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**THE CAUSES OF LEARNERS POOR PERFORMANCE IN SCIENCE SUBJECT
IN SELECTED PRIMARY SCHOOLS OF TULIMANI DIVISION,
MBOONI- WEST DISTRICT KENYA**


**BY
PENINNAH KASIKI NZWILI
BED/15560/71/DF**

**A RESEARCH REPORT SUBMITTED TO THE INSTITUTE OF OPEN AND
DISTANCE LEARNING IN PARTIAL FULFILLMENT OF THE
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INTERNATIONAL UNIVERSITY**

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DECLARATION

I Peninnah Kasiki Nzwili do hereby declare that this is my own original production and that it has never been submitted to any institution for the award of a degree or any other award.

Signature.......... Date.....14-10-2010.....

PENINNAH KASIKI NZWILI

BED/15560/71/DF

APPROVAL

This report is resulting from the researcher's efforts on **the causes of learners poor performance in science in selected secondary schools of Tulimani division, Mbooni-west district Kenya.** It was conducted under my supervision with my approval; it is now ready for submission to the academic board for the award of a bachelor's degree in education of Kampala International University.

Signature  Date 10/10/10

Mrs. TALIGOOOLA DEBORAH NABUSETA
SUPERVISOR

DEDICATION

I dedicate this work to my dear husband Stevens Musyoki, my three children Sylvia Mueni, Kyenze and Naom who gave me both moral and material support during my study.

ACKNOWLEDGMENT

I would like to acknowledge the services of the people who have greatly helped in producing this work especially my colleagues at Tututha primary school and the Head teacher who never got tired while I was away from school collecting this information.

Particular gratitude goes to my supervisor Mrs. Taligoola Deborah whom I owe heartfelt gratitude for all the professional, parental and social guidance and support during the course of this study.

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May the almighty God bless you all

TABLE OF CONTENTS

DECLARATION.....	i
APPROVAL.....	ii
DEDICATION	iii
ACKNOWLEDGMENT	iv
TABLE OF CONTENTS	v
LIST OF TABLES.....	viii
ABSTRACT.....	ix
CHAPTER ONE.....	1
INTRODUCTION	1
1.0 Background of the study	1
1.1 Statement of the problem	2
1.2 Purpose of the study	2
1.3 Objectives of the study.....	2
1.4 Scope of the study.....	3
CHAPTER TWO.....	4
REVIEW OF THE RELATED LITERATURE	4
CHAPTER THREE	10
RESEARCH METHODOLOGY	10
3.0 Introduction	10
3.1 Research design.....	10
3.2 Study area.....	10
3.3 Study population.....	10
3.4 Sample size.....	11
3.4.1 Sampling technique.....	11
3.5 Data collection methods	11

3.5.1	Instrumentation	11
3.5.2	Sources of data	11
3.6	Data collection procedure.....	11
3.7	Data analysis	12

CHAPTER FOUR 13

DATA PRESENTATION, ALYSIS AND INTERPRETATION OF

FINDINGS..... 13

4.0	Introduction.....	13
4.1	Background information	13
4.1.1	Sex of teachers	13
4.1.2	Qualification of teachers.....	14
4.1.3	Area of specialization	14
4.1.4	Teaching experience of respondents.....	15
4.1.5	Professional development of science teachers.....	15
4.2	School physical facilities and performance in science subjects.....	16
4.2.1	Adequacy of science facilities	17
4.2.2	Availability of science teaching learning aids in selected primary schools... ..	18
4.3	Learners' attitude towards the subject and performance in science..	19
4.3.1	Gender and attitude towards science subjects	20
4.3.2	Gender related performance in science in primary schools	21
4.4	Teachers' attitude and performance in subjects.....	22
4.4.1	Why teachers lack interest in the subject.....	22

CHAPTER FIVE 25

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

.....		25
5.0	Introduction	25
5.1	Summary of findings	25

5.1.1	Background characteristics.....	25
5.2	Physical facilities available in Primary schools	26
5.1.3	Learners attitude towards sciences	27
5.1.5	Teachers attitude toward and performance in science subjects.....	27
5.2	Conclusion.....	27
5.3	Recommendations	28
REFERENCES		29
APPENDICES		30
Appendix A: Questionnaire for teachers		30
Appendix A: Questionnaire for students		33

