A STUDY OF POOR AND DECLINING PERFORMANCE IN MATHEMATICS AMONG PUBLIC PRIMARY SCHOOL PUPILS IN GATHENJE ZONE, OLJORO-OROK DIVISION OF NYANDARUA NORTH DISTRICT

BY

MARGARET .N. WAITITU

B.E.D/ 18228/71/DF

A RESEARCH PROPOSAL PRESENTED TO THE INSTITUTE OF OPEN AND DISTANCE LEARNING IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD DEGREE BACHELOR OF EDUCATION IN EARLY CHILDHOOD AND PRIMARY EDUCATION KAMPALA INTERNATIONAL UNIVERSITY

NOVEMBER, 2009

DECLARATION

I, declare that this project is my original work and has never been presented to any other university for award of any academic certificate or anything similar to such. I solemnly bear and stand to correct any inconsistency.

Signature
.....Waititu.....

MARGARET .N. WAITITU

BED/ 18228/71/DF

DATE 21/8/2009.....

APPROVAL

This research report is submitted for examination with my approval as a University Supervisor.

Signed

.....

MR.WOMUZUMBU MOSES

SUPERVISOR

DATE:

.....21/08/2009.....

DEDICATION

This work is affectionately dedicated to my beloved husband, daughters Winnie and Sheila and my dear sons Waitutu and Kariuki for their support patience and understanding during the period of study.

ACKNOWLEDGMENT

First of all I give thanks to the almighty God for his mercy and grace granted to me during this time of my degree course and through this research project

I would like to thank my supervisor Mr. Womuzumbu Moses for being there for me whenever I needed him and also offering his professional advice where necessary.

I would like also to thank my family members and Mr Fred for the prayers towards the success of my course.

Am also grateful to the full faculty of Kampala International University for mounting all the directives, procedures and methods of carrying out this research project

I would also like to thank the respondents who returned the questionnaires and those who were cooperative to me.

May God bless you all

TABLE OF CONTENT

LIST OF TABLES

DEFINITION OF TERMS

The following terms were used in the study therefore need to be defined.

Attitude - Individuals predisposition to a stimuli

Concritize - Arbitrary concepts being linked to real situations

Solicite - Gather information from relevant stakeholders

Mathematics - Philosophy of number. A language, which is concise. precise a and full of symbolism

ABSTRACT

The importance of mathematics in life of an individual, community, nation and the world at large cannot be underscored. Mathematics is a tool that is used to solve problems encountered in life. The subject is pillar in Scientific and Technological development in any nation in the world. More so it is an integrating factor in many subjects learnt by a pupil in school e.g. social studies, Religious Education, science just to name a few. Therefore, poor and declining performance in mathematics is a concern to the individual, society, nation and even the world at large. It is in view of the pivotal role of mathematics that triggered curiosity to study and identify the factors that have contributed to poor and declining performance in mathematics in Gathanje zone and consequently identify probable solutions and thus outline recommendations. In order to get the required information two types of instruments were developed and used to collect data. One type is questionnaire be filled by teachers and the other by pupils. The questionnaires were self administered in the six selected schools. The data collected was analysed using percentages for quantifiable responses. The data provided by the respondents was extracted and discussed as per item. The teachers teaching methods and pupils attitudes were discussed as well as their opinions towards improving teaching learning process. Most of the responses were analysed in table form. It was found that most of mathematics teachers rarely use any other resources apart from the chalkboard and they require the whole class to concentrate on what they write on the chalkboard. Most of the pupils on the other hand had negative attitude towards mathematics emanating from parents especially the mothers and the peers. It was found that the schools have substantial commercial resources provided through Free Primary Education Programme but the initiative of teachers to improvise supplementary ones was minimal. However it is believed that seminars workshops, insets and induction courses for teachers on teaching methodology would arouse the desire to make Teaching and Learning child centred and thus induce motivation and interest to the learners. Parents also need to be counselled to desist from instilling fear of mathematics to their children.

CHAPTER ONE; INTRODUCTION

1.0 Background information

It was noted that performance in K.C.P.E mathematics from the year 2001 through to 2006 maintained a generally low and declining mean score in the overall performance in public primary schools in Gathanje zone. Ol Joro orok Division of Nvandarua North District.

Table 1 showing the zonal mean score from 2001-2006

Year	2001	2002	2003	2004	2005	2006
Mean score	45.71	44.93	43.81	46.82	44.07	43.41

Source: K.C.P.E

From the table there was a gradual decline in the K.C.P.E mean grade in mathematics from year to 2001 to 2003 accompanied by unpredictable rise in 2004 and the gradual decline once again in the subsequent years.

1.1 Statement of the problem

The study aimed at investigating the causes of poor and declining performance in mathematics among primary school pupils in Gathanje Zone, Ol Joro orok Division of Nyandarua North District.

After establishing the problem, the study has offered necessary recommendations in view of improving the Teaching learning process of mathematics and as a result uplift the standards of mathematics in Gathanje Zone, Ol Joro orok Division, Nyandarua North District and consequently nationally.

1.2 Purpose of the study

The purpose of the study was to investigate factors that cause poor and declining performance in mathematics among primary schools in Gathanje zone, Ol Joro orok Division of Nyandarua North District. And consequently solicit from the relevant stakeholders the appropriate measures necessary to alleviate the alarming situation.

1.3 Objectives of the study

(i) Investigate the Teaching Learning methods commonly used by primary mathematics Teachers in the zone under study.

(ii) Investigate the availability and adequacy of necessary resources and facilities for teaching mathematics in the primary schools.

(iii)Investigate the influence induced to pupils by their parents and other members of the society concerning the build up of their attitudes towards mathematics.

1.4 Research Questions

Two types of Questionnaire were used as tools to solicit information from core stakeholders in the Teaching and Learning of mathematics at primary level. One type was administered to the primary mathematics teachers while the other was administered to randomly selected classes six, seven and Eight pupils from the sampled schools.

1.5 Significance of the Study

The study revealed necessary measures that would be undertaken in order to improve and revitalise performance in mathematics at primary school level in
Gathanje zone. Through the suggested solutions and recommendations, it is expected individual children and the general children fraternity undertaking study of mathematics at primary level will be assisted to embrace the study positively.
The consequences of improved performance in mathematics at primary level will influence more learners to undertake mathematics at higher levels thus develop scientific and Technological oriented generation that would enhance to help accomplish the national vision 2030 (Kenya will be an industrialized nation).

Parents and the society are advised on the role to play in guiding and counselling their primary school children on the vitality of mathematics in problem solving.The study was conducted in six of the fifteen public primary schools in Gathanje zone and mainly focused on primary mathematics teaching methods and the attitude of the pupils towards the subject. The study also looked at the availability of necessary resources and facilities and the attitudinal influence by parents and society to the pupils.

1.7 Limitations of the study

Weather: During the study it was too rainy making. Transport and communication was too difficult. This made it impossible to include those schools at the far end (Ngano, Kwa Lord and Kahuruko) to be included in the sample under study.

Time: There was limited time to carryout the Research thoroughly well using a sample quite representative of the population.

Finance: The Research called for substantial amount of money for Transport, communication, entertainment, typesetting the proposal and the research report among others

Workload: The Research was undertaken at the same time with the project. The project demanded writing the project proposal, carrying out the project and writing the project report. The work was too much bearing in mind the teacher had other subject to teach at the same time.

1.8 Assumptions of the study

i) That teachers teaching mathematics at primary level do not use child- centred methods during Teaching and Learning of mathematics.

ii) That parents and peers influence the development of negative attitude towards mathematics among primary school pupils.

iii) That the sample taken is somehow representative of the pupils' population in the zone.

iv) That the study can be used to make an inference for the zone.Division, District, Province and the nation concerning mathematics Teaching and Learning at primary school level.

CHAPTER TWO; LITERATURE REVIEW

2.0 Introduction

The study of work done by other authorities pertaining to problems affecting teaching, learning and performance in mathematics was reviewed to give an insight of what stand know in this area of study

2.2 The importance of mathematics

Otieno, A (1988) defined mathematics simply as "the philosophy of numbers or working with numbers by applying signs which have got condensed meaning such as +, -, ÷ and x.". Thus the common elements in the definition of mathematics include.

i) Mathematics deals with numbers

ii) Mathematics deals with rules and theories

iii) Mathematics is a logical and systematic subject.

Thus mathematics is more than mere calculations and computations. Therefore teaching mathematics goes beyond making pupils competent in calculations. The general aims of Teaching maths involve developing basic skills in dealing with numbers. Developing the ability to think critically in school and outside,Developing the ability to communicate precisely in symbolic form. Developing the aesthetic appreciation of the environment among' others. In the introduction of his book Dr. A.O Kalejaiye (1998) wrote "one main objective of the recent reforms in mathematical education in Nigeria is to get rid of the un necessarily formal and dogmatic character of mathematics to help children learn about numbers by discovering their properties and by building operations tables before memorizing them. And to develop a meaningful learning algorithm without using unduly and unrealistic numbers". This is useful: -

i) To provide the child with the basic manipulative skills useful in ordinary life.

ii) To provide the child with the basic skills in logical thinking.

iii) To introduce the child with the necessary basic skills in numeracy.

iv)To expose him to ways of using those skills to solve his problems.

v) To introduce the child to the basic concepts of spatial relationships.

vi) To introduce the child to the basics of record keeping and all aspects of accounting.

Arising from the perceived aims and objectives mathematics extends its antennae into various disciplines. Ash Worthy (1981) commented " mathematics is necessary in the study of most

of the other science subjects". (P23). Every commission that has worked out the revision of mathematics curriculum has stated certain mathematic needs rising and Johnson (1975) noted some of these needs as: contribute understanding of natural phenomena, used to investigate interpret and make decisions in human affairs, contribute to cultural heritage (aesthetic value) understand and learn to communicate ideas correctly and precisely to others, develop appreciation and enjoyment of the subject itself and realization of its role in development of science and technology for civilization.

2.3 Facilities and resources in teaching primary mathematics

Primary school children are at the age of concrete operation where they learn by working with physical objects. Facilities and resources (Teaching- learning Aids) enable them to understand basic number relationships, the idea of place value, the interrelationship of the four basic operations of addition, subtraction, multiplication and division, the geometrical properties of plane and solid shapes, the various uses of numbers in real life. Dr. Kalejaiye A.O (1998) quoted some of the teaching aids that can be used in teaching primary school mathematics as:-

Physical Objects: includes sticks, pencils, bottlers, bottle tops, seeds, fruits wooden cubes, sugen boxes, boxers of different sizes, milk tins, oval tin or Bournvita tins, coins, plastics or rubber, balls of different sizes etc.

Teacher made aids. These included: Number patterns, one to hundred square charts. Cardboard geometric models, skeleton models of geometric shapes, Frame works of place shapes, hollow cubes, geoboard (pin boarder nail board)

Commercial produced aids. These include: Structural patterns, tape measure

Geometrical instruments, weighing balance, teaching aids for capacity - I litre jug., spoon

Other teaching aids included Chalkboard and text books

Mukwa C.W (July 1986) emphasized the importance of training teachers to develop a clear and in depth understanding of educational media and to prepare them to use the knowledge, competencies and skills acquired to practice the design, production and use local and cheap but effective teaching and learning aids while teaching. Every teacher in primary school need to know the teaching aids available to him, how and where to obtain them and how to select them, the necessary equipment matching teaching and operating and maintaining such equipments and what to do in case of mechanical failure.

The text attempts-to-equip the teacher with the know how of confronting adjusting and eventually contain the challenge. The skills discussed and the required standard include.

Lettering and illustration

The teacher should write legible and large letters using chalk and felt pen, draw and label illustrations neatly by free hand on the chalkboards manila paper or newsprint paper.

Visual literacy skills involve picture and drawings

The teacher should state the principal steps, necessary for visual literacy training, design with the help of pictures of learning experience that encourage visual sequencing of ideas; devise and implement a simple but effective system of storing and retrieval of flat pictures. And draw pictures and arrange them in set to constitute a plan for learning experiences in one of their teaching subjects at a given class level.

2.4 Pupils motivation and attitude towards mathematics

Cockcraft (1981:4) stated "The problem of learning mathematics as a means of communication are not the same as those of learning to use ones nature language.

Mathematics does not come naturally like the native language, it is not used constantly but it must be learned and practised". It is therefore the duty of the teachers, parents and the society to enhance mathematics learning. This can be done through motivating learners in order to create and sustain interest to learn mathematics. Consequently this will minimise the widespread fear that mathematics is a difficult subject. Pupils should be lured to develop positive attitudes towards mathematics.

2.5 Parents conception towards mathematics

Most of the parents especially the mothers believe that mathematics is a difficult subject. Since the mothers interact most with the children, they unaware induce the belief to the children.

2.6 Environmental Factors

Society and peer influence plays a great role in influencing the individual child towards conception of mathematical structures. Enrolment, sitting arrangements lighting and ventilation in the classroom are other important environmental factors that determine teaching and learning of mathematics. The large the class the short the teacher pupil contact time which is important in order to assist individual children.

2.7 Teacher preparation and teaching and learning methods

A well prepared teacher of mathematics is systematic in his teaching and identify early in advance the difficulty part of the lesson and thus employ teaching and learning methods appropriate to the content. Teaching practice management committee of the faculty of

education, Moi University (May 1990) wrote that Mathematics lesson objectives must be stated in observable and measurable terms and must be achievable within the allocated time. Therefore it is necessary to employ teaching and learning methods that are child centred. Evaluation of pupils' progress in the course of the lesson is necessary (formative evaluation). Its successfulness is the indication of the success of teaching learning process.

CHAPTER THREE; METHODOLOGY

3.1 Introduction

To determine the relationship between teaching-learning methods commonly employed by teachers, the researcher worked out percentage of quantifiable variables while the five point Likert scale was used to determine the opinion of the respondent for the un-quantifiable variables. The sample was derived from a population of 6723 pupils in 15 public primary schools in Gathanje zone, Ol Joro Orok Division of Nyandarua North District. Six schools were randomly picked which comprised of 40% of all public primary schools in the zone. An average of 40% of pupils in class 6, 7 and 8 in each school formed the sample of the elements interviewed. Two questionnaires were used to solicit the responses from the sample elements. The information from the respondents was analysed by tallying and the result tabulated. The tabular information was used to derive the conclusion after computing percentage and consequently the recommendations.

3.2 Population

The total number of pupils learning mathematics in primary schools in Gathanje Zone were 6723.

3.3 The sample was drawn from standard six, seven and eight pupils in six sampled schools stratified in two sub-zones.

Ngano sub zone

1. Mwenje Primary School
2. Kamukunji Primary School
3. Gathanji Primary School

Silibwet sub zone

4. Muungano Primary School
5. Mahua Primary School
6. Igwamiti Primary School

Table 2. Sample Description

School	No. of teachers teaching mathematics in classes 6,7 and 8	Total No. of pupils in classes 6-8	No. in the sample	%
1	8	291	35	12.02
2	5	187	22	11.76
3	2	107	11	10.28
4	7	233	25	10.73
5	3	98	11	11.22
6	3	159	16	11.16
Total	**28**	**1075**	**120**	**11.16**

Source; Field data 2009

3.4 Instrumentation

To get the required information about factors causing poor and declining performance in mathematics in public primary schools two types of questionnaires were developed and used to collect data. One of the questionnaires was for teachers and the other for pupils.

3.4.1 Pupils questionnaire

The questionnaire had several questions seeking the background information of the pupils' opinion on what help they get from parents and other relatives and close member. The questionnaires also required pupils to indicate what the aforesaid say concerning mathematics.

3.4.2 Teachers Questionnaire

The questionnaire sought information about teacher's sex, grade, academic qualification and experience. It also required them to give their opinions concerning the teaching and learning of mathematics at primary level. Statements were made on the five-point Likert scale of: Strongly Agree, Agree, Not Certain, Disagree and Strongly Disagree. There were open ended questions for the respondents to express their feelings concerning the remedy of the problems.

3.5 Data collection

The questionnaires were self administered to the respondents. A total of 120 pupils' questionnaires and 28 teachers' questionnaires were administered. In both categories the following number were received back. Pupils 109 and teachers 22.

3.6 Data analysis

The collected data was tallied, coded and analysed using percentages for quantifiable responses. Feeling attitude scale was drawn. All the data were tabulated and evaluated after which conclusions were established and recommendations highlighted.

CHAPTER FOUR; RESULTS AND DISCUSSION

4.1 Introduction

Quantifiable data obtained was analysed in form of percentages. While the qualitative data was assessed using the five - point Likert scale. This made it possible to draw conclusions.

4.2 Characteristics of primary mathematics teachers

Several characteristics of primary mathematics teachers were investigated. These included Sex of the mathematics teacher, academic/ professional qualifications of the teacher, teachers preparation and commonly used method of teaching mathematics, teachers' perception towards mathematics.

Table 4.2.1 Distribution of teachers by sex

Sex	No. of teachers from sampled schools	Percentage	No. that responded
Male	11	39.29%	9
Female	17	60.71%	13
Total	**28**	**100**	**22**

Source; Field data 2009

The respondent who complied were 78.57% of the administered questionnaires more female than male teachers teach mathematics. The percentage of female teaching mathematics was 60.71% against 59.29% for male.

4.2.2. Distribution of teachers by qualification / expressive

Academic qualification	P2	P1	DIP/SI	ATS	ATS III	ATS II	ATS I	Experience
C.P.E	-	-	-		-	-	-	%
K.C.S.E	1	10		6	-	-	-	77.27%
K.A.C.E	-	-	3	-	-	-	1	18.18%
							1	4.55%
Total	**1**	**10**		**9**			**1**	**100.00%**

Source; Field data 2009

The academic level of most of the teachers teaching mathematics was K.C.S.E 77.27% and most of them were P1 teachers.

Table 4.2.3. Teacher preparation and commonly used method of teaching

Sex	**Preparation schemes and lesson notes**			**Teaching methods**				
	Always	Sometimes	Rarely	Group discussion	Discovery	Classroom discussion	Lecture	Illustratic chalkboa
Male	2	6	1	1	-	2	-	6
Female	5	8	-	4	-	5	-	4
Total	17	14	1	5	-	7	-	10
Percentage	31.82%	63.64%	4.54%	22.73%	-	31.82 %	-	45.45%

Source; Field data 2009

From the above analysis it was noted that the highest percentage of teachers 63.64% prepares sometimes but not always.

On teaching and learning methods, the most commonly used is chalkboard illustration (45.45%).

4.4 Pupils perception towards mathematics

The pupils who participated had forwarded their responses were 109 out of 120. This was 90.83% and their response was as tabulated below.

Table 4.4 Teachers perception towards facilities and resources

	Statement	Strongly Agree		Agree		Uncertain		Disagree		Strongly Disagree	
		NO	%	NO	%	NO	%	NO	%	NO	%
1	Mathematics is enjoyable when we are given opportunity to investigate using teaching learning aids.	23	21.1%	37	33.94	41	37.61	5	4.59	3	2.75
2	I like mathematical activities carried outside the classroom.	47	43.12	59	54.13	3	2.75	-	-	-	-
3.	My parents say that mathematics is a difficult subject.	33	30.28	62	56.8	9	8.26	1	0.92		
4	I have heard other people saying that mathematics is difficult			67	61.47	35	32.11	4	3.67	2	1.83
5	Our teachers and parents always advice us on the careers requiring good performance mathematics.	-	-	8	7.34	29	26.61	70	64.2	2	1.83

4.5 Suggested solution given by pupils

Mathematics learning is enjoyable when learning using child-centred activities.

Most of the pupils suggested that they like mathematical activities carried outside the classroom.

Pupils have acquired negative attitude towards mathematics from parents, peers and other people in the society.

Teachers and parents do not take time to advice pupils the relevant fields where mathematics is applied.

CHAPTER FIVE; CONCLUSION AND RECOMMENDATION

5.1 Introduction

In this chapter the summary of the study conclusions and recommendations are briefly discussed.

5.2 Summary

In this research project, the researcher investigated the causes of poor and declining performance in mathematics among primary school pupils in Gathanje zone and offered solutions and recommendations to the identified problems. The researcher adopted case study design to carry out his research. The investigator employed purposive sampling to identify the elements of the sample representative to the population. Questionnaires were administered to the sample, which included both pupils and teachers. The study involved collection, recording and analysing of the obtained data. The respondents revealed some of the shortcomings which presumably when attended to would alleviate and improve the declining poor performance in mathematics at primary in Gathanje zone and elsewhere.

According to the findings, the following were identified as the causes of poor performance Negative attitudes of pupils towards mathematics due to Talk and Chalk commonly teaching method which is boring. Teachers' static approach towards the teaching of mathematics at primary level. Environmental influence both social and cultural environment. Laxity of teachers to solicit mathematics resources from the local environment. Deficiency in preparation for mathematics lessons by most mathematics teachers.

5.3 Conclusions

In view of the respondents' responses, the following conclusions were made.

Teachers teaching learning methods.Teachers teaching mathematics at primary level should employ variety of teaching learning strategies. The strategies should be mostly child-centred.

Acquisition of teaching learning facilities and resources. Most of the teaching, learning resources can be acquired through improvisation from the local environment and a few by purchasing.

Parents influence and the society. Parents and the society play a pivotal role in the development of their children's attitudes towards mathematics.

Pupils attitude towards mathematics. Most pupils showed negative attitude towards learning of mathematics because they lacked intrinsic motivation.

5.4 Recommendations

From the aforesaid conclusion, the following were the recommendations derived from the research

Teachers should diversify their teaching strategies to incorporate child centred methods. Therefore these teachers need to attend seminars, workshops, induction courses facilitated by educationists.

Teachers should be encouraged to improve most of the resources to teach mathematics from their local environment.

Mathematics panels at school levels should solicit resource common in the teaching of mathematics from the local environment and set up a mathematics resource bank.

Parents and other members of the society should be sensitised on the need to advice their children the importance of mathematics and refrain from inducing the belief that mathematics is a hard subject.

Teachers should start career guidance sessions so that enlighten pupils in importance of mathematics in most scientific and technological careers.

Further investigations can be done to investigate the increased number of female teachers teaching mathematics and the impact on the performance by the girl child and the boy child.

REFERENCES

Ashworth A.E (1981). The Teaching of Mathematics. Hodder and Stoughton London.

Cockcroft, W. H. (1981) Mathematics counts London HMSO.

Githua B. B. (Dr), (1991) Mathematics Projects for BED Student, Egerton University.

Otieno, A. Methods of Teaching Mathematics University of Nairobi.

Kalejaye A. O. (Dr) (1985) Teaching Primary Mathematics, University of Lagos.

Mukwa C. W. (July 1986) Design and use of Educational Media in Primary Education Kenyatta University.

Teaching Practice Management Committee (ay 1990) Teaching Practise Guide Moi University.

Kerich, A. W. (1990), Educational Communication and Technology Subject Methods, Kenyatta University.

Jomo Kenyatta Foundation (2003), Primary Mathematics Teachers Book 6, J. K. F.

Ngugi G. etal. (2004) Lets learn Mathematics Teachers Book 7, KLB.

Jomo Kenyatta Foundation (2005, Primary Mathematics Teachers Book 8. J.K.F.

APPENDIX A; QUESTIONNAIRE FOR MATHEMATICS TEACHERS

Please put a tick in the box against the most appropriate item in your opinion.

Do not write your name anywhere in this questionnaire. The information given will be confidentially safeguarded.

1. Sex Male ☐ Female ☐
2. Academic qualification

   C.P.E ☐ K.C.S.E ☐ K.A.C.E ☐

   BED ☐ Others Specify _____

3. Teaching experience

   0 – 3 years ☐ 3 –6 years ☐ 7 – 10 years ☐

4. Number of lessons you teach per week.

   Less than 20 ☐ Between 21 –30 ☐ Above 30

PART II

Give your opinion or feeling on the following

5. What is the general attitude of your pupils towards mathematics

   Very interested ☐ Interested ☐

   Fairly Interested ☐ Not interested ☐

6. What is the general performance of your pupils in mathematics

   Excellent ☐ very good ☐ good ☐

   Above 81% 70-80 60 –69

   Fair ☐ Poor ☐ very poor ☐

   50 – 59 40 – 49 Below 40

7. Tick your opinion concerning the statements given

   SA – Strongly agree A – Agree UC – Uncertain

   D – Disagree SD – Strongly Disagree

	Statement	SA		A		UC		D		SD	
1	Availability of facilities and resources determine the mathematics teaching learning methods to be used.										
2	Resources facilitate the lesson to understood easily										
3.	Most of resources in mathematics can only be obtained by purchasers.										
4	Most mathematical resources can be improvised from the local environment.										
5	The mathematical panel can be useful in preparing a mathematics resource bank in the school										

8. List the problems you may have encountered while teaching primary mathematics.

   _____

   _____

9. What solutions can you suggest for these problems to make mathematics teaching and learning effective and successful? Please list the solutions?

   _____

   _____

10. Please give suggestions/ comments about the mathematics teaching methods appropriate for effective learning of mathematics at primary level.

    _____

    _____

    _____

    _____

Thank you for your kind response.

APPENDIX B; QUESTIONNAIRE FOR PUPILS

Do not write your name on this questionnaire

PART I: Background information (Tick)

1. Sex Male ☐ Female ☐
2. Do your parents encourage you to do mathematics at home?

   Yes ☐ No ☐

3. Does one of your parents, relative or friend help you to solve difficult mathematical problems?

   Yes ☐ No ☐

4. Put a tick to show your opinion on the following statements

   SA – Strongly agree A – Agree

   UC – Uncertain D – Disagree

   SD – Strongly Disagree

	Statement	**SA**		**A**		**UC**		**D**		**SD**	
1	Mathematics is enjoyable when we are given opportunity to investigate using teaching learning aids.										
2	I like mathematical activities carried outside the classroom.										
3.	My parents say that mathematics is a difficult subject.										
4	I have heard other people saying that mathematics is difficult										
5	Our teachers and parents always advice us on the careers requiring good performance mathematics.										

Thank you for giving your opinion