

**TO PREDICT THE CAUSES OF POOR PERFORMANCE OF
MATHEMATICS IN SECONDARY SCHOOLS IN
BUGAHYA COUNTY IN HOIMA
DISTRICT**

BY

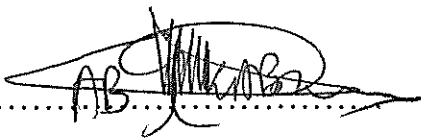
**KIIZA ABDULATIFU
BED /9164/51/DU**

**A RESEARCH REPORT SUBMITTED IN PARTIALFULFILLMENT
FOR THE REQUIREMENT FOR THE AWARD OF BACHELOR'S
DEGREE IN EDUCATION OF KAMPALA
INTERNATIONAL UNIVERSITY**

DECEMBER, 2007

DECLARATION

I Kiiza Abdulatifu, declare that this is my original work and has never been submitted to any University or any institution for any award.


Signed 

Date:

**KIIZA ABDULATIFU
(RESEARCHER)**

APPROVAL

This research report has been carried out under my Supervision as University Supervisor. It is ready for submission for the award of a Bachelor of Degree in Education of Kampala international University (KIU)

Signed.....

Date: .....

**MR. KAMAGARA EDISON
(SUPERVISOR)**

DEDICATION

I dedicate this work to my mother Kiiza Zaliika of Hoima District. The dedication is for her struggle in nurturing me up to this stage I can now stand. Independently. I also dedicate to my supervise Mr. Kamagara who from time to time have been guiding me in order to produce a sound research book and also another dedication goes to my wife Mrs Kaganzi Saundah and my children Faruk, Kirungi Muruta, Boonabaana Sudati and Nasiiba Kusiima, who also were sympathetic and tolerant to me until I came out to write this research book.

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- All people who assisted me in obtain the required information pertaining my research here and there, are equally acknowledged among them includes Miss Atugonza Daphine of Kigoroby MP /S.

There were other people whose contributions made my success significance, the list is endless. Although, I cannot mention them on this leaf. Honestly appreciate their co-operation and commended them for their in put please keep up the spirit.

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ABSTRACT

There is so far evidence to predict the causes of poor performance mounted in different subjects at different levels in secondary schools in different parts of Uganda.

However no documentary evidences has been seen to explain in the courses of poor performances of mathematics at 'O' level in Bugahya county in Hoima District. The independent variables ^{studied} were head-teachers, mathematics teachers and students of 'O' level (S1-S4) and these three groups were studied in details since they could be manipulated.

The study took place in Bugahya county in Hoima in the few selected secondary schools like Bwikya Secondary Schools, St. Thomas More Pan African Secondary School and Standard and the study was by use of questionnaires.

In the course of study, it was found that poor performance of mathematics was much attributed by the administration, than the student and finally the mathematics teachers. To alleviate the problem of poor performance of mathematics there is a need for head teachers, ~~provide~~ ^{provide} teaching materials / carry supervision, teachers carry appropriate methods of teaching and student behave well and avoid absenteeism.

CHAPTER ONE

BACK GROUND OF THE STUDY

1.0 Introduction:

The Mathematics concepts (ideas) began as early as 15th in Western Europe and later the ideal spread to Africa. The pre-Historic human beings probably learned how to count at least up to ten in the figures. The first theory of Mathematics was led to be thale of medilus in 850 be who is believed to have proposed the first theory in the plane geometry and later simplified as the pythogras in Geometry as recognized by many Greeks and later Alexandria forward the third and fourth theory which involves the present decimals, numerals, bases and Hindu-Arabic which reached Europe from 100 AD from an Arab mathematician in the middle East called Khwarism.

The modern mathematics have become more diverse and each subject is divided into several mathematical units (chapter) for example Geometrical Arithmetic's, Algebra, Trigonometry, mechanics, statistics, numerical analysis and calculas to mention a few. The logarithm was invented by Jobunapier, Calculus by Sir Isaac Newtons and the probability theory was invented by Balise Pascal and Pierred.

The main focus of my study was the secondary school curriculum. The curriculum of secondary school is made up of a variety of subject which includes:-

English, History, Mathematics, Biology, Chemistry, Physics, Geography, Agriculture, RE, music and etc. My main concern is mathematics since it is core subject. It is used taught under light supervision with low motivation to an extend that student could even after developing a bad attitude towards it.

Most teachers and learners assume that mathematics is simply a mere calculation of figures and especially non mathematician developed a bad attitude even before practicing it.

Mathematics is a practical subject and needs much foundation as it continue to exists. The Government of Uganda in conjunction with the national curriculum development center (NCDC). The current secondary school curriculum has made mathematics compulsory and if a student fail it no certificate (UCE) is to be awarded to him and not even allowed to pause higher studies in post secondary or tertiary college.

Mathematics is worst done simply because the student have bad attitude towards it and sometimes they lack back ground (foundation) even those who take it at higher level. The time at which the subject is exposed is little and therefore lack enough practice to the subject and this leads to poor performance. There are few specialists in mathematics and this has given me courage to look into the problems that causes poor performance in mathematics in the secondary schools in Bugahya county in Hoima District and this has been due to poor methods of teaching.

Poor performance in mathematics in most schools in Hoima District in general and Bugahya county have become a concern of teachers, Tutors, Professors, Government and the mathematics lovers especially in “O level, “A” level, colleges and vocational Training Institution. You find in the higher level of learning, the subject has few student.

Given the above reasons which were advanced above, the researcher investigated the causes of poor performance of mathematics in secondary schools in Bugahya county in Hoima District and gave remedies or solutions to alleviate the above problem.

1.2 Statement of the problem

A number (couple) of years has passed when mathematics has been poorly performed in secondary school in Bugahya county in Hoima District. This has been reflected from the results of mathematics performance at both UCE and UACE due to the neglect of the subject by students.

1.3 The purpose of the study

The purpose of the study was to establish the root causes of poor performance in mathematics in secondary school in Bugahya county in Hoima District.

1.4 The objectives of the study

The objectives of the study were as follows:-

- (i) To find the types of methods used by teacher's to teach mathematics and the interventional measures to alleviate the methods discovered.
- (ii) To find the type of instructional materials used to aid the teaching of mathematics in secondary school in Bugahya county in Hoima District.

- (iii) To analyse the mathematics learning and evaluation in Secondary schools in Bugahya county in Hoima District.
- (iv) The responsibility of the Teachers in learning of mathematics in secondary schools in Bugahya county in Hoima District.

1.5 Research Hypothesis

The researcher hypothesises the following questions on the independent variable that might have caused the poor performance of mathematics in secondary schools in Bugahya county in Hoima District.

- (i) Are the methods used in teaching and learning of mathematics in secondary schools in Bugahya county in Hoima District appropriate.
- (ii) Are instructional materials aiding the teaching and learning of mathematics in secondary school in Bugahya county in Hoima District.
- (iii) Is the learning and evaluation of mathematics administered in the secondary schools in Bugahya county in Hoima District.
- (iv) Is the teacher responsible for the performance of the learners in Bugahya county in Hoima District.
- (v) Is the bad attitude of pupils towards mathematics related to poor performance of mathematics in secondary school in Bugahya county in Hoima District.

