EFFECTS OF ATTITUDE IN MATHEMATICS AND

PERFORMANCEIN MALINDI DISTRICT,

COAST PROVINCE,

KENYA

BY

MWANGI CAROLINE WAMBUI

BED/21039/81/DF

A RESEARCH REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BACHELOR

OF EDUCATION IN SCIENCE TO THE INSTITUTE OF

OPEN AND DISTANCE LEARNING (IODL)

KAMPALA INTERNATIONAL

UNIVERSITY

AUGUST 2010

DECLARATION

I MWANGI CAROLINE WAMBUI, do hereby declare that "EFFECTS OF ATTITUDE IN MATHEMATICS AND PERFORMANCE IN MALINDI DISTRICT, COAST PROVINCE IN KENYA" is entirely my own original work and that it has never been submitted to any other institution of higher learning for academic award/ purposes.

Sign...

Name...M̲W̲A̲N̲G̲I̲ C̲A̲R̲O̲L̲I̲N̲E̲ W̲A̲M̲B̲U̲I̲.......

Date....27/08/2010.......................

SUPERVISOR'S CERTIFICATION

The research report has been submitted to the institute of open and distance learning for examination with my approval as the candidate's university supervisor.

Sign..

Name. REV: EZEKIEL Olupot E.

Date...

DEDICATION

I wish to dedicate this research dissertation to my lovely husband, Josephat Wainaina Karoki and daughter Grace Gathoni Wainaina without whose support and encouragement, this research report would not have been possible.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to my reviewers, immediate supervisor, REV. ELIKO OLUPOT EZEKIEL, MR. KATUNGUKA and the entire Kampala International University management for the sincere support that they gave during the research process. I also feel humbled by the assistance offered to me by my beloved husband, JOSHPAT WAIMAINA KAROKI for the research to become reality.

I will not forget to express my gratitude to the entre Malindi secondary schools management for the great help in obtaining findings of the research.

It will be unfair for me not to mention the students who provided critical feedback and served as invaluable sources in the preparation of the research.

Last but not the least, my sincere gratitude's goes to my parents who accorded me great support during the research process.

LIST OF ACRONYMS

KCSE : Kenya Certificate of Secondary Education

SMASSE : Strengthening of mathematics and science in secondary Education

KCPE : Kenya certificate of primary Education

KIE : Kenya Institute of Education

KNEC : Kenya National Examination Council

TABLE OF CONTENTS

ABSTRACT

The researcher investigates the effects of attitude in performance of mathematics in Malindi district, coast province, Kenya.
The researcher got disturbed by declining performance in mathematics and for this reason sought to find out the relationship between attitude and performance in mathematics as a subject. The main aim of the research was establish the causes that have been hindering performance in mathematics.

The researcher got records of the last three years KSCE results for mathematics for form four classes of 2007, 2008 and 2009 from the district education office on mathematics performance. The research only managed to sample a few school for the research.

The methodology used to collect relevant data was questionnaire which were designed and administered to students in sampled schools. After analyzing the research finding was a major drawback in performance of mathematics. It was also found that girls were highly affected by attitude than boys in their training of mathematics. Some students had their negative attitude toward mathematics originating from their parents words of discouragement. It is from this research the researcher discovered that 65% of boys have negative attitude mathematics while 70% of girls have negative attitude toward mathematics. The negative attitude in the learner was' found to due to a number of reasons. One, lack of good communication between teacher rand learner, secondly, negative attitude passed by parents to earners directly or indirectly.

Thirdly, lack of conducive environment for learning. Fourth, wide curriculum and use of wrong teaching methods. Recommendations were, sufficient reference materials should be available in schools, parents should be encouraged to give positive comments toward mathematics to avoid impacting negative attitude to student and the secondary schools in Malindi district should have to offer student career guidance. Further study should be carried out in disparities between performance of boys and girls.

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter presents the introduction, the poor performance in mathematics in schools, the background of the problem, statement of the problem, purpose of the study, research objectives, significance of the study and assumptions made in the study.

1.1. Background of the Problem

Considering the contribution of mathematics, science and technology in today's world, one would have expected mounting interests in this discipline, but the reverse is observed instead. In deed, there is declined enrolment in mathematics and science subjects among the youth and poor performance in examinations, such as those taken in high school mathematics and science courses by the brave few who feel comfortable to enrol (Silas)(1999).

It is ironical that in our pro-science and technologically oriented world, the youth who would take charge of global affairs in future, the running of industries and the means of production, research laboratories space technology and international politics are shying away from the very subjects that should adequately prepare them for such roles Mwangi (2008)

Saitoti (2006) reported that mathematics have been registering poor performance in the world during his time as minister of education in Kenya. Kenya as a country was not left out in registering poor performance in mathematics. Since independence the performance in mathematics in Kenya has never been satisfying. The government has tried its level best to change the performance of mathematics in Kenya by carrying out workshops to equip

teachers, SMASSE is one of in-service programmes the government has initiated with an aim of - improving mathematics in the Kenya.

Nyagosia (2009) reported poor performance in Malindi district secondary schools.

The average performance of boys is better than girls when the Kenya certificate of secondary education is considered. The performance in this subject is guided by the students entry behaviour to form one from primary level where summatic examination is known as KCPE. The research report is aimed at finding out why the performance of mathematics is poor.

1.2 Statement of the problem

Mathematics plays a big role in our day to day activities. Everything people do and talk about involves calculations and estimates. Guchura(2004), SAITOTI (2006) noted that mathematics has been registering poor performance world wide. Karega (2008) reported poor performance in the KCSE examination of 2007. The result of KCSE 2006 to 2009 from malindi district education officer indicated a drop in performance every year. Since mathematics skills are vital in solving day to day problems, there is an agent need for solution to be sought through research findings. It is as a result of this that the research came to existence on relationship between attitude and performance.

1.3. Objectives

1.3.1 General Objective

The study aimed at determining the impact of attitude on academic performance in mathematics in Malindi district, coast province Kenya.

1.3.2 Specific Objectives

1 To find out causes of poor performance in mathematics.

2 To find out ways mathematics performance can be improved in Malindi secondary schools.

3 To find out the learners attitude toward mathematics teaching method.

1.4 Research Questions

1. What are reasons leading to failure in mathematics?

2. How can performance in mathematics be improved?

3. How does the way of teaching in mathematics affect attitude of the learner?

1.5 Scope of the study

The study was conducted at Malindi district, Kenya. The district has 26 schools, 2 girls' schools, 3 boys schools and the rest are mixed schools. The district has 3 boarding schools. The researcher will make use of male and female students in the secondary schools of the district. The district is the researcher's choice due to the background information she has about the district. The researcher also happened to teach in one of the school in the district, teaching chemistry and mathematics but all along some issues remain unclear as to why they have been - The study was done from 2005 -2010. It is during this time the secondary schools of Malindi District were registering poor performance. It was during the same time, the objective of Kenya being industrialized by 2030 was launched.

1.6 Significance of research study

The research in intended to benefit the stake holders such as teachers, parents, administrators, ministry of education, Kenya national examination council (KNEC) and the learners.

Teachers:

The teachers will use appropriate methods of teaching and approaches in teaching and handling learners with difficulties n mathematics.

Parents:

Parents will be made aware of the difficulties their children face in learning mathematics as a subject.

School administration:

The research findings will be useful in making policies regarding teaching mathematics in secondary schools.

Ministry of education:

The research will help the ministry of education in formulating policies and also reviewing mathematics syllabus.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This section presents the review and a short analysis of the related literature in the area of performance in mathematics in Malindi district secondary schools. It focuses on other researcher's related work.

2.1 Theoretical Background

Simon (1991) defines attitude as settled way of thinking or- feeling about someone or something typically one that is reflected in person's behavior. The systematic study of learning is relatively new. Robert ES (2003) not until late nineteenth century was learning studied in scientific manner. Using techniques borrowed from physical science, researchers begun conducting experiments to understand how people and animals learn. Two of the most important early researchers were Ivan Pavlov and Edward Thordike. Parlov's theory emphasis on observation and careful measurement and his systematic exploration of several aspects of learning helped to advance the scientific study of learning.

The theory can help a teacher understand many situations such as when a learner's anxiety about being taught mathematic develops into delalitating fear of attending a mathematics lesson.

Pavlov's work inspired researchers in the United States such as E.L. Thordike (Hilgar & Bocier, 1966). Thordike like many of the early behavioral learning theorists, linked behavior to physical reflexes. In this early work he also viewed most behaviour as a response to stimuli in the environment. The environment of a learner consists of learners, teachers, non- teaching staff, parents and

facilities available. This view that stimuli can prompt responses was the forerunner of what become known as stimulus response (S-R) theory. The theory hypothesized that other behavior were also determined in a reflexive way. Stimuli that are present in the environment rather than by conscious or unconscious thoughts. Thordikes law of effects states that if an act is followed by a satisfying change in the environment, that act will be repeated in similar situation increases however, if a behavior is followed by an unsatisfying change in the environment, the chances that the behavior will be repeated decrease. Thus Thorndike showed that the consequences one's behavior play a crucial role in determining one's future behavior. Since attitude is reflected in behavior, satisfying change in learning of mathematics will be followed to positive attitude. Unsatisfying change in learning of mathematics will result to negative attitude on the subject.

2.2 Factors affecting student performance in mathematics.

2.2.1 Teachers

Kirui D. (1996) cited the teacher factor. If teacher fail to motivate the learner, learning turns his experiences will lead to poor performance in mathematics.

Ndambuki S.K (1996) fund that poor attitude, unqualified teachers, lack of teachers, overloading of teachers are some of the causes of poor performance.

2.2.2 Reference materials

Many schools in Malindi district lack the ability of obtaining references such as Bibliographies, dictionaries, encyclopedias, directories, year books hand books, manuals, atlases, periodicals, magazines and newspapers.

Ndambuki S.K (1996) cited lack of textbooks and reference materials as a serious cause of poor performance in mathematics and sciences. In a school

where there are few textbooks, the teaching becomes teacher centered. The administration in Malindi district should adopt book ratio of 2:1 so that student can have a variety of reference books.

The schools should also buy books from different authors.

2.2.3 Student related factors

Kamau (1998) found out that 65% of the secondary students have poor attitude towards mathematics and would wish not to continue with the subject in pursuit for their careers. Waguru (1998) and Kamau (1998) in their research found out that in their negative attitude towards mathematics is one of the major causes of poor performance in the subjects.

In the recent past a good number of students use brain retarding drugs and substances like bhang, heroine, Khati and many others when besides brain damage cause indiscipline and lack of concentration.

2.2.4 Curriculum

The Kenya institute of education (KIE) was given mandate by the Koech Commission (1999) to develop the secondary schools curriculum while KNEC is responsible for examination and certifications. It was discovered that the syllabus were made in haste to implement the relevant recommendations of Mackey report of 1981. Any curriculum prepared in haste, like the one in question will not be able to a check the national goals of education of the country because it lacked the time to undergo all the 10 developmental states outlined by Shiundu and Omulando (1992) in the development of a curriculum.

Time allocated for the coverage of the syllabus is not enough for the coverage of the mathematic syllabus and there are chances students sit for their KSCE examination without having complete the mathematic syllabus.

2.3 Ways mathematics can be improved.

Evaluation

Marl (1981) roles that tests are vital necessity in motivating learners. However, the examinations should not be too many.

Motivation:

There is urgent need to provide motivation and encouragement to teachers and learners. Kangethe (1992). This will make teachers and learners feel appreciated.

Employment of qualified teacher:

Koech report (1999) emphasizes employment of qualified teachers to teach secondary schools.

Supervised exercises:

Teachers should plan for supervised exercises in their lessons. Immediate feed back motivate a learner.

2.4 Impact of method used in teaching mathematics.

Nyambuto (2004) noted, methodology used to deliver concept to a learner have great impact. A learner may be positively or negatively motivated.
Lack of motivation leads to negative attitude toward the affected subject. The study agreed with Nyambuto's findings.

2.5 Review

The review focus on the theories related to attitude, factors affecting students' performance in mathematics and way of improving performance. The next chapter describes the methodology applied to obtain data.

CHAPTER THREE

METHODOLOGY

3.0 Overview
This chapter presents methodology used to gather information and data which forms the basis for reference, interpretation and explanations. It talks about research design, sampling procedure, sample population, instruments, data collection procedure and data analysis.

3.1 Research Design
The researcher's choice was survey design in this type of research design; questionnaires were given to students of different schools. The information was gathered from students in pursuit to identify the causes of their poor performance in mathematics.

3.2 Sampling procedure & target population
The entire Malindi district would include 26 secondary schools of varied enrollment approximately ranging from 250 to 1500 students per school. The school to be visited were selected at random based on the following categories.

1. 2mixed schools
2. 2 boys' schools
3. 2 girls' schools
4. 2 full boarding school

The schools visited were;
(i) Marafa Sec School
(ii) Grashi Secondary School
(iii) Magarini Sec School

(iv) Mgala Girls Secondary Schools

(v) Kakoneni Girls School

(vi) Malindi High Secondary School

(vii) The researcher targeted the students that were willing to fill the questionnaire, since mathematics is a compulsory subject in all schools in Kenya.

3.3 Data Collection tools

The researcher's tools used to collect the required data were written self administered questionnaires administered to the students from form 1 to form 4.

The questionnaire contained 5 questions. Three were descriptive and two of them required the student to agree or disagree.

3.4 Quality control

The questionnaire comprised of 3 items valid.

$$\text{Controls validity index (CVI)} = \frac{Number\ of\ items\ valid}{total\ items}$$

$$= \frac{3}{3}$$

$$= 1$$

The C.VI conforms to Amins 2004 recommendations of 0.7>

3.5 Procedure for data collection

The researcher sought a letter of introduction, from the faculty of Education, Kampala International University to conduct research in Kenya. This letter was presented to the head of the institution where the research was carried. The researcher was later granted permission to carry out the research.

The researcher visited selected schools in different days. The teacher then distributed questionnaires to sampled classes in each stream in a selected school.

Since the enrollment in class per school ranged from 35 to 50 students, the researcher was able to obtain around 150 filled questionnaires from the students.

The opinion given by the number of the students will be taken to represent the opinion of all the student in the sample school.

3.6 Data Analysis

The research used pie-chart showing percentages distributions of response. It was used to determine the effect of attitude on performance in mathematics in Malindi district secondary schools.

The formula used was $x/n \times 360°$ and was used to find the fraction of the sector of a circle representing an information. Where x is the numerical value of the number of respondent who provided favourable outcomes.

N is the total number of the respondents. Further the size of the sector representing any information will be converted to percentages as follows. $X/n \times 360° \times 100\%$ Where x^0 is the angle of the sector in the circle.

3.7 Limitation of the study

The researcher was faced with the following limitations;

Restricted to one district in sample schools due to limited resources like time and funds

Some schools were not visited in the allocated time due to extra co-curriculum activities that were taking place around the same time.

The researcher was able to overcome the limitations by collecting data which was greatly useful to the study.

CHAPTER FOUR

RESEARCH FINDINGS

4.0 Overview
This chapter presents finding of the research and the analysis.

4.1 Summary of performance in KSCE for four consecutive years. Since the results can easily be obtained from the Malindi district education office, the researcher came up with the following from district quality assurance officer Mr. Edward Maro.

The following rating was used for all school.

Table 1:4.0

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Points	12	11	10	9	8	7	6	5	4	3	2	1

Table 1:4.1 Likert scale ratings.

Strongly disagree	1
Disagree	2
Neutral	3
Agree	4
Strongly	5

Table 2:4.1.2 KCSE results for year 2007

School	Mean	Points
Marafa Secondary School	D-	2
Garashi Secondary School	E	1
Barani Secondary School	D	3
Maganni Secondary School	E	1
Ngala Girls Secondary School	D-	2
Kakoneni Secondary School	D-	2
Malindi Secondary School	C-	5
Gede Secondary School	C-	2

Source: field data, 2010

Table 3:4.1.3 KCSE results for year 2008

School	Mean	Points
Marafa Secondary School	D	3
Barani Secondary School	D	3
Garashi Secondary School	E	1
Maganni Secondary School	E	1
Kakoneni Secondary School	D-	2
Malindi Secondary School	C	6
Gede Secondary School	D-	2
Ngala Girls Secondary School	D-	2

Source: field data, 2010

Table 4:4.1.4 KCSE results for year 2009

School	Mean	Points
Marafa Secondary School	D-	2
Barani Secondary School	D+	4
Garashi Secondary School	E	1
Maganni Secondary School	E	1
Kakoneni Sec School	D-	2
Malindi Secondary School	C-	5
Gede Secondary School	D-	2
Ngala Girls Sec School	D	3

Source: field data, 2010

14

Table 6.4.2. Findings from Respondents

	Other ways	Increase of teachers	Remedial time	Good relationship	Math is hard	Not understand the teacher	Bad relationship between teacher and learner	Other reasons	Effect of teacher method on performance
;		12345	12345	12345	12345	12345	12345	12345	12345
ary		01345	5211015	432115	601415	01167	5421510	10210	01257
ıry		21347	62139	10483	10257	20394	32017	24567	23568
ry		10726	137610	23676	23079	40138	62013	53782	01349
y		03456	03456	10235	10258	50239	53105	32524	21039
i y		92314	71345	52345	20399	41037	62425	10457	52037
/		23547	20365	17897	30189	52039	12068	76012	41032
.		01239	31325	13456	20187	61239	10376	40345	15436
ls		32345	47829	32071	30189	12351	23547	01345	42397

4.2 Data Analysis

After the researcher obtained and recorded the raw data, the fractions of responses were converted to percentages to obtain the findings in a simpler form

Table 8:4.3.1 Response for ways performance in mathematics can be improved in percentage

School	Increase of teaching		Remedial time		Good relationship in class		others	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Marafa Secondary School	53	45	25	23	13	18	08	14
Barani Secondary School	54	38	19	23	23	18	04	23
Garashi Secondary School	60	32	17	24	13	28	10	16
Maganni Secondary School	33	43	60	21	27	32	23	04
Kakoneni Secondary School	-	52	-	20	-	25	05	03
Malindi Secondary School	31	-	39	-	10	-	07	-
Gede Secondary School	24	-	39	-	10	-	07	-
Ngala Girls Secondary School	-	31	-	35	-	22	-	07
Average	**46**	**40**	**33**	**24**	**19**	**24**	**09**	**11**

Source: Field data

Table 9:4.3.2 Response for why students fail mathematics in percentage

School	Increase of teaching		Remedial time		Good relationship in class		others	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Marafa Secondary School	60	68	16	05	21	12	03	11
Barani Secondary School	64	52	21	35	14	05	01	08
Garashi Secondary School	53	40	23	24	10	20	10	16
Maganni Secondary School	50	48	20	18	23	10	07	26
Kakoneni Secondary School	-	61	-	16	-	17	-	07
Malindi Secondary School	42	-	22	-	26	-	05	-
Gede Secondary School	48	-	24	-	14	-	14	-
Ngala Girls Secondary School	-	48	-	17	-	26	-	09
Average	**53**	**52**	**21**	**17**	**18**	**15**	**07**	**13**

Source: Field data

Table 12:4.3.5 Response on contribution of teachers delivery method

School	yes		No	
	Boys	Girls	Boys	Girls
Marafa Secondary School	46	71	54	29
Barani Secondary School	67	58	33	42
Garashi Secondary School	57	92	43	08
Maganni Secondary School	50	52	50	48
Kakoneni Secondary School	-	46	-	54
Malindi Secondary School	46	-	54	-
Gede Secondary School	59	-	41	-
Ngala Girls Secondary School	-	59	-	41
Average	**54**	**63**	**46**	**37**

Source: Field data

17

From table 4.3.1, the students cited ways to improve performance in mathematics thus include increasing the teacher student ratio, there is need for remedial time for student who are slow learners and the did not forget to mention the need for good relationship between the subject teacher and the students. However, some students mentioned the need for them to acquire the required positive attitude in order to excel in mathematics.

On average 46% of boys and 40% of girls emphasized the need for increase in the teacher student ratio 24% of girl as well as 33% of boys emphasized the need for remedial time which in their opinion will be of great help in improving their performance in mathematics. The number of girls and boys who thought that good relationship between the teachers and should be improved 24% and 19% respectively. The rest of the students cited other reasons.

In Table 4.3.2, 53% of boys and 52% of girls reported that mathematics is a hard subject and therefore the poor performance.

21% and 17% of boys and girls respectively indicated that failing was due to not 18% and 15% of boys and girls respective did not forget to mention the teacher and student relationship factors. They insisted there should be a good relationship between the subject teacher and the student so that maximum learning can take place.

It was evident in table 4.3.5 that girls are affected negatively more than boys by the method that the uses to deliver his content to learners. The percentage obtained were 54% for boys 63% for girls. 46% boys and 37% of girls disagreed with the fourth idea.

The research represented the data using pie-charts as follows

18

Pie-Chart 1: 4.4.1 Responses on ways mathematics performance can be improved.

Boys

8%

29%

46%

17%

- Increase in teachers number
- Good relationship between teacher and student
- Remedial time for teaching
- Others

Girls

11%

24%

41%

24%
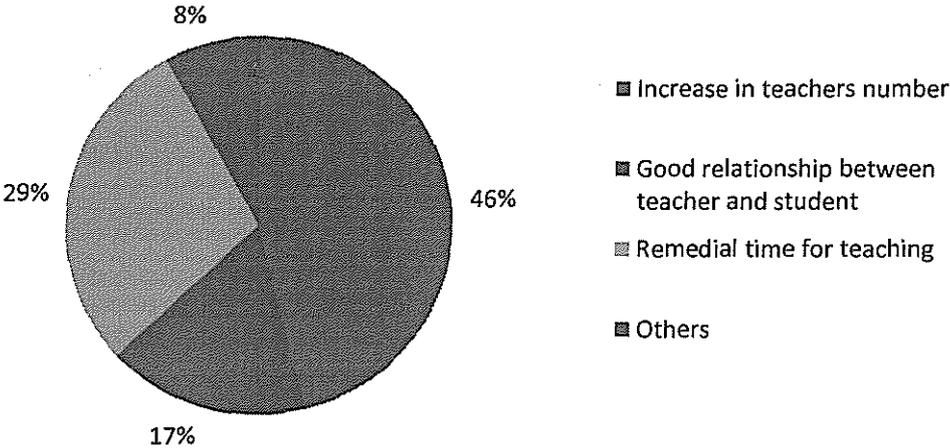
- Increase in teachers number
- Good relationship between teacher and student
- remedial time for teaching
- Others
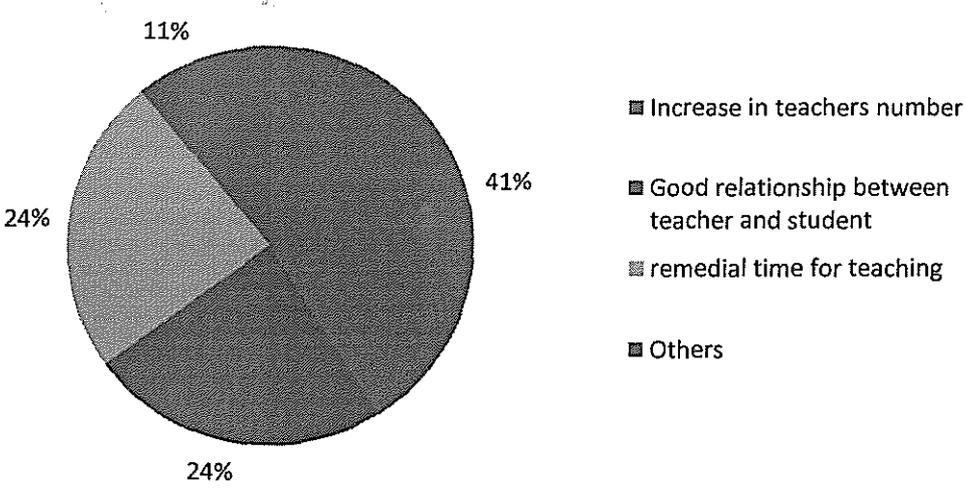
Pie-Chart 1: 4.4.1 Responses for why student fail mathematics

Boys

7%

18%

21%

54%

- It was hard
- Did not understand the teacher
- Poor relationship between learner and teacher
- Others

Girls

13%

15%

18%

54%
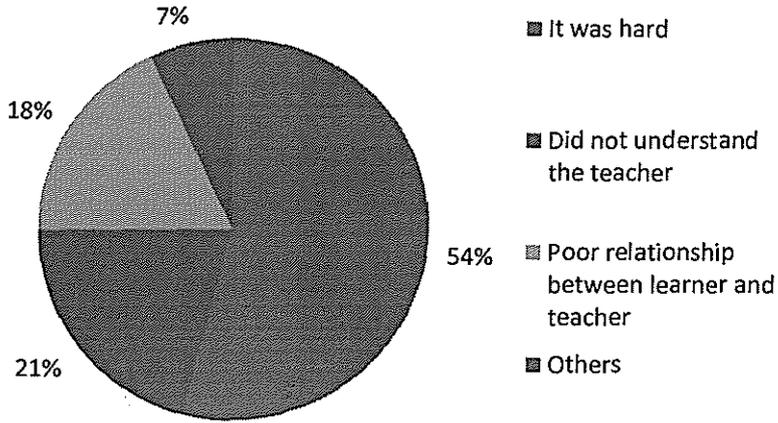
- It was hard
- Did not understand the teacher
- Poor relationship between learner and teacher
- Others
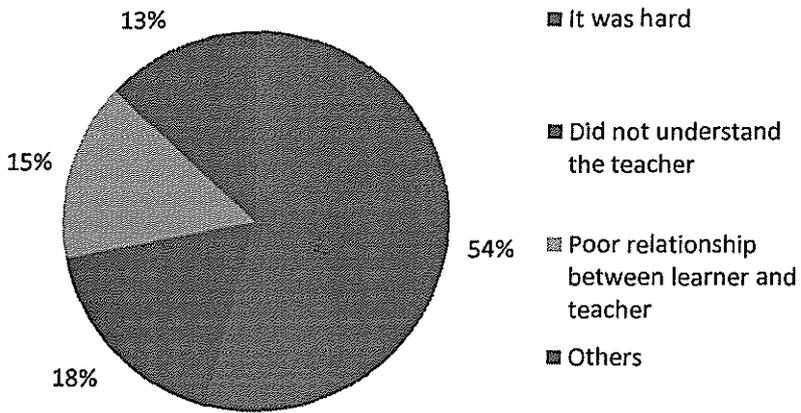
Pie-Chart 1: 4.4.5

Responses on teachers' methods of teaching

Boys

46%

54%

- No
- Yes

Girls

35%

65%

- No
- Yes
-
-
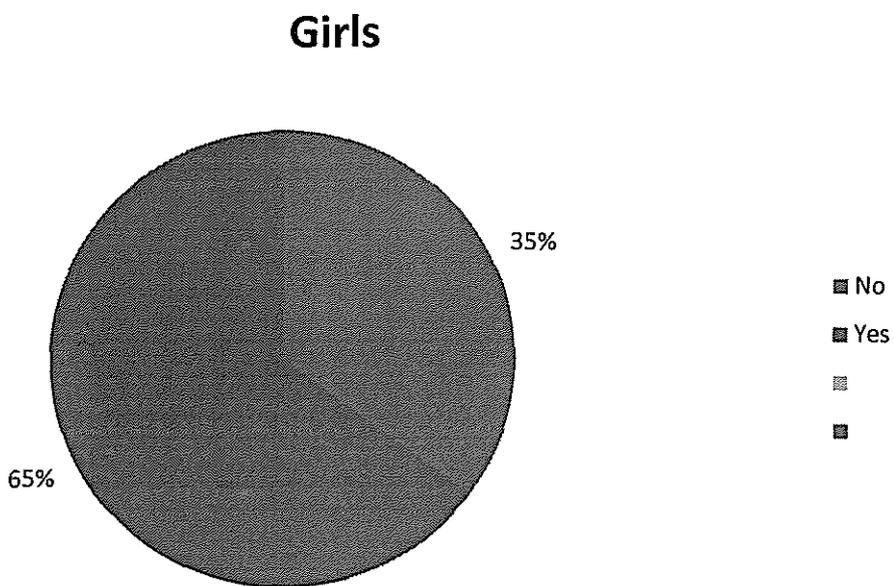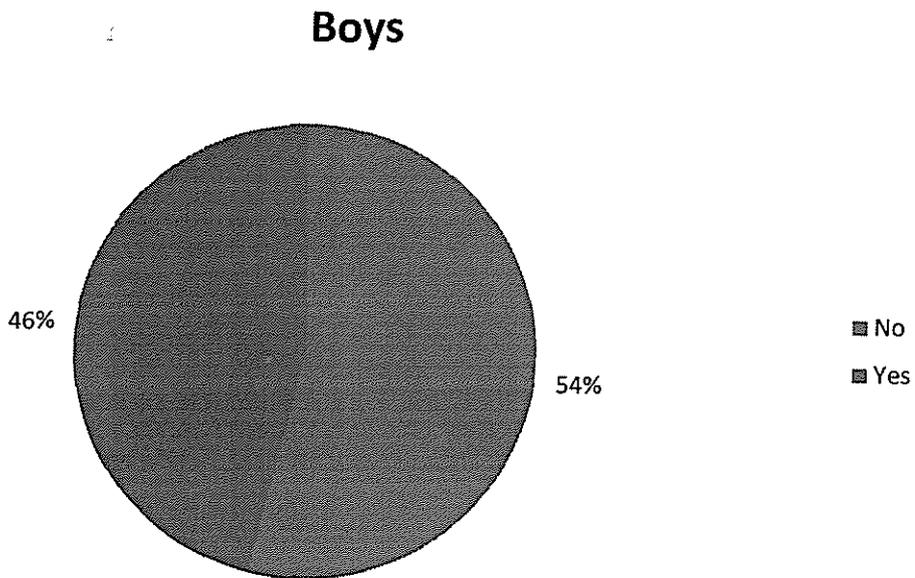
4.3. Review

The chapter captured the core factors of the research study which includes data analysis of both descriptive and numerical data collected from sampled secondary schools.

The chapter tried answer research questions and mentioned the possible factors affecting performance in mathematics

The next chapter discusses the finding, draws conclusions and makes recommendations for the study.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.0 Overview
This chapter presents summary, conclusions an d recommendations. These recommendations were realized according to how the researcher found them.

5.1 Summary
The main aim of the study was to investigate the factors leading to poor performance of mathematics in Malindi district secondary schools, cost province, Kenya. The alarming performance made the researcher to develop an interest on finding out the factors affecting it. The researcher also cited measles to be taken into account to improve the performance.

The research found out that among other factors affecting the performance, the following were outstanding: lack of enough teachers in secondary schools, negative attitude by the students toward mathematics, negative influence by the parents, poor methodology used by teachers when delivering the subject and the school set up. The need for remedial time is a clear indication of a wide mathematic syllabus which could not be covered within the stipulated time. One possible explanation for poor performance in mathematics is existence of negative attitude in learners towards mathematics.

The research agrees to Kamau (1998) assertion that learners have negative attitude toward mathematics and science in general.

Other possible explanations are related to the curriculum. The research fund out that 85% of the teaching force does not cover the syllabus within the stipulated time.

23

There are quite a number of reasons such as over involvement of teaching force in co-curriculum activities which is a requirement by ministry of Education in Kenyan Secondary Schools.

5.2 Conclusions

The following are some of the findings arrived at by the researcher: Lack of positive attitude in learners hinder understanding of mathematical concepts. The negative attitude is brought about by the following reasons.

1) Lack of proper communication between the teacher and the learner.

2) Negative attitude passed by parents to learners directly or indirectly.

3) Lack of proper environment for proper learning: schools situated near areas known for drug abuse cases.

4) Wide curriculum that is a challenge to the learner in understanding all the concepts in it within a short time.

5) Use of wrong methods in teaching concepts that are already challenging to learning.

Lack of reference material another major reason that contributes to poor performance in secondary schools. Use of few textbooks result to the teaching becoming teacher centered and therefore boring to learners.

5.3 Recommendations

The following are the researcher's recommendations The government should employ enough number of teachers so that the teacher student's ratio can be increase. The increase in student teacher ratio will result to learner and teachers having enough time to interact with the learners. This will result to good relationship between teacher and the learner and therefore reducing chances of negative attitude toward mathematics existing.

24

The government should equip the secondary schools with sufficient different types of reference mathematics books. This will help in cubing negative attitude in learners.

During parents/ teachers meetings, the parents should be requested to encourage their children to study mathematics.

The secondary schools in Malindi should have a plan for career guidance in schools. The students should be made to understand the importance of mathematics in their lives.

The government should integrate the study of mathematics with computer training to equip learners with more practical skills and boost the learner's attitude towards mathematics.

In the course of study, the researcher found out that higher percentage of boys have positive attitude to mathematics than girls. The researcher advocates for more research to ding out where the variation of performance in boys and girls come form in mathematics.

REFERENCES

Simon Schuster (1991) 1st edition, Website's New World Dictionary for Explorers of Language Cleveland.

Robert E.S (2003) 7th edition, Johns Hopkins University, Educational Psychology, Theory and Practice. Boston

R.M, Marcy D Peter G.R (1996)2nd edition, A Simon & Schuster Company, Educational Psychology, A Learning Centered Approach to Classroom Practice United Stated of America.

Sudhir Kumar (2003), 2nd edition, Teaching of Mathematics Daryaganji.

Kamau, S.W (1998) A study of the factors causing poor performance in secondary mathematic and science Nairobi: Nairobi University printer.

Kinli.D. (1996) Factors influencing the performance of mathematics and science among secondary students, Nairobi: KIE.

Sutton, C.(1981) Communication in the classroom Washington, DC; NCES.

APPENDICES

APPENDIX A: Questionnaire for Secondary Students

I am a student of Kampala International University undertaking a study on 'EFFECTS OF ATTITUDE ON MATHEMATICS AND PERFORMANCE'. I kindly request you to answer the questions below. Your responses will be highly appreciated and your information shall be treated with utmost confidentially.

Section I   :   **Please fill in the following**

Gender   :

Age   :

School   :

Form   :

Section II: Tick appropriately in the following questions.

(1) Performance in mathematics can be improved by increasing teachers

Strongly Disagree [ ] Disagree [ ] Neutral [ ]

Agree [ ] Strongly Agree [ ]

(2) Performance in mathematics can be improved by creating remedial time

Strongly Disagree [ ] Disagree [ ] Neutral [ ]

Agree [ ] Strongly Agree [ ]

(3) Performance in mathematics can be improved by good relationship between teacher and learner

Strongly Disagree [ ] Disagree [ ] Neutral [ ]

Agree [ ] Strongly Agree [ ]

(4) There are other ways performance in mathematics can be improve

Strongly Disagree [ ] Disagree [ ] Neutral [ ]

Agree [ ] Strongly Agree [ ]

(5) Students fail in mathematics fail in mathematics because it is hard?

Strongly Disagree [ ] Disagree [ ] Neutral [ ]

Agree [ ] Strongly Agree [ ]

(6) Students fail in mathematics because of not understanding the teacher

Strongly Disagree ☐   Disagree ☐   Neutral ☐

Agree ☐   Strongly Agree ☐

(7) Students fail in mathematics because of poor relationship between teacher and learner.

Strongly Disagree ☐   Disagree ☐   Neutral ☐

Agree ☐   Strongly Agree ☐

(8) There are other reasons why student fail in mathematics.

Strongly Disagree ☐   Disagree ☐   Neutral ☐

Agree ☐   Strongly Agree ☐

(9) The way a teacher teachers affect your performance.

Strongly Disagree ☐   Disagree ☐   Neutral ☐

Agree ☐   Strongly Agree ☐

BUDGET

S/NO.	DESCRIPTION OF ITEM	COST (Kshs)
1.	Travelling expenses	3,600
2.	Stationary expenses	1,500
3.	Photocopying	1,500
4.	Production of research report	3,000
5.	Secretarial services	2,000

CURRICULUM VITAE

Name   :   Mwangi Caroline Wambui

Reg no   :   BED/21039/81/DF

Faculty   :   Education

Course   :   BED Science

Subjects   :   Mathematics Chemistry, Education

Year   :   2010.