative attitude towards science as they have a lot of materials in the exercise books but they can understand and explain it.

### **5.2.4 Evaluation and performance**

The researcher found out that most pupils are tested twice through-out the term i.e. during half-term and at the end of the term examination. This meant that pupils do not master the progress hence were not serious with their revision. Lack of evaluation frequently make student lack confidence when final examination (K.P.L.E) approaches leading to poor performance of science. The pupils who are evaluated frequently created confidence within themselves and ended up performing well in mathematics.

## **5.3 Conclusion**

### **5.3.1 Physical facilities and performance**

From the research study carried out it was observed that in some schools, physical facilities were found to be inadequate teaching and learning resources most of the content is only taught theoretically and it this remains abstract to pupils. As a result the pupils failed the exam and they are likely



to fail their final examination (K.P.L.E) as they don't understand the concepts properly in class.

### ***5.3.2 Motivation and performance***

It was observed that most teachers and pupils are poorly motivated even if they have performed better in their work. The implication is that pupils will lack interest and end up performing poorly in mathematics which will translate even to the final examination (K.P.L.E).

Also teachers were not well motivated and the implication is that they will be demotivated hence affecting performance.

### ***5.3.4: Evaluation and performance***

From the study it was noted that pupils are rarely evaluated and some are evaluated twice per whole term i.e. during half term and at the end of the term. The implication is that pupils won't have enough exposure to examination hence lack of confidence during the final examination (K.P.L.E). This leads to poor performance of the same.

## ***5.4 Recommendations***

The researcher wishes to make the following recommendations and suggestions which are based on the findings of the study.

Teachers should cultivate a positive attitude towards their work in order to improve and motivate learners hence science performance will improve. Teachers should use an examination language that is candid to the learners

and also should develop teaching materials early in advance that clearly communicates the learning concepts.

### ***5.5 Suggestion for further research***

The researcher recommend that there is need to carry out further research in both primary and secondary school levels including district, provincial and national schools. This will give a clear understanding of why learners perform poorly in science examinations and come up with tangible solutions to the menace as out country surely needs science in its developmental plans, industry and schools among others.

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## **APPENDIX A: TRANSMITAL LETTER**

JAPHETH MBITHI KIMITHI  
KAMPALA INTERNATIONAL UNIVERSITY  
P.O Box 20000  
KAMPALA – UGANDA

Dear Sir/ Madam,

### **REF: RESEARCH STUDY**

I am a student in Kampala International University pursuing a degree course in Bachelor of Science in Education. I am carrying out a research study concerning the cause of poor performance in mathematics in primary schools in Masinga division, Yata north district. The research is part of partial fulfillment of the Kampala International University award in Bachelor Degree.

Therefore, any assistance given will be of great significance and shall be treated with privacy and confidence for the purposes of this study.

Yours faithfully,

**JAPHETH MBITHI KIMITHI**



## APPENDIX B: STUDY QUESTIONNAIRE TO PUPILS

TOPIC: FACTORS AFFECTING PERFORMANCE OF SCIENCE IN  
PRIMARY SCHOOLS

This questionnaire is seeking information about the factors affecting the performance of science in primary schools. The information you will give will be treated in the strictest confidentiality.

Name of the School .....

Class .....

Sex .....

Age .....

Religion.....

**ATTITUDE**

3. How often do you perform the following tasks in science (tick appropriately)

Question	Daily (5)	2-3 day a week (4)	Weekly (3)	Fortnightly (2)	Monthly (1)	Never (1)
Do exercise on your own						
Do practical individually						
Borrow available science books						
Do extra work for making in science						
Approach science teacher for help						
Do assignment on your own						
Do practical activities in group						

10. Science as a subject you would credit it interesting (tick appropriately)  
strongly agree ( ) 3, disagree ( ) 2, Strongly disagree ( ) 1,

Physical Facilities

11. Your science performance is affected positively by the physical facilities.

Agree ( ) 4, Agree ( ) 3, Disagree ( ) 2, Strongly disagree ( ) 1

12. How often do you carry a science demonstration room?

Weekly ( ) 4, Fortnight ( ) 3 Monthly ( ) 2 Never ( ) 1

13. How often do you visit your school library for science research?

Daily ( ) 4, Weekly ( ) 3, monthly ( ) 2, Never ( ) 1

14. How are science textbooks distributed in your class?

1Very adequate ( ) 4, Adequate ( ) 3, Inadequate ( ) 2,

Very inadequate ( )

### **Motivation**

15. How often does the school hold pie-giving days to reward well performing pupils?

Termly ( ) 4, Twice a year ( ) 3, Annually ( ) 2, Never ( ) 1

16. Does teacher revise exams after making

Always ( ) 3, some times ( ) 2, Never ( )

17. How early do you complete the science syllabus before the year ends

Quite early ( ) 4, Early( ) 3, Late( ) 2, we don't( ) 1

18. What would like to be after school?

19. In your opinion do like science as a subject

Yes ( ), No ( ).

20. What made you choose science?

## **Evaluation**

21 How often are evaluated in science either in CAT or exams

Weekly ( )4, After every topic( )3, During half term ( )2, only at the end of the term( )1.

22. Languages used in exams affect your performance in science

Strongly agree ( ) 4, Agree ( ) 3, Disagree ( ) 2, strongly disagree ( )1

23. More numbers of times evaluated entrance good performance as you progress.

24. How often do you revise exams after they are marked?

Always ( ) 3, some times ( ) 2, Never ( )1

**Thank you for your cooperation**

## APPENDIX C: STUDY QUESTIONNAIRE TO TEACHERS

### TOPIC: FACTORS AFFECTING PERFORMANCE IN SCIENCE IN PRIMARY SCHOOLS.

This questionnaire is seeking information about the factors affecting the performance of science in primary schools. The information you will give will be treated in the strictest confidentiality.

Name :.....

Sex :.....

Religion :.....

Work station .....

Number of years in your working station .....

2 What are your academic working qualification (tick appropriately)

Graduate trained ( )

Graduate untrained( )

Diploma ( )

Certificate ( )

3. How long have you been teaching science?

#### Attitude

4. What attitude do you have towards school administration?

Very positive ( ) 4, positive ( ) 3, Negative ( ) 2,

Very negative ( ) 1

5. What attitude do your learners have towards science?

Very positive ( ) 4, Positive( ) 3, Negative( ) 2, very negative ( ) 1

6. Your pupils are very actively involved in your science class

Strongly agree ( ) 4, Agree ( ) 3, Disagree ( ) 2, strongly disagree ( )1

7. Which sex performs poorly in mathematics and why?

### **Physical Facilities**

8. How many science demonstration rooms do you have in your school?

9. How equipped is your schools science study and demonstration rooms.

Very adequate ( ) 4, adequate 3 ( ), not adequate ( )2,

Very inadequate ( )1

10. Science performances is affected by physical facilities in your schools.

Strongly agree ( ) 4, Agree ( ) 3, Disagree ( )2,

Strongly disagree ( )1

11. How science textbooks distributed in your school

Always ( )4, inadequate( )3, very inadequate( )2, only teachers copy (

)1.

### **Motivation**

17. How often do you evaluate your pupils in science

Weekly ( ) 4, After every topic ( )3, during half term( )2, only at the end of term ( )1

18. Language in exams affects performance of pupils in science

Strongly agree ( ) 4, Agree ( ) 3, Disagree ( ) 2, strongly agree ( )1

19 How is your pupil's attitude towards exams?

Positive ( ) 3, Negative ( ) 2 very negative ( )

20. What is your opinion about the number of times learners are evaluated and their performance.

**Thanks for your cooperation**

## APPENDIX D: STUDY QUESTIONNAIRE TO SCHOOL HEADS

**TOPIC: FACTORS AFFECTING PERFORMANCE OF SCIENCE IN  
PRIMARY SCHOOL.**

This questionnaire is seeking information about the factors affecting the performance of science in primary schools: The information you will give will be treated in the strictest. Confidentiality.

1. Name of the school: .....

Sex:.....

Work experience:.....

Number of years in current station:.....

Type of school: Day mixed (    ), Day boys (    ), day girls (    ),

Religion: .....

1. How many science teachers do have in your school

Trained:.....

Untrained.....

2. How science was performed in the last two years KCS exams?

Very well (4), Well (3) poorly (2) very poorly (1)

3. How often do you reward your pupils who perform well in your schools?

Always (4), Regularly (3), Rarely (2), Never (1)

4. How do you motivate your science teachers in your school?

5. What is the minimum entry marks of learners who enroll in your school.

6. How often do you discuss pupil's performance with the parent? Termly (3), annually (1), twice a year (2)