- (vi) Is the Hedteacher , DIHIT, DOS or Head of Department of mathematics responsible for the poor performance of learners in mathematics in Bugahya county in Hoima District.

1.6 The scope of the study

The researcher's area of concern was to find out causes of poor, performance of mathematics in secondary school in Bugahya county in Hoima District. Because it was nearer to his home and easy to reach.

The Researcher met the H^εadtechers, Deputy Headteachers, mathematic teachers and students' community in the four secondary schools St. Thomas More, Standard secondary school and Pan Africa Secondary school and Bwikya Secondary school).

1.7 The significance of the study

The interventional measures articulated in this research report can be used by the following education stake holders in the following ways:-

- (i) The national curriculum Development center can use this research report to revist their curriculum so as to acquit both learners and teachers with enough knowledge.

The national examination board (UNEB) can use this research report to adjust in their evaluation technique to suit both the learners and teacher's knowledge of scope.

- (ii) The Headteacher's, mathematics teachers and Director of studies can use this research report to revisit their approach towards the teaching of the subject.
- (iii) The District education Officer, inspector of school and chief administrative can use this research report as monitoring tool for quality education.
- (iv) The ministry of education and sports as key planners can use this research report to formulate educational policies to improve the mathematics study in the country as a whole.
- (v) The student can be guided on how to go about mathematics Questions all levels after been pre-empted through the study of this researcher report.

1.8 The limitation of the study

There were only two major constrains that limited my performance as a Researcher) in the course of this research writing. The first one was financial constrain. Given the wide area and the research proposed to investigate. The exercise in turn proved very expensive especially in terms of material and secretarial sources and transport.

The researcher faced a constrain of time factor. The researcher had to process the research findings and at the same time teach and also attend lectures and domestic duties.

1.9 Delimitations

Although there were shortcomings and challenges as mentioned above, they were compromised. The school for example where I am working and the District Partly funded this research report.

The research exercise helped the researcher to gain more experience of making research even for further studies and also put in practice the suggested solutions for the poor performance in mathematics in the secondary school in Bugahya county in Hoima District.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

Since the researcher's concern is on mathematics study. Its imperative to explain what mathematics is. There is no single definition for mathematics that is universally agreed upon by mathematicians. Several mathematicians have come out with several different definition of mathematics.

According to the Dictionary "oxford English 6th edition (199-728)" defines. Mathematics: is science of numbers and shapes. It further says that mathematics

is composed of branches:

- (i) Arithmetic's
- (ii) Algebra
- (iii) Geometry
- (iv) Trigonometry.

According to the Hutchinson Encyclopedia Millennium Edition, 2000 Helcon” states that mathematics is the science of relationship between numbers between spatial configuration and obstructive structures.

According to “mathematics curriculum” defines mathematics as the process of calculating numbers.

The “Oxford Power Dictionary” defines mathematics as the science of numbers, quantities or shapes.

2.1 Methods of teaching mathematics and performance of students

Several researchers have come out with different findings on the causes of poor performance of mathematics. Here the researcher’s concern is on the causes of poor performance of mathematics in secondary schools in Bugahya county in Hoima District.

According to Kuliika and Kulik (1982:534), all students attitudes towards the subject are slightly more favourable in grouped classes.

This signifies that pupils / student work well when grouped according to their abilities and therefore there is need for a teacher to group his students.

Eggen Paulo Detal (1970:30), the methods the teacher use must have to vary and therefore it is based on the idea that no single approach to teaching is appropriate in all situation and consequently effective teaching requires alteration strategies to accomplish different goals.

This therefore means that teaching does not need a single method but a variety of methods and therefore in choosing a teaching method, a teacher or an educator must consider the content at hand, specific objectives, nature of the classroom environment available or resources learners interact and their ages.

According to Moger (1963), a good objective has three parts namely it must have a verb, phase describing the intended student behavior, it must how occur. It must give criterion for acceptable performance on the test.

This signifies the fact that a good decision plan objective phrase must be interms of Psycho meter, affective and cognitive domain and objectives must be specific, measurable and achievable.

Rubin Lewey (1977:56) Etal, there must be designing and redesigning of what is to be taught by whom when where and what Pattern,

Developing Curriculum, guidelines, establish standard planning instructional, instituting adrawn school time table.

For learners to learn, there must be a guide lined time table and Syllabus, scheme of work and lesson plan for effective teaching.

According to Brunner (1966:75), students learn best by discovery that is when they will have the “aha” Experience of sudden understanding something.

In this case teachers are encourage to use guided discovery simply because this method give quick feed back and students discovery on their own and also learn to solve problem of the daily life on their own.

According to “ Uygotssky” (1978:73), learners internalize knowledge effectively when author’s such as teachers, parents, and peer guide and assist them”.

Therefore this means that there is need for teachers to assists learners especially in mathematics and this help to cater for individual differences especially slow learners by providing to them financial support.

According to Deland Sheere (1987: 79), it must be stressed that future teachers will be able to make their pupils independent in learning every life if only they to enjoy the same independence during training. The lasting learning only occurs if learners solve meaning fully.

This means that teachers teach best what they also understand properly and therefore there is also for the teacher to properly guide the learners for future life experience.

Anderson (1980:257) and Bretzg and Kulhang (1977) states that:

Answering question while reading seems to be one of the best method of comprehending and improving memory” in this explanation of the Quotation it means that a teacher must apply the technique which involves active thinking or process of the learners not just copying words or phrases from a text book . Reading while answering helps the learners to conceptualize and comprehend knowledge.

Brown Desmond etal (1983: 39) also state” put forward the traditional time tested method like lecture method, Discussion method, Demonstration method, the project method and study trip. This therefore implies that there is need to intergrate the traditional

methods with the new appropriate (approaches) for example learner's center method like discover method or problem solving method.

According to professor Ssengendo A. Z. Quotes Mursells James (1992:4) Effective teaching is not a clever use of a bag of tricks forgetting this and that into children's heads. It is the revealing of the possibilities otherwise undreamed of the transmitting of a vital spark, the projecting of influence making for better happier lives.

This implies that there is therefore for a teacher in his planning to choose a method, approach is strategies skills and techniques that will bring about effective learning such method should encourage learners participate, develop effective critical thinking, imagination creativity and give away to self discovery.

2.2 Instructional materials and performance of students

According to wraggle CR (1984:4), today are several factors which combine to the required level of skills and learning materials such as textbooks, flannel boards, Television, and Projectle) instructional materials are important because they aid the memory of the learners

as it is said when I see I remember, when I hear I forget and I do I know.

According to Wraggle et al (1984:4), “The books and articles on effective teaching are numerous and a summaries a massive amount of words,” an American researcher concluded.

According to “Bottom and Harris et al (1973 and 1979), there must ensure the availability of instructional materials and staff members in adequate number with appropriate competencies for facilitating instruction, recruiting, screening selecting, assigning and transferring staff are some of endeavors.

2.3 Evaluation of student and performance

In order to found whether the objectives have been achieved there is need to use a feed back tool “evaluation and assessment “ and many researchers commended it as an important tool in the process learning in schools.