LIST OF TABLES

Table 1: Presents sex of science teachers.....	13
Table 2: Presents qualification of teachers.....	14
Table 3: Teachers view on whether they specialized in science.....	14
Table 4: Showing the teaching experience of respondents.....	15
Table 5: Teachers view as to whether they have attended seminars.....	16
Table 6: Presents the availability of science facilities in primary schools.....	16
Table 7: Presents the adequacy of science facilities.....	17
Table 8: Showing the available teaching learning aids for sciences	18
Table 9: Presents the teachers view on the attitude of Learners towards sciences	19
Table 10: Shows the teachers views about the gender influence on students attitude towards science subjects.....	20
Table 11: Presents teachers views about performance in science subjects by gender	21
Table 12: Presents the teachers opinion as to whether they enjoy teaching sciences.....	22
Table 13: Presents reasons which were given by teachers as to why they hold a negative attitude.....	23

ABSTRACT

This study examined the factors causing poor students performance in science subjects in selected secondary schools of Tulimani division, Mbooni-West district. The following objectives guided the study; To find out if the physical facilities available in schools contributed to performance in science; To assess the attitude of learners towards sciences; To assess the teachers attitude towards subject.

Findings indicate that majority of the science teachers were male, eight of the fifteen teachers are graduate teachers and seven of them were diploma holders. The academic qualification of most of the science teachers was favorably high enough to enable them teach authoritatively and confidently to make the students pass the subject. Further finding indicate that all schools provided relevant science textbooks and charts. Eleven teachers had further contributed that in their laboratories there were chemicals for conducting experiment. But when it came to funding of science congress and fairs as well as field trips the number of teachers reduced. Recommendations were also made.

CHAPTER ONE

INTRODUCTION

1.0 Background of the study

Science study is a very important subject as it is an exact science education which deals with knowledge about ourselves, the world around us and as well as the economic progress of the country,

The current education system in Kenya is designed to achieve specific national goals. The educating recommendation of September 1981 saw the introduction of the 8-4-4 system. Kenya is aiming to be industrialized by the year 2020. If this goal is to be achieved, it means better performance in science education of which science studies is part and parcel forming the backbone of industrialization in the country.

Even though science studies and its application are so important in everyday life and in industrial activities, its performance in Kenya certificate in secondary education (KCSE) continues to be poor. It is a matter of concern to both the government and the general public that science subject is poorly performed as compared to other subjects. Many people have done research in student's 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 on how to overcome the problem and it is not clear why up to now the situation has not changed. Most suggestion given by readers appears not to be effective. Ways and means must be found to ensure that the parties concerned know where the problem lies.

1.1 Statement of the problem

The 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 education subjects in general. Since the factors leading to the problem have not been put in place, therefore teaching of the subject has not been efficient and performance remains poor. This study has determined the poor performance in science studies as subject, given recommendations which if adopted could improve the performance of the subject in schools.

Performance in science, in most of primary schools in Tulimani division has not been very promising during the past years. This is not surprising because the teaching and learning of science in secondary schools is being faced by a number of challenges such as facilities, teacher characteristics. It also seems as if even the attitude of both teachers and students hold a negative attitude towards the subject. Could it be due to their quality? The researcher therefore carried out this study because of this.

1.2 Purpose of the study

This research was carried out to establish the factors leading to poor performance of learners in science subject in selected primary schools of Tulimani division.

1.3 Objectives of the study

The following objectives guided the study;

- To find out if the physical facilities available in schools contributed to poor performance in science
- To assess the attitude of learners towards sciences

- To assess the teachers attitude towards the subject

1.4 Scope of the study

This research was carried in Tulimani district, Mbooni-West district in Kenya to establish the causes of poor performance of learners in science subjects. The following schools involved in the study:

Tututhat primary school, Wanzauni primary school, Nthaani primary school, Kinyuani primary school, Kiliku primary school, Itetani primary school and Musau Imale primary school.

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

Introduction

The research reviewed a number of factors that could easily contribute to the performance in the science studies. The nature of teaching and learning is confronted with many problems which are experienced by science studies teachers and students. The problems that face teachers include poor facilities, shortage of teaching aids, lack of expertise learners with negative attitudes towards science studies, learners who are poor in English hence may not understand science studies concepts due to language barrier, inadequate references and other facilities for conducting practical lessons.

Physical facilities and performance in science subjects

Availability of the necessary physical facilities plays a role in enhancing good performance in any subject. Saund (1988) concurs when he says "it is generally assumed that better facilities in school would lead to better performance in examination". He further notes that a teacher who has a class with lockable doors and widows for example will be motivated to make a variety of teaching aids as he knows he can store them safely.

Views on the causes of low enrolment in examination are many and varied. These views range from personal discipline and poor administration among others. Nyama (1984) on ways to help students pass, the following questions; what makes students pass? Is it good desks, good diets, good books or good teachers? He further noted that the thorough look to find out the enrolment of students in science studies.

Kotikot (1985) lamented that despite schools in Tulimani district having qualified staff and permanent physical facilities to the Kenyan primary learners in the district do not enroll equally in all science education subjects. This comment shows that it is not fair to blame the teacher and facilities for poor performance in science studies. Time urgency of rectifying this situation calls for a look at the student the parents and the environment to explain the deteriorating performance in schemes.

On inequitable distribution of facilities and personal among other factors (Gichaga, 1902) adds ... if the government could give some treatment priority to both rural and urban schools by supplying equipments on time rural schools could also compete favorably with urban schools. There is a complete reappraisal of the kind of experience 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 books other than elaborate equipments unlikely to be met in later life.

Eshiwani (1996) in one of his studies in Kenyatta University, Kenya, he found that there is need to introduce research and innovation in our science education curriculum given the fact that the present primary school educations geared towards university education, when the majority of these learners sitting these examinations could become facilitators in scientific discoveries and innovations in rural areas.

A supportive administration plays a big role in enhancing enrollment of science education in schools. This is because the principle controls the finances and could avail a lot of teaching aids for sciences. Some of the teaching aids for science are charts, science reference books, funds science congress, fund science studies teachers for science education seminars.

Writing on this issue Mbithi (1982) says that "it is important because curriculum design has practical meaning when the school has required support materials, for trips and practical based teaching makes science studies are interesting and more motivating." It gives the student confidence in the subject and enhances good enrolment.

Learner's attitude and performance in science

The negative attitude of learners also contributes to poor performance in science studies. Eshiwani (1996) explains why the students develop a negative attitude and that "the courses are overloaded abstract and each topic is treated superficially with results that pupils forget what they have learnt". Bell (1990) 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 teacher influences in school and more so from the teacher influence the pupil's attitudes towards everything in school and may affect the performance. Therefore teachers should have their continuous attention directed towards creating, developing, maintaining and reinforcing positive attitudes in the students.

Teachers' attitude and performance in science

The teaching methods of a teacher play an important role in motivating of learners. Eshiwani (1996) observed that "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 by themselves.

Ayot and Patel (1992) concurs by saying that the learner should be the centre of learning and that they should be actively be involved through experimentation

and self discovery. The illustrations examples and demonstrations given to the learners be related to their experiences and the environment of the child. The teacher should aim at changing the negative attitude in students by making the lesson more interesting, practical real and also let the students know what career to expect in science studies related fields.

Some teachers lack interest in teaching the subject. This may be because they are not motivated properly for their tasks. Mangy Thou (1945) emphasized that teachers need to be rewarded for work well done. Their salaries and incentives need to be reviewed from time to time.

Sidhuks (1882) notes that successful teaching experience is available as a standard and that the trained teachers and those with teaching experience contribute to good performance. It will enable the teacher to acquire certain recommendable characteristics such as promptness adaptability, efficiency, the ability of arousing and maintaining interests, adequate command of instructional materials and ability to face the class since he/she will use appropriate teaching aids prepare lesson plans, illustrations, exercises and give proper instructions to the students.

Kihumaba Kamotho of East Africa Standard (2000) quotes, "NHSCO devoted its two weeks session on the international conference on education analyzing the role of teachers into a changing world"; during the conference the quality of teachers, their working conditions and their role in a changing world took a very significant dimension. Delegates agreed that there was need to re-engineering education so that learners receive an education based on all pillars of learning. Delegates also note that teachers work under very difficult conditions for very little pay, relative to the task they accomplish.

Government of Kenya on the other hand argue that due to their number, it is not possible to pay them a salary commensurate with the role they perform.

On Friday 12/10/2001, three catholic priests from Mbooni-West district were reported to have defied a government order to re-open two schools until the head teachers were transferred. Sponsors role in the institution is only spiritual, he quotes some religious domination has appointed officials known as education secretaries. Be named that these people do not know anything about education to dictate you on how run your institution.

Mr. Macharia PID/E Rift valley told DEOs and Primary school heads to ensure that all members of the school board of governors have a t least a form four level of education and their Chairpersons degree. Mr. Macharia said that most members of the school board were illiterate and easily manipulated by errant head teachers. He claimed that many schools were doing extremely poor in national examinations because most of the board members are illiterate (East African Standard, 2001).

The ministry of education had undertaken one of the comprehensive transfers of head of head teachers in recent time. Hundreds of head teachers have been moved in the exercise while others has been demolished. The government says that the move has been necessitating by the persistent inability to perform. Transfers it well managed can improve the realization of country's educational goals through proper implementation of curriculum and proper managing of learning activities and facilities, the recent transfers are geared towards that.

From the reviews, it is evident that many studies was carried out to find out the factors that had led to poor performance among students in science studies in secondary schools. The researchers aim is to find out if those factors apply to Tuttuthat primary school and others. Since most of the problems facing performance in science studies are common to many schools in Kenya, parents and teachers meeting 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 in science that have remained elusive.

Surum (1999) quoted that research into the study of science subjects and the improvement of teaching methods has been of interest to researchers, as well as from various journals and books in this subject. The finding of these studies have centered on science education circulars, teaching methods, teaching facilities and the school environment.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

In this chapter, the study was carried out to investigate on the causes of poor performance of learners in science subjects in Tulimani division Mbooni-West district in Kenya. A design was chosen, the study area and population identified. A sample size had to be selected using a specific technique; data collection and data analysis, procedure were also identified.

3.1 Research design

This studied followed a descriptive research design and quantitative techniques were applied at the initial stages of the study but during analysis quantitative methods had to be employed too to analyze the data.

3.2 Study area

The study was conducted in Tulimani division, Mbooni-West district in Kenya in following schools which include Tututha primary school, Wanzauni primary school, Nhaani primary school, Kinyuani primary school, Kiliku primary school and Itetani primary school.

3.3 Study population

The targeted population included people living in the Tulimani division Mbooni West district, who happened to be both subsistence farmers and herdsmen. All teachers, parents and Learners were potential respondents.

3.4 Sample size

In this study 60 teachers were used, 5 teachers were drawn from each school.

3.4.1 Sampling technique

Because of time the researcher employed a stratified random sampling technique to see that teachers with different working experiences were included in the sample.

3.5 Data collection methods

3.5.1 Instrumentation

Means were devised to construct instruments which could help gather relevant data about the study. In this situation where all teachers were literate, questionnaires had to be designed. The items in the instrument were limited to the three objectives formulated for the study. Items were both open-ended and close-ended in nature.

3.5.2 Sources of data

The study used both primary and secondary data. Primary data was gathered from the field at a later stage, while secondary data was gathered by reviewing different researcher's literature.

3.6 Data collection procedure

An introductory letter had to be obtained from the institute of open and distance learning to release the researcher from college to for research. Permission was also got from the schools where this research was undertaken. While in the field the respondents were identified and the instrument distributed to them. They filled it and then returned to the researcher.

3.7 Data analysis

After collecting data from the field it was edited by looking through each field responses ascertaining that every question had an answer and all the errors were eliminated for the completeness, accuracy and uniformity.

The data was then coded using various responses given to particular questions which had no code numbers. Data was then presented in frequency tables rendering it ready for interpreting quotations were also included.

CHAPTER FOUR

DATA PRESENTATION, ALYSIS AND INTERPRETATION OF FINDINGS

4.0 Introduction

This study examined the factors causing poor performance of learners in science subjects in selected primary schools. The following objectives guided the study;

- i. To find out if the physical facilities available in schools contributed to performance in science
- ii. To assess the attitude of students towards sciences
- iii. To assess the teachers attitude towards subject

Chapter four presents, analyses and interprets the findings

4.1 Background information

4.1.1 Sex of teachers

Table 1: Presents sex of science teachers

Sex of teachers	Frequency	Percentage
Male	9	60.0
Female	6	40.0
Total	15	100

Source: Primary data 2009

Findings in table 1 indicate that nine of the teachers interviewed were male while six of them were female.

4.1.2 Qualification of teachers

The study chose to investigate the qualification of teachers because this is directly related to how effective they can teach sciences.

Table 2: Presents qualification of teachers

Qualification	Frequency	Percentage
Graduate	8	53.3
Diploma	7	46.6
Certificate	-	
Total	15	99.9

Source: Primary data 2009

From the findings in table 2, 53% of the teachers were graduates and 46% were diploma holders. This shows that majority of these teachers should be able to impart relevant scientific knowledge and skills so that students can perform better.

4.1.3 Area of specialization

It is important that the teachers who teach sciences be specialists in that area

Table 3: Teachers view on whether they specialized in science

Specialization in science	Frequency	Percentage
Yes	11	73.3
No	4	26.6
Total	15	99.9

Source: Primary data 2009

Findings above show that 73% of the teachers were science specialists and the training, 26% were not. Since the majority of them were a science teacher why that is their performance was not good at all? Could the 26% be the cause of poor performance in sciences?

4.1.4 Teaching experience of respondents

The more experienced teachers are the more effective and knowledgeable they can be in teaching the subject.

Table 4: Showing the teaching experience of respondents

Teaching experience	Frequency	Percentage
Over ten years	5	33.3
Five-nine years	7	46.6
Below four years	3	20.0
Total	15	99.9

Source: Primary data 2009

The above findings show that majority of the teachers had an experience of between five to Nine years, thirty three percent had an experience of over ten years, and 20% of them had taught for less than five years.

The above analysis shows that science teachers have enough experience and therefore must be able to teach well.

4.1.5 Professional development of science teachers

Teachers were asked whether they had ever attended any seminars to sensitize them about how best to teach the subject.

Table 5: Teachers view as to whether they have attended seminars

Sex of teachers	Frequency	Percentage
Yes		
No	15	100
Total	15	100

Source: Primary data 2009

The above findings in table 5 highlighted that all teachers had not attended any seminars at all teachers have not been given a chance to grow in their profession and in particular that area of specialization because of not attending workshops. This could be the reason as to why there is poor performance in science subjects.

4.2 School physical facilities and performance in science subjects

Availability of the necessary physical facility plays a role in enhancing good performance in any subject (Saud, 1998). The relevant physical facilities for the learning of sciences include laboratories with the necessary equipment.

The researcher wanted to establish if these facilities were available in the five secondary schools found in central division in Narok district.

Table 6: Presents the availability of science facilities in primary schools

Presence of laboratories	Frequency	Percentage
Available	15	100
Not available		
Total	15	100

Source: Primary data 2009

The above analysis in table 6 indicates that all schools have science laboratories to carryout practical lessons. But why is it that the schools continued to perform poorly? Is it the adequacy of these science facilities? Are they equipped?

4.2.1 Adequacy of science facilities

Kotikot (1985), who carried out a study on enrollment of students in science subjects, had observed that having qualified teachers and permanent physical facilities in schools was not enough to curb failures in the subjects. Gichaga (1902) instead highlighted that at this time there were inadequate equipment, most especially in rural schools. This researcher therefore sought to find out if this was the case.

Table 7: Presents the adequacy of science facilities

	Frequency	Percentage
Adequate	3	20.0
Average	7	46.6
Not adequate	5	33.3
Total	15	99.9

Source: Primary data 2009

Findings in table 7 indicates that according to three teachers, the equipment were available in science laboratories. Seven teachers however expressed that they were on average adequate. Lastly five teachers commented that they were inadequate. The above findings show that this could be one reason as to why students are failing the subjects. It is true that the science syllabus followed in rigid and exam oriented but the students need practical exercises to understand the science concepts. Research is part and parcel to learning of sciences but here

in this case students are being denied a chance to discover for themselves through practical lessons.

4.2.2 Availability of science teaching learning aids in selected primary schools

Mbiti (1982) wrote that it is important that curriculum design puts into consideration support materials, trips and practical based teaching. Because this makes science studies are interesting and more motivating. It gives a student confidence in the subjects. The study therefore investigated what existed in school in form of teaching learning aids.

Table 8: Showing the available teaching learning aids for sciences

Teaching learning aids available	Yes	No	Total
Textbooks	15		15
Charts	15		15
Funding of science congress	4	11	15
Funding of field trips	8	7	15
Chemicals are available in laboratories	11	4	15
Frequency	53	22	75
Percentage	70.6	29.3	99.9

Source: Primary data 2009

The findings in table 8 indicate that all teachers contributed that the science related text books were readily available to the students who study sciences. All teachers also agreed that there were charts to be used in the teaching of the subject. Findings however show that a few schools funded or used science congresses, and only eight teachers agreed that field trips were being used to

teach the practical subjects. Eleven teachers further more accepted that there were chemical in laboratories.

The above findings highlight a gap in the teaching of sciences using science congress and field trips, yet these could otherwise add value to the teaching and enhance the understanding of scientific concepts and theories. Poor performance in the subjects could be partially because of this.

4.3 Learners' attitude towards the subject and performance in science

Researchers have observed that a negative attitude of learners towards a subject also contribute to poor performance in science (Eshwani, 1996).

Bell (1990) explains that courses covered were overloaded, which resulted in surface learning. More to that there are research findings which expose stereotypes which influence the student's attitude towards the subject.

Table 9: Presents the teachers view on the attitude of Learners towards sciences

Learners hold a negative attitude toward the subject	Frequency	Percentage
Yes	10	66.6
No	5	33.3
Total	15	99.9

Source: Primary data 2009

From table 9, majority of teachers 10 agreed that at times learners hold a negative attitude towards the subject. Five teachers however disagreed.

The findings above indicate that indeed there are some learners out there; with a negative attitude towards the subject learning can not take place effectively when the children do not like what they are studying. Hence poor performance in science could be partially because of this.

4.3.1 Gender and attitude towards science subjects

The researchers say girls usually hate studying sciences because of stereotypes. Girls usually think sciences are for boys because of what parents have made them believe that they are inferior to boys and may never make it.

Table 10: Shows the teachers views about the gender influence on learners attitude towards science subjects

Girls hold a negative attitude toward science subjects	Frequency	Percentage
No	5	33.3
Yes	8	53.3
Do not know	2	13.3
Total	15	99.9

Source: Primary data 2009

From table 10, five teachers disagreed that girls held a negative attitude toward sciences, eight teachers however agreed that indeed the girls did not like sciences, two teachers however did not know whether this was the case.

The findings in table 10 highlight the applicability of the already held view that girls usually have a negative attitude towards the subject. It exposes a factor influencing poor performance in the subject. Could be that girls are the poor performers in the subject?

4.3.2 Gender related performance in science in primary schools

The study had to establish if the girl's performance was poor to that of boys in science subjects

Table 11: Presents teachers views about performance in science subjects by gender

Boys perform better than girls in science subject	Frequency	Percentage
Yes	9	60
No	6	40
Do not know		
Total	15	100

Source: Primary data 2009

From table 11, nine teachers agreed that boys were performing better those girls. But six teachers disagreed and none of the teachers did not know.

This finding shows that because of a negative attitude towards the subject, girls are performing poorer than boys. They could be the representative of those students who are performing poorly in sciences.

4.4 Teachers' attitude and performance in subjects

Teachers play a significant role in imparting knowledge and skills (Kamotho, 2000). Teachers have however been observed to hold a negative attitude towards their job due to a number of factors such as overworking, low payments Thou (1945). If then this is what is happening then poor performance in the subject could be because of this. Teachers therefore had to be asked whether they enjoyed the subject.

Table 12: Presents the teachers opinion as to whether they enjoy teaching sciences

Teachers interest in teaching science	Frequency	Percentage
Yes	11	73.3
No	4	26.2
Total	15	99.9

Source: Primary data 2009

The above table shows that eleven teachers were interested in teaching sciences and four were not. This finding also shows that the performance of students in science subjects could be due to some of the teachers who do not enjoy teaching the subject. This shows that because the teachers lack interest in the subjects, they tend to discourage the children from learning the subject, hence the poor performance.

4.4.1 Why teachers lack interest in the subject

Teachers were asked as to why some of their colleagues held a negative attitude towards their teaching activities.

Table 13: Presents reasons which were given by teachers as to why they hold a negative attitude

Why teachers hold a negative attitude towards teaching science	Frequency	Percentage
Teachers are overworked	13	86.6
Some teachers do not have enough experience and proper qualifications	15	100.0
Some teachers are negligent	06	40.0
Sometimes the facilities are not suitable enough to teach from there	12	80.0
Administrators are too tough on teachers	07	46.6
Individual teachers entered the profession as a last resort	2	13.3
The students are very indisciplined hence they discourage teachers.	15	100.0
Total	70	66.6

Source: Primary data 2009

The findings in table 13, thirteen teachers contributed that teachers hold a negative attitude because they are overworked. All teachers contributed that inexperienced and lowly qualified teachers were those who held a negative attitude; six teachers added that some of those who held a negative attitude were neglect ones. Twelve teachers thought that some teachers had developed a negative attitude because they were not well facilitated as far as the teaching of the subject was concerned. Seven teachers thought the autocratic management style of head teachers caused a change of teacher's attitude towards the job. Two teachers suggested that those who held a negative attitude towards the subject were just forced to join profession.

Lastly all of the teachers contributed a related view that due to indiscipline students in schools, teachers have lost interest in teaching.

Science subjects are vital because of their direct contribution to the development of any economy, but the teachers who teach these subjects hold a negative attitude towards their profession. The suggested factors are responsible for their poor performance in the subjects. It shows that teachers are not carrying out their duties as expected due to some reasons mentioned. Consequently, the student are not learning well as expected, hence the poor performance.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The preceding chapter analyzed data on factors which were contributing to learners poor performance in science subjects.

The following research questions were formulated to focus this study?

- i. Have physical facilities in schools affected learners performance in science subjects?
- ii. Has the attitude of students influenced their performance in science subjects?
- iii. Does the teachers attitude towards work influence the performance of students in science subjects?

Chapter five summarizes what has analyzed in chapter four and concludes the study and then gives recommendations.

5.1 Summary of findings

5.1.1 Background characteristics

Findings indicate that majority of the science teachers were male, eight of the fifteen teachers are graduate teachers and seven of them were diploma holders. The academic qualification of most of the science teachers was favorably high enough to enable them teach authoritatively and confidently to make the students pass the subject.

Eleven teachers of those teachers who were teaching the subjects were specialists in that area. This could add on their competency in teaching the subjects in order to make the students perform better. But however four

teachers did not have the relevant specialization in sciences. This was established as one of the reasons as to why students were performing poorly in the subject.

Finding further showed that majority of teachers interviewed had a great experience in the field hence their ability to impart relevant scientific knowledge and skills students and make them excel. Teachers however were not being given an opportunity to grow professionally by organizing for them refresher courses and workshops. This could otherwise be the contributing factor towards the poor performance in the subjects.

5.2 Physical facilities available in Primary schools

All teachers used in the study connected that laboratories were available in their schools for science students to use. It was further established that they were on average adequate for the teaching of practical science lessons. This finding showed that in other school they were adequate while in others they were not, promptly the researcher to conclude that poor performance in sciences is partly to blame on this factor. Because science is supposed to be taught practically because of its abstract nature, the necessary facilities and equipment need to be readily available all the time. But in this case they were available but inadequately. This denies the students a chance to participate in the scientific experiments which could make them pass their examinations. Practice makes perfect, which is not the case in our study. This finding is in agreement with the Gichaiga report (1902) which had observed that the physical facilities were not adequate, and advised that having qualified teachers and physical facilities is not enough to curb failures in the science subjects.

Further finding indicate that all schools provided relevant science textbooks and charts. Eleven teachers had further contributed that in their laboratories there were chemicals for conducting experiment. But when it came to funding of

science congress and fairs as well as field trips the number of teachers reduced. This clearly showed that schools were not adequately funding these ventures yet they also contribute to the better performance in the subject. This finding exposed the schools inability to find scientific exercises hence the poor performance in the subjected..

5.1.3 Learners attitude towards sciences

Majority of the teachers shared that their students they taught held a negative attitude was towards science subjects. This attitude was however attributed to same factors. Because of the negative attitude towards the subject it is possible that some students were performing poorly because of this.

About gender influence on attitude towards sciences, it was established that some girls held a negative attitude towards the subjects, although some teachers did not agree to this statement and the two had no idea. This finding exposes the girls negative attitude towards the subject and hence the poor performance most especially for girls.

5.1.5 Teachers attitude toward and performance in science subjects

Findings in the study that some teachers were not happy with their job. The reasons given included not having enough experience and relevant qualification, indiscipline of learners, inadequate teaching/learning facilities and equipment; teachers being overworked. Such findings show how this lack of interest in their job, can cause teachers to teach carelessly. This was discovered to be the most dominant factor influencing the poor performance in science subjects.

5.2 Conclusion

Sciences are prerequisite in the modernization of any society. For Kenya to achieve this, it must ensure that the dissemination of scientific knowledge, ideas

and skills is done through education. What is worrying is that performance has remained poor. The factors responsible for this performance range from physical and personal. The teachers have observed to play a dominant negative role in the poor performance students in science subjects. This in turn affects student's attitude which makes them fail science subjects.

5.3 Recommendations

The policy makers must design the relevant curriculum materials for Learners. They must avail finances for school facilities

Using meaningful activities in their classrooms. Different and meaningful activity should be used by science teacher in order to improve on the general concentration of the students, reducing boredom and promoting easy and quick understanding of difficult concepts applied in science emphasizing process rather than product during problem-solving sessions, science student should be trained not also to produce answers or product but they should master and clearly understand the whole process that brings about the product, as in science the means justifies the end.

Promoting collaborative learning in science classes. Collaborative and interactive learning should be highly adopted as this promotes easy understanding and both learners and teachers can learn of where they experience difficulties. The learning of science should be a two way process rather than a dictating approach.

Helping learners to develop a positive attitude towards science. Positive attitudes towards learning of science can be cultivated by the education ministry and science teachers through improvement of students perception and motivation.

REFERENCES

Abraham, MR (1989). Research in instructional strategies. Journal of college science teaching pg 185-187

Bradley A.Z; Urich SM; Jones M Jr & Jones (2002). Teaching the sophomore organic course without a lecture. Are you crazy? Journal of Chemical education

Felder R.M; Woods, DR; Sitice, J.E & Rugarcia (2000). The future of Engineering education II. Teaching methods that work. Chemical engineering education

Francisco J, Nicoll G & Trautmann M (1998). Integrating Multiple teaching methods into a general chemistry classroom. Journal of Chemical education

Harvey LC AND Hodges LC (1999). The role of multiple teaching strategies in promoting active learning in organic chemistry. The chemical educator

Jarret R M & McMaster (1994). Teaching organic chemistry.

Mahajan D.S & Singh G.S (2001). Phobia towards organic chemistry in year one students at the University of Botswana. LONAKA Buletin of the center for academic development .

APPENDICES

Appendix A: Questionnaire for teachers

Dear Respondents;

You are requested to answer all the questions as truthfully as possible. Do not write your name. This information obtained will be confidential and will be used for the purpose of this particular study.

Sex

Male ☐

Female ☐

Professional qualification

Diploma ☐

Untrained graduate ☐

Graduate ☐

Masters ☐

Did you specialize in sciences?

Yes ☐

No ☐

Years of experience in teaching science studies?

.....

Have you attended any seminar since employment?

Yes ☐

No ☐

If yes how many times

.....

.....
Have you been involved in setting any National examinations?

Yes ☐

No ☐

Have you been involved in marking any national examinations?

Yes ☐

No ☐

Do you have enough textbooks in the library?

Yes ☐

No ☐

In very few words, what is your attitude towards science studies?

.....

.....

Does that school administration support science education department?

Yes ☐

No ☐

You are to express in agreement between the feeling expressed in each statement and your personal feelings towards science studies?

Strongly agree ☐

Disagree ☐

Agree ☐

Strongly disagree ☐

Tick the right answer	SA	D	A	SD	U
I feel good when going to teach science studies					
I feel a sense of insecurity when teaching science studies					
My mind goes blank and I am unable to think clearly when solving numerical questions in science studies					
I have loved business studies since I was in form one and have always solving enjoyed studying it					

Is it teachers who determine the science subject , the student are to take?

Yes ☐

No ☐

Appendix A: Questionnaire for students

Dear Respondents;

You are requested to answer all the questions as truthfully as possible. Do not write your name. This information obtained will be confidential and will be used for the purpose of this particular study.

Class

Sex

Male ☐

Female ☐

What is your attitude towards the science subject?

Positive ☐

Negative ☐

Neutral ☐

How is your performance in science studies?

Very good ☐

Good ☐

Fair ☐

Poor ☐

How do you rate science studies as a subject?

Very hard ☐

Hard ☐

Easy ☐

Very easy ☐

How many students share science studies textbooks?

one ☐

Two ☐

Four ☐

Five ☐

Do you normally complete the syllabus?

Yes ☐

No ☐