According to Airasian and Madans (1973:321) says “Evaluation have many use in classroom instruction”

This signifies that there is a need to evaluate mathematics since it is a science subject. The teacher needs to evaluate the learners memory Airasian and Madans, also put forward that “There are five methods of evaluation namely placement evaluation, formative evaluation, diagnostic evaluation and summative evaluation”.

According to Nevoa and Spectof (1979:380), “Lack of relationship between time to completion of exams performance on the basics of personality traits “person tempo in testing which has operatically defined needed to complete the examination therefore, this means that there is need to give the student enough time to complete the Exams to avoid or reduce panic.

According to Resenshire (1979- 230), “Learning should be based on cognitive measurement on most classroom and standard test.

This means that while teaching a teacher needs to carry out evaluation and assessment especially at the end of a specific period.

As a teacher, a student must be given enough exercise to test the learners memory and comprehensiveness.

According to (Lauritzen 1992, Yagers), according to constructivists, “people (learners) construct knowledge on the basis of the experience.”

This means that the learners need opportunities to explore the experiment and experience. It is better for teachers to give student much exercise to test and practice the concept.

Wertsch (1995:75), “put forward that people (learners) with high developed language skills which can perform complex task than illiterate people can’t do, because the literate people use language as a tool to mediate between the task and performance”.

This signifies learners should be exposed to the mathematical language other than merely calculation. The learners should be given many exercise and tests than so as to encourage them to read and get more mathematical concepts.

According to Smith and Lazarus (1990) Stated that “How a given individual reacts emotional to encounter depends on evaluation of what the encounter implies for the person Well being. This signifies

that the teacher must evaluate the learners properly, if you know how to evaluate the relationship with environment you can predict the person's emotions and reactions and also to cater for individual differences.

According to Curtis (1958) "The process of evaluation is as old a human Civilization but for long time is taken for granted so that the mature of the process was not examined.

In the explanation of the Quotation it means that a mathematics teacher should always evaluate his own lesson after teaching through by giving exercise. This can help him to understand the progress of his learners and to cater for individual differences.

2.4 Motivation and students performance

In order a person to learn must be motivated and therefore motivation is the engine of interest.

According to Gallmore and Tharpetal etal (1990:73)" identified six ways that can help student to learn.

- (i) Model a behavior so that the student can initiate.
- (ii) Rewards students for behaving in a desired way.

- (iii) Give students feed back about their performance and allow them to revist and improve it.
- (iv) Provide student with information they need to learn.
- (v) Ask Questions that require student to actively formulate response.
- (vi) Provide students with a [ognotive structure for organizing understanding new knowledge.

According to Chance (1992, 1993) Urgeat that both types of rewards have a place in education setting and teachers needs to strike a balance regarding the use of extrinsic and in trinsic form of motivation. This signifies that there is need for learners (student) to be motivated and motivated towards if they are attracted and motivated towards the concept to be taught students, can't pick interest in the subject and unless motivated.

According Bandura (1977:274) stated that there two sources of motivation "our thoughts about possible future out comes of behaviors and secondly active setting of goals and these mainly become our standards for evaluation of performance.

These underlines the fact that the teacher must have a set up goals for learners and also motivate him in order to achieve the set up goals towards students and must have specific objectives.

According to Draikurs, Grundward and Papper (1983:339), stated that “contend that student misbehave to get attention, power and revenge up to the sense of inadequately.

This means that there is a need to provide proper guidance and counseling student and highly motivate them especially when teaching mathematics and failure to provide the basic needs in as far as mathematics is concern, student will tend to misbehave.

2.5 The nature of the teacher and performance of students.

According to Botton and Harris etal (1973 and 1979), there is need to ensure the availability of instructional staff members.

Inadequate numbers with appropriate competencies for facilitating instruction recruiting is screening, selecting and assigning and transferring are some of endeavors.

This means that for students to perform well must be handled by a competent teacher in the subject ,in this case mathematics.

According to Curtis JS (1958:91), “The educator (teacher) passes on the education all that is believed to be useful and worth while in the culture of society in the hope that the future would be transmitted to the next generation.

This underlined the fact that it is the teachers plan to activate all the possible avenues to enable the learners get a permanent change in behavior as the results of the learning process by so doing the learners will evaluate the same. It should noted that the serious learner evaluate the serious teacher.

According to Madsen Clifford etal (1980) says “.. and Perhaps the most important aspect of teaching concerns honest assessment of the contingencies that operate in reinforcing the mathematics teacher.

It explains that if a teacher is to spend much of his life in teaching mathematics it quite important, He should understand what behavior are summed within the career simply because most teachers enters the

teaching profession without aware the behavior necessary to become successful teacher of mathematics eggen Paul etal (1979:550), a major consideration of this stage is to match an appropriate strategy with the selected goal to be able to do it effectively, a teacher must have a clear, precisely stated goal in mind as well as a number of teaching strategies available. The teacher with the largest number of strategies will usually have the best chance of matching the strategy to goals.

According to Desmond etal (1990:3), for students already with certain of their desire is to teach, student teaching offers the opportunity to learn ideas skills and attitudes to become a competent teachers”.

This explanation shows that training and practicing also make teachers in understanding concepts in education, which have to go hand in hand with personal mastery of the field. Also important to note that for a teacher to teach, He must be well trained or a long serving teacher must go through many work shops and seminars to make him able to remember what he should have forgotten and practice also the new existing concepts since the society is dynamic.

According to Straw, Bell and Clanson (1986:450), the way individual view work may be a function of a stable trait, not just a reflection of the work itself.

Explanation

It is important to locate a teacher the correct subject and class of experience simply because the nature of the trait of that teacher how individual differences in their work they do. The teacher needs maximum supervision for proper doing of work and guidance especially for the new qualified teacher if they are to handle learners properly and efficiently.

2.6 Supervision and performance of student

For teachers to teach well needs at least to be supervised according to Ben. M. Harris in his book “supervisory behavior in education, third edition page 10-12.

CHAPTER THREE

METHODOLOGY

3.1 Design of the study

This study was designed to enable the researcher to collect data which explained the causes of poor performance of mathematics in secondary schools in Bugahya county in Hoima District.

3.2 Area of study

The study took place in Bugahya county in Hoima District in four selected schools government aided schools namely

- (i) St. Thomas More secondary school
- (ii) Bwikya Secondary school
- (iii) Standard Secondary School
- (iv) Pan Africa secondary school

3.3 Subject of study

The researcher obtained the data from the different respondents

(groups) namely:-

- (i) Head teachers
- (ii) Mathematics teachers

(iii) (10 selected pupils S.3)

3.4 The sampling technique

3.5 Sampling procedure for the secondary schools.

Hoima District is found in Mid western Uganda and it has got two counties namely

- (i) Bugahya
- (ii) Buhaguzi.

The researcher used systematic sampling method depending on the alphabetical order of the counties as in the above.

The researcher also used the same systematic sampling to obtain the schools out 16 schools alphabetical following homogeneity of the schools and got these

- (i) Bwikya Seecondary School
- (ii) St. Thomas More
- (iii) Standard secondary School

3.5.1 Characteristics of the sampled schools

The characteristics of the sampled schools depended on the following:-

- (i) School located in a similar geographical setting hence operated under similar climatic conditions.
- (ii) All schools were heterogeneous and strict day schools found in two different town councils and were all performing mathematics

3.6 The sampling procedure for correspondents

- The technique with the researcher need to select the correspondents (items) from the sample was deliberate or purpose sampling and the specific respondent were:
 - (i) Head teachers
 - (ii) Mathematics teachers
 - (iii) Student (S.3)

3.7 The tools of data collection

In the interest of time, the researcher used only one device, the research Questionnaire to collect the data required pertaining the prevailing problems.

3.7.1 Questionnaire

This was specific device the researcher used. A set of related questions was designed for both respondents that is to say Headteacher, Mathematics teacher and students. Quite a number of dependent variables were investigated using the questionnaire under specific headings or independent variables. Both factual and opinion Questions were formulated. In the first set of Questions respondents were to give their ideas, fears, convictions prejudice or just the attitudes about a given variable.

3.7.2 Research procedure

The researcher used two research assistants drawn from four schools of study within the county of Bugahya that is one teacher and one student. This was done to ascertain the authenticity and the reality of the research findings. The researcher briefed them their roles, and visited them from time to time to get the required information.

3.7.3 Methods of research collection

The researcher presented the Questionnaire to respondent for answering in the four selected schools in Bugahya county in Hoima district.

As followed namely

- (i) Questionnaire for Headteacher
- (ii) Questionnaire for Mathematics teachers
- (iii) Questionnaire for student (S.3).

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

4.1 Introduction

After completing the field study, the researcher embarked on processing the materials which were later analyzed. The Questionnaire was thoroughly checked and masses of details reduced to manageable proportions. The material was summarized in tabular form to bring out its salient features. The results were finally interpreted and presented using simpler statistics and qualitative approach.

The analytical technique used was non parametric.

4.2 Findings of the study

Table 1: Response to Questionnaires

Respondents category	Reference number	Distribution	Collected	Percentage response
Headteachers	I	4	4	100
Mathematics teachers	II	10	9	90
Students	III	40	40	100

One hundred response was not realized in the table one which shows the response to questionnaire by the three groups (categories) of respondents. The response by the Head-teachers was 100% because most of them were friendly to the researcher and also pupils responded to 100% but the response of the teacher was 90% giving the table response of all 3 categories of respondent to 90%

4.3 Presentation analysis of data for Head-teachers

The following independent variables on the Head-teacher were investigated using the research hypothesis Questions in the respective order given below:-

- (i) Basic information
- (iii) Professional Qualifications
- (iv) Providing appropriate instructional materials
- (v) Curriculum Development / time table punctuality
- (vi) Attendance of seminar work shops or refresher courses
- (vii) Supervision

A number of independent variable on a Head-teacher were investigated and the responses were coded and tabulated as shown A

tick (v) was used for “Yes “ response and cross (x) was used for “No” response.

4.3.1 Head-teachers’ Reponses

Table 2: Basic information

Code	Variable	A	B	C	D	Total
A1	School enrolment	640	860	470	560	2530
A2	Number of teachers	22	23	19	20	84

Only 84 teachers handle the population of 2530 students giving the ratio of 84:2530, giving rise of 3.3%. From the table the percentage indicates that the population of teacher is too small to handle the population of 2530.

Table 3: Mathematics teachers versus the school enrolment and other subject

Code	Variable	A	B	C	D	TOTAL
A1	School enrolment	640	860	470	560	2530
A2	Number of teachers	2	3	2	3	10

Only 10 mathematics teachers handles the population of 2530 and this gives a ratio of 10:2530 and this gives the percentage of 0.8% or 1% and this makes a very teacher to have a big load.

Table 4: Professional Qualification

Level of qualification

Level	Variables	%
LT	4	4.76%
GV	56	66.6%
GT	20	23.8%
MS	4	4.76%
PHD	-	00%
Total	84	100%

From the table 2.2 this means that only L1 teacher's are (not trained) giving a percentage of 4.7% versus 80 teachers who are qualified giving the percentage of 95.3 and this means that the schools have quality teachers also the graduate teachers ratio of 24:56 and also giving arise of 42.7% which is a good quality.

Table 5 : Head teachers providing appropriate instructional materials

Code	Variables	Yes	No	%
C1	Obtaining appropriate instruction	1	3	75%
C2	School has mathematics text books	4	0	100%
C3	All text books enough	0	4	100%
		5	7	58%

The findings were drawn from appendix 2, questions 14 which indicates 75% Headteachers do not provide appropriate instruction materials, 100% indicated that schools have mathematics test books where as 100% of response from table indicates that schools lack enough mathematics text books. The over all findings on Headteacher's gave the raise of 41.6% providing appropriate instructions materials and 58% not providing appropriate instructional materials.

Table 6: Head-teacher's said no above why / reasons.

Responses	Number	Percentage
Lack of money	1	25%
Teaching materials are expensive	3	75%
Not available	-	0
None of these	-	0

The finding drawn from Appendix 2 Question indicate that most head teachers don't provide instructional material because of being expensive give 75% and 25% saying lack of money.

Table 7: D. Curriculum Development

Code	Variables	Yes	No	%
D ₁	Mathematics periods corresponds to syllabus	1	3	75%
D ₂	School has general time table	4	0	100%
D ₃	Time allocated enough (work load)	0	4	100%
D ₄	Teacher display time table	0	4	100%
Total		5	11	-

The findings were drawn from appendix 2 Question 6, and 7 which shows that the great magnitude of the problems faced by Headteacher's in effecting the curriculum in the in schools accumulated for ratio of 5;11 and giving a percentage of 68.7% and those schools with positive response having the percentage 31.25% Table.

Table 8: Are your teacher's punctual?

Response	Number	Percentage
Yes	1	25%
No	3	75%

From the above findings from table 8 indicate that the majority of teachers are not punctual to their lessons and giving rise of 75% and only 25% of teachers are punctual and follow the time table seriously.

Table 9: If no in question above why?

Response	Number	Percentage
Lack of responsibility	-	00%
Long distance	3	75
Part timers	1	25

The finding were drawn from appendix 2 Question 8 and 7 which indicates that most teachers are not punctual to lesson due to distance and this give a percentage of 75% and part time teachers gives a percentage of 25%.

Table 10: How often do you supervise your teachers?

Response	Number	Percentage
Always	0	00%
Some times	3	75%
Rarely	1	25%

Findings were drawn from Question 9 appendix 2. the percentages indicates that the majority of Head teachers don't have routine (daily supervision) and thus give 75% and 25% of Headteachers rarely supervises the reason they gave was that the work was carried out by Deputy Headteachers and Director of studies

Table 11: Do teachers use a variety of methods when teaching mathematics?

Response	Number	Percentage
Yes	4	100%
No	0	00

The finding from table 11 indicates that teachers use a variety of methods when teaching and this gave 100%.

Table: 12: Common methods used by teachers in teaching mathematics

Response	Number	Percentage
Lecture	1	25%
Guided discovery	2	50%
Brainstorming	1	25%
Rote	-	
Miming	-	

Finding drawn from appendix 2 hypothesized question 3 indicates that majority of teachers use guided discovery and giving rise to the percentage of 50% only few use lecture methods and brainstorming and this gave for 25% each.

Table 13: Do you teacher's attend seminar work shops or refresher courses.

Response	Number	Percentage
Yes	0	00%
No	4	100%

The findings drawn from table 13 from appendix 2 Question 13 (a) indicates that teacher don't attend seminar and this give a percentage of 100% and this signifies that teachers lack new skills / orientation skills.

Table 14: If no why in Question 13 (a) reasons indicated

Response	Number	Percentage
Lack of money	3	75%
Lack of time	1	25%
Government organize	-	-
Teacher's refuse	-	-

The conclusion drawn from table 14 above drawn from appendix 2 indicates that Headteachers don't carry out refresher course due lack of money and time and this gives a percentage of 75% and 25% respectively and this evidence shows that teachers lack new orientation skills.

Table 15: Other problems Hypothesized by a researcher

Code	Variable	Yes	No	Yes %
B1	Problem in mathematics teaching syllabus	4	0	100%
C3	Problems in organizing for instructions	4	0	100%
C4	Problems in providing teaching materials	4	0	100%
G2	Problems identified during lesson supervision	2	2	50%
G	Certaining not done by schools	3	1	25%
E1	Problems of punctually	4	0	100%
	Total	21	3	87.5%

The above other problems hypothesized by the researcher accounted for 87.5% making the challenges quite significant to Headteachers.

Table 16: Unique problems raised by Headteacher

No	Problems	Yes	No	Yes
1.	Lack of up date mathematics text books	3	1	75%
2.	Lack of adequate mathematics text books	3	1	75%
3.	Big size class (few teachers interfiled)	1	3	25%
4.	Lack of instructional materials	4	0	100%
5.	Learners don't practice English	1	3	25%
6.	Un trained teachers & under trained	3	1	75%
7.	Poor foundation from lower level	1	3	25%
8.	Lack of refresher courses	3	1	75%
9.	Teachers don't fellow the time table & lack of staff houses	1	3	25%
10.	Lack of parent / community participation	2	2	50%
	Total	22	18	55%

The problems raised by the Headteachers during the study accounted for 55% although figures may not appear quite significant there are problems raised as lack of instructional materials for 100% failure.

Table 17: Head-teachers investigated variables summary

Table of scope of influence to mathematics performance

Code	Investigated variables	Success	Failure	Fail %
D	Curriculum development	5	11	68.8%
C	Provide appropriate instructional materials	5	7	58%
G	Supervision	0	4	100%
C ₁	Teacher's use a variety of methods when technique	4	0	00%
C ₂	Common methods used to teach mathematics	2	2	50%
F	Attendance of seminar workshops refresher course	0	4	100%
D ₁	Particularity & time table following ³	1	3	75%
K ₁₀	Hypothesized problems by a researcher	3	21	87.5%
K ₉	Unique problems raised by the Headteachers	22	18	55%
	Total	42	70	62.5%

From the findings drawn from table 10 from Appendix 2, the magnitude of the problem affect Head-teachers in Bugahya county accounted for 62.5%. This implies that the level of success to improve mathematics performance accounted for only 37.5%.

4.4. Mathematics teacher' response

The following I undependable variables on the teachers of mathematics of four secondary schools in Bugahya county in Hoima District were investigated using Appendix 3 in the respected order given below:-

- (i) Basic information
- (ii) Teacher's preparation and work load.
- (iii) Methods of teaching
- (iv) Classroom instruction
- (v) Instruction / teaching material
- (vi) Testing and evaluation.
- (vii) General attitude toward mathematics learning.

A number of other dependent variables on the teachers were also investigated and responses coded and tabulated a tick was used for "Yes" response and a cross (x) was used for "No response.

Table 18: A Basic information

Code	Variable	A	B	C	D	Total
A ₁	S.3 class	79	43	45	34	201
A ₂	Math passes inform I 2007	43	19	20	16	98

Out of a total of 201 of S3 students who sat for end of term i 2007 mathematics test only 98 obtain a pass marking giving raise to percentage 48.7% and failure accounts for 51.2%.

Table 19: Teachers preparation

Code	Variable	Yes	No	N%
B1	Draw lesson plans	9	1	10%
B2	Lesson plan easy to draw	8	2	20%
B3	Scheme of work easy allow	3	7	70%
B4	Mathematics syllabus easy to ..	2	8	80%
B5	Time allocated enough / work load	1	9	90%
	Total	23	27	54%

The findings were drawn from table 12 appendix 3 questions 3 indicates that 54% of teachers don't prepare lesson especially when going to teach and have problems related to lesson preparation. This implies that only 46% found no problems in preparing what to teach.

Table 20: If work load not enough what do you do from above table B 5

Response	Number	Percentage
Cover what I can afford	2	20%
Give as much notes as possible	1	10%
Concentrate on revision using past papers	6	60%
Remedial teaching	1	10%
None of the above	0	0%

The findings were drawn from appendix 3 which indicates that the majority of teachers load is too much for them, they concentrate on revising past papers giving the percentage of 60% and only 20% can afford to cover what they can afford.

Table 21: Methods of teaching mathematics

Teaching methods used by mathematics teacher and pupils performance.

Response	Number	Percentage
Question & Answer	2	20%
Discovery methods	3	30%
Brain storming	1	10%
Talk & chalk	4	40%
Rote methods	0	00%
Field excursion	0	00%

Findings were drawn from appendix 3 Question which shows that the majority of the teachers use talked chalk method and this give the raise of 40% from the percentage of 40% and only 30% of the teachers uses discovery method. And 20% use question and answer.

Table 22: Classroom Instruction

Code	Variable	Yes	No	Percentage
D ₁	Student interested in mathematics	1	9	90%
D ₂	Class discipline	3	7	70%

The table shows that pupils are not interested in the subject and 70% of pupils become indiscipline during mathematics lesson and only few students are interested in mathematics and are accounted for 10%.

Table 23: General attitude of students towards mathematics subject.

Response	Number	Percentage
Quite low	2	20%
Just average	1	10%
Very good	1	10%
Good	1	10%
Rather low	4	40%
I don't attitude	1	10%

Table 22 and 23 in Appendix 3 findings indicates that the students have low morale in mathematics and this accounting for 40% and 20% respectively in table 40.0. 90% of student lack interest in the subject which is quite a big number (challenge) only 10% are interested in subject.

Table 24: Problems encountered when teaching mathematics.

Problems	Response	Percentage
Instruction materials	5	50%
Content	-	00%
Indiscipline	2	20%
Community	1	10%
Lack of motivation law salary	1	20%
Methods of teaching	1	10%

At least 50% of the teachers in the country faces the problem of instructional materials, 20% face the problem of indiscipline and only 10% faces the problem of lack of motivation / law salary.

Table 25: Instructional / teaching mathematics and performance of pupils.

Code	Variable	Yes	No	% Fail
E ₁	Enough teaching materials	0	10	100%
E ₂	Enough mathematics reference text books	1	9	90%
E ₃	Available relevant math text book	5	5	50%
	Total	6	24	80%

The teachers experience a vacuum of 90% in securing the teaching materials. This implies therefore that 90% of their lesson are being taught without teaching materials. The effort accounted for only is 10% and lack of enough reference mathematics text books accounts for only 10%.

Table 25: Testing and evaluation

Code	Variable	Number response	Percentage
F ₁	Give monthly test	3	30%
F ₂	Weekly	1	10%
F ₃	Every day	-	00%
F ₄	Termly	6	60%

The findings were drawn from table 16.1 from appendix 3 Question 11 and 12 and 13 shows that teachers carry out testing at the end of term

and therefore this means that, they have a problem in affecting evaluation.

Evaluation and only wait for termly assessment. Only 30% of teachers assess monthly and 1% can do weekly this percentage is so significant to alleviate the problem of testing and evaluation.

Table 26: Unique problems raised by mathematics

Teachers were asked to state problems they face as they teach the subject.

Number	Problems	Yes	No	% Yes
1	Lack of test books	6	6	60%
2	Poor back ground	3	7	30%
3	Automatic promotion	8	2	80%
4	Time not enough for the subject	7	3	70%
5	Too many pupils	7	3	70%
6	Lack of library	1	9	10%
7	Lack of teaching materials	9	1	90%
8	Little salary	1	9	10%
	Total score	42	38	32.5%

The table above shows the problems raised by the teachers of mathematics and the scope of their influence on mathematics learning

and teaching. The problems raised together affected the teachers by 52.5%.

Table 27: Mathematics teachers investigated variable summary

Summary: table of scope influence of mathematics teaching and learning.

Code	Investigated variables	Success	Failure	% Failure
B	Teacher preparation	23	27	54%
E	Teaching materials	6	24	8%
C	Teaching methods	5	5	50%
E	Classroom instruction	4	16	75%
F	Testing & evaluation	4	6	60%
G	General attitude	3	7	70%
K ₈	Problems encountered when teaching	2	8	80%
K ₉	Unique problems raised by mathematics teachers	38	42	52.5%
	Total	85	135	61.3%

As far as the investigated variables were concerned, the mathematics teachers total failure in affecting their performance in mathematics accounted for 61.3% paving way of an out put of only 38.7%.

4.5 Students response

The following independent variables were investigated from 40 S,₃ students doing mathematics in the four different schools of Bugahya county in Hoima District under appendix 4 in the respective order below.

Table 28 : Student liked mathematics in lower secondary school and willing to take the subject up to high level.

Response	Number	Percentage
Yes	16	40%
No	20	50%
Low morals	3	7.5%
I don't know	1	2.5%
Total	40	100%

The findings were drawn from question 1,2,3 and 4 in appendix 4 which show that students have little morale (attitude) towards mathematics subject and this accounted for 50%, 75% and 2.5% and only 40% of the student like mathematics which is quite challenging.

Table 30: Code S.2 students go to library

Response	Number	Percentage
Yes	11	28%
No	29	72%

The findings were drawn from Questions appendix 4 show that the majority of pupils don't go to the library and raising 72 while 20% of student go library.

Table 31 : How often do you go to the library?

Variables	Response / number	Percentage
Every day	1	2.5%
Once a week	10	25%
Rarely	29	72.5%
Total	40	100%

From table 19.2, the findings drawn from Question 6 Appendix indicates most student don't go to the library and those who go their go rarely accounting for 72.5% only 2.5% stated that they go library once a week which is quite low for mathematics good performance.

Table 32: Code S₃ Students testing and evaluation

Variables	Yes	No	% No
Do exams	30	10	25%
Do home work	15	25	62.5%
Holidays package	5	35	87.55
Weekly test	10	30	75%
Total	60	100	62.5%

The above findings were drawn from question 16,14,12,13 and 15 Appendix 4 which indicates that student are not fully evaluated and this accounts for 62.5% in all variable and student do only termly exams which account for 100% and home work account for only 37.5% quite low for students to improve in mathematics.

Table 33: How often do you do Exams?

Response	Number	%
Daily	0	05
Some times	0	0%
Termly	30	75%
Weekly	1	2.5%
Opening of term	9	22.5%
Total		-

The findings were drawn from question 12 (a) Appendix 4 indicates that student do exams termly and this gave 75% and only 25% of pupils do exams at the beginning of the term and 2.5% do weekly exams this show that teachers don't evaluate student adequately.

Table 34 : Does your school have enough mathematics text books.

Response	number	% percentage
Yes	10	25%
No	30	75%

The conclusion drawn from table 19.3 from question 7 appendix indicates that the majority of school lack mathematics text books and this accounts for 75% and 25% have access on mathematics text books and some of which are out dated stated students.

Table 36: How do you find the content in the mathematics text books.

Variable	Response	Percentage
Shallow	1	2.5%
Hard	36	90%
Brief	3	7.5%
Easy	0	00%

The findings were drawn in question 8 and 9 appendix 4 which show that 90% of student stated that the content found in mathematics text book is hard and this show that teachers do not assist the student and few student who access mathematics text book.

Table 38: Unique problems raised by student

Number	Problems	Yes	No	% Yes
1	Teacher don't abusive language	21	19	52.5%
2	Teacher don't associate with students	30	10	75%
3	Teacher is speedy	20	20	50%
4	Teaher is lazy	25	15	62.5%
5	Too much work of the teacher	10	30	25%
6	Few exercise	25	15	62.5%
7	Few exams	30	10	75%
8	Few teachers	40	0	100%
	Total	201	119	91.3%

The table above from the finding drawn from student unique problems raised indicates that students are not catered for and even teachers are not friendly which accounts for 91.3% failure only 8% for teacher cater for student which is quite problems for students learning and teaching.

Table 39: Students investigated variable summary

Summary table scope of influence in mathematics performance

Code	Investigated variable	Success	Failure	% Failure
S1	Student liked mathematics at low secondary	16	24	60%
S _{2a}	Use library	11	29	72.5
S _{2b}	How often go to library	11	29	72%
S _{2c}	Enough mathematics text books	10	30	75%
S _{2d}	Content text books	4	36	90%
S ₃	Students testing & evaluation	60	100	62.5%
S _{3a}	How often do exams	1	39	97.5%
K ₂₃	Unique problems raised by students	111	201	91.3%
	Total	232	488	67.7%

The findings were drawn from appendix 4 indicates that variable investigated show there is still a big problems in as far as mathematics performance is concern and thus accounted for 67.7% and 37.3% is quite low to effect the subject learning.

Table 40: Head teacher, mathematics teachers and student summary investigated variables.

Total performance summarized

Code	Variable	Success	Failure	Percentage Failure
1	Head teacher	42	70	62.5%
2	Mathematics teacher	85	135	61.3%
3	Students	232	488	67.7%
	Total score	359	693	65.8%

The findings drawn from appendix 2, appendix 3 and appendix 4 indicates that the magnitude of the entire problems causing poor performance in mathematics in secondary schools in Bugahya county accounted for 65.8% and their successful efforts attracted only 34.1%

The finding further indicates that magnitude of the problems lie on the side of administration and students, which accounts for 65.1% and mathematics teachers accountable for 34.9%.

4.7 Data interpretation and discussion

4.7.1 Introduction

Since three categories of respondents were studied, Data was interpreted according to category Head teachers mathematics teachers and students.

4.7.2 School enrolment

The four schools investigated namely A,B,C,D had a total enrolment of 2530 students and a staff of 84 teachers. Given the teacher student ratio of 84:2530 one realizes that the ratio is so few that it has a negative impact on the teachers performance.

According to "EKADDU (2002), the lecture of Kyambogo University, The contemporary issues in performance as large classes due to both Universal primary education and universal secondary education with few teachers who lack mathematics background, lack the instructional materials for example for teaching according to the educational implementation statute (1997), the teacher is supposed to handle 60 students. This alone is an evidence of an over load on the side of the teachers refer to (table 2).

4.7.3 Curriculum development

This area of study was aimed at established the extent to which Headteachers manage and supervise the implementation of curriculum in their schools. The findings or results collected revealed that half of the schools has no instructional goal. The findings drawn also from appendix 2 question 6 and 7 reflect a great magnitude of the problem faced by Head-teachers in effecting the curriculum in the schools accounted for ratio 5:11 and giving the percentage of 68.7% indicating no instructional objective satisfied. A school Head-teacher with no instructional objective is like a driver who does not know his destiny.

Its work is just to driver the vehicle for that matter he do not care about the speed at which he drives and the plight of the passengers. The hypothesized question is the Headteacher responsible for poor performance of the learners in mathematics was valid or found true.

4.7.4 Providing appropriate instructional materials

In providing materials teachers to use, the findings indicates that 75% of schools were un able to select and obtain appropriate materials due

to lack of money on evaluating the effectiveness of the materials 75% were again un able to do it this implies that only 25% of the Head-teachers were in position to select and obtain appropriate materials and evaluate their effectiveness in helping the teaching of the subject. The findings drawn from appendix 2 indicates also 75% failure to provide instructional materials like text books accounted from the side of the Head-teacher, proving the hypothesized question true. The failure attributes materials being expensive and lack of money.

Today there are several factors which combines to the required level of skills and learning materials such as text books flanned boards, Tv projectile, therefore instructional materials are important because they aid the memory of the learners because there is a say that when I hear I forget, when I see I remember and when I do I know.

4.7.5 Supervision

Te findings were drawn from appendix 2 question 9 indicates the majority of Head teachers don't carry out routine supervision due to which work, Which indicates 75% but the supervision of work in school lie entirely on the Director of studies and Deputy Head teacher.

However, it was also discovered that some (few) Head-teachers made efforts to supervise and observe lesson in other classes accounting for 25% but all of them expressed their dissatisfaction over the UCE mathematics results in their schools for the period between 2000-2006. The findings reveal that Head teachers suffered a failure of 75% testing the hypothesized in question 6 correct.

4.7.6 Arranging for in service education / refresh courses

Here the researcher was concern with evidence of Head-teachers effort to improve the quality of their teachers and subsequently improve the teaching of mathematics. The findings from appendix 2 question 13a indicates that Head-teachers don't organize seminar, workshop and refresher courses further for their teachers and this deficiency accounted for 100% and yet some of them claimed they had carried out assessment needs for training teachers.

4.7.7 Responses to other problems hypothesized by researcher

There were number of other problems the researcher assumed could be affecting the head teachers performance in ensuring better standards of mathematics in schools Below were the findings according to the results collected.

There were 100% affecting Head-teachers and these the following;-

- (i) Providing teaching materials
- (ii) Organizing for instruction
- (iii) Teaching of mathematics
- (iv) Punctuality

They all admitted that there were certain things (strategies) they would wish too put in place but incapacitated by circumstance

Half of them had the problem in involving community in school academic strategies and 75% identified problems during lesson observation and supervision.

Unique problems raised by Head-teachers were asked to state specific problems they felt affect their performance as school managers and curriculum supervisors. Ten problems were raised and scored according to the results as follows:-

75% of the problems affected the Head teachers as following areas as below:-

- Lack of up to date mathematics text books
- Lack of adequate mathematic text books

- Lack refresher courses
- Lack of instructional materials

Lack of parents / community participation in school programmes accounted for 50%. Big size classes, learners don't use English, poor foundation from lower classes and teachers don't follow the time table each attracted 25%.

However all schools investigated contended that the problems of instructional materials was significant with 100% response. This alone negatively influenced performance by 55% (See table 9).

4.7.9 Head-teachers investigated variables and their scope of influence.

This section gives a summary of all Head-teachers investigated variables and their scope of influence to the teaching / learning of mathematics in schools.

- Curriculum development alone suffered by 68.8% paving a narrow way for only 31.25 successes. This problem was significant given the level of significance of 0.5 providing appropriate instructional materials suffered with great resistance of 58%, creating a room for success of 42%.

- Problems related to supervision accounted for 100% failure.
- Teachers use a variety of methods when teaching mathematics experienced 100% success and no failure was noticed.
- Common methods used to teach mathematics surfaced with effort of 50% and failure accounted for 50% and this was in equilibrium with the success.
- Attendance of seminars, workshops or refresher course for up to dating teachers deal with new skills suffered a great deal with resistance of 100% or failure creating a big vacuum.
- Punctuality and time table following experienced more failures that success accounting for 75% failure and 25% success quite a big vacuum.
- The researcher hypothesized problems reflected a significant failure of 87.5% on Headteachers paving a narrow way of only 12.5% success.
- The problems raised by the Headteachers accounted for 55% failure but with lack of instructional materials being significant with 100% response.

Summary, the magnitude of the administrative problem affecting Headteachers performance in the investigated variables accounted 62.5% failure and only 37.5% success (se table 10).

4.9 Teachers

The four schools investigated had the population of 84 teachers and out of which only 10 teachers handles the population of 2530 and this giving a ratio of 1.253 a percentage of 0.80% quite a big load for the teachers and of qualified teachers of 80 only 8 teachers are qualified and gave the ratio 8:80 which was a 10% a small population to handle a big population of 2530.

4.9.1 Teachers preparation

The study here was aimed at establishing the extent to which mathematics teachers prepare them selves for teaching.

According to J Farrant in his book “principles and practice of education says” A well prepared lesson can be taught without lesson but a successive lesson can never be tough with out preparation here there was only six variables which were investigated. From the results, the following facts were established. The finding were drawn

from appendix 2 questions which shows that 54% of teachers don't prepare lesson but use text books to teach and only 46% drew lesson plans. In doing so, they found the problems in interpreting the teaching syllabus and majority complained of little time given mathematics. On scheming of the subject only 70% succeeded to draw their schemes with ease. This implies that 70% of lessons taught in mathematics were taught with proper preparations.

This created a vacuum of 30% as for teachers who lack preparation when teaching mathematics subject.

Almost all teachers complain of load not being enough and only 10% teachers stated that they carry out remedial if the load is not enough.

4.9.2 Methods of teaching

The findings were drawn from appendix 3 question 16 indicated that the majority of teachers used talk and chalk methods which gave a percentage of 40% and 30% of teachers uses discovery, learning not merely the use of many methods but the use of favorable or appropriate method.

According to professor Sangendo “A z Quotes Mursell James” (1992:4), “effective teaching is simply the clever use of a bag of tricks forgetting this and that into children heads, it is the revealing of possibilities other wise undreamed of transmitting of a vital spark, projecting of influence making for better happier lives” and he teacher should aim at transmitting the long life experiences to enable a child live a happier life

4.9.3 Class room instruction

All teachers here claimed that their pupils showed interested in mathematics subjects. However, when students consulted the results indicated negative trend apart from few who admitted that they had interest in subject and this gave 10% and their morale was ranked quite low up to I don't care attitude refer to table (4.1).

4.9.4 Instructional teaching materials and pupils performance

Three areas were investigated under this area. All teachers conceded that they didn't have enough teaching materials and this experienced a vacuum of 90%, on the inadequately t books 10% contended that had enough teaching materials. Half of the teacher's complained that the mathematics text book had irrelevant and out dated content and only

10% conceded that pupils borrows the books for private study. The entire problem under the study accounted for 80% (see table 15).

4.9.5 Testing and evaluation

The researcher was interested in finding out the level at which teachers assess the performance of learners in the subject. The findings drawn from appendix 3 questions 11,12 and 13, results reveled that 75% of the teachers gave tests but only half of them (50) displayed the students results 60% of the teachers concede that student do exams on termly basis and 30% stated do exams monthly and this accounted for both 45%.

4.9.6 Unique problems raised by mathematics teachers

Teachers were asked to state challenges they faced as they teach the subject, 60% complained of lack of test books, 90% lacked teaching materials, 70% to many problems and 80% automatic promotion.

Only 52.5% experienced the problems in each of the following:-

- (i) Poor back ground
- (ii) Automatic promotion
- (iii) Inadequate time
- (iv) Little salary

- (v) Too many children
- (vi) Lack of library.

Teachers under this area of study had a problem that accounted for 53% of the gross problem that affect mathematics performance.

4.9.7 Summary: table of scope of influence of mathematics teaching and learning

This section gives a summary of all the investigated variables that affect teachers and the scope of influence on the teaching of the subject only 46% of the teachers were able to prepare their lesson plans with ease. This implies that 54% of mathematics lesson were taught without preparation or using take lesson plans.

- (i) Testing and evaluation the teachers accounted for 40% and suffered a defeat of 60%.
- (ii) The problems encountered where teaching accounted for 80% and only 20% and unique problems raised by teachers altogether affected their performance by 52:5% where as the general attitude of mathematics subject and classroom instruction fetched percentage of 80% and 75% respectively.

There were only two variables, which were investigated here from the students and results were as follows:-.

4.9.7.1 Students Attitude to Words Mathematics

According to the findings drawn from appendix 4 question 1, 2 and 3 indicates that, student had little morale or attitude towards mathematics and findings shows, that the causes were teachers don't associate with learners and therefore lack motivation. According to chance (1992, 1993)

“urges that both types of rewards have a place in education setting and teachers need to strike a balance regarding the use of extrinsic and intrinsic form of motivation”.

4.9.7.2 Use of library

The study was aimed at finding out to what extent students used the library to supplement on what teachers, teach. However the finding revealed that 72% of student don't use the library and only 28% go to library and even those who use the library, it was discovered only 2.5 use the library daily while 72.5% rarely use the library and the reason which were given was their libraries lack enough

mathematics text books accounting to 75% and 90% of student who go to library find the content in text books hard and their teachers don't assist them.

4.9.7.3 Students testing and evaluation.

The researcher here was interested in establishing whether students do monthly exams but the findings indicated that 75% of students do exams and at end of the term, 38% students go home with their home and only 12.5% of students carry a holiday package when going Home and only 25% of the students do weekly exams. The finding source shows that the failure is due to lack of financial materials.

4.9.7.5 Unique problems raised by students

The students were asked the problems which they faced in the learning of mathematics. The findings indicated that the student were not catered and this gave rise of 75%, teacher use, abusive language and this accounted for 52% .

Teacher gave few exams and this faced the defeat of 75% and big challenges was, few teachers and this accounted for the greatest problem of 100% (refer to table 2:1).

4.9.7.6 Student investigated variable summary

76% students have good back ground of mathematics at lower level and the great challenge was student lost morale, few used library accounted for 18% only and only 10% of pupils can successes to read and interpret the concept in this text books despite teachers don't assist them (table 20.3) others problems encountered were as follows;-

- (i) Student testing and evaluation
- (ii) lack of enough text books
- (iii) Unique problems raised by students
- (iv) The student under this area of study had the problems that accounted for 67.7% of the gross problems that affected mathematics.

4.9.7.7 The Head-teachers, mathematics teachers and student summary investigated variables.

In this last part of the study, the man focus of the researcher is make a summary of the variables investigated in line with success and failure.

4.9.7.8 Performance summary

The findings indicated that the Headteachers success accounted for 37.5% while the failure accounted for 62.5% whereas the mathematics teachers performance was ranked success to 38.7% and failures accounted for 61.3% and the students themselves accounted for 67.7% failure and only 32.3% success.

The great magnitude to the poor performance of mathematics is attributed to the students themselves 67.7 due to indiscipline, lack of motivation as its indicated in the books of psychology, a person cannot learn unless motivated, the attribute of the Head teachers in failure to provide the materials to use, carry supervision and finally teacher success accounts only 38.7% slight lower than that of the students and Headteachers.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

In light of the findings clearly outlined chapter four of this report, below was the condensed summary of influence for both Head-teachers, mathematics teachers and students on the performance of mathematics. The Head-teachers met 70 administrative challenges that accounted for 62.5% their subordinates the teachers 135 challenges as class managers which accounted for 61.3% and finally the students faced 488 challenges which also accounted for 67.7%.

The scope of the problem that caused general poor performance of mathematics in Bugahay county accounted for 65.8%.

In nutshell the Head teacher, teachers and student investigated variables had significant effect on the performance of the mathematics subject.

Instructional teaching materials

- There was lack of teaching materials.

- There was lack of mathematics text books and those which existed were outdated ones.

This was greatly a result of lack finance and finally affected performance of both the administrators, mathematics teachers and students.

Testing and evaluation

- There was minimum assessment and evaluation of students by teachers and this was strictly based on monthly and end of the term and this was attributed from both the head-teachers, mathematics teachers due to lack of finance and hence leading to poor performance of mathematics.

Methods of teaching used

- Most common methods of teaching used were mainly guided discovery and discussion method which did not assist people much especially in application and remembering of the mathematical concepts.

Responsibility of teachers in the learning of mathematics

-
- The effect of mathematics teachers in the learning of the subject was minimal in the way that it did not motivate the students and this resulted in poor performance of students in the subject.

5.2 Conclusion

The significant effect on pupils' mathematics performance summarized in the previous section was attributed to a number of factors. The factors according to the findings here conclusively as follows:-

- Schools were generally under staffed
- Schools lack up to date and adequate text books
- Head-teachers lacked professional competence.
- Head teachers had little time for instructional supervision.
- Head-teachers didn't select conduct teachers needs assessment
- Head-teacher didn't select and evaluate teaching aids.
- Politicians / parents involvement in school programmes was minimal.
- Many teachers had not gone for retraining.
- Head-teachers found problems in organizing instructional and organizing demonstration lessons.

- Teachers had difficulty in selecting appropriate materials, teaching methods, directing study, and securing pupils' participation organizing for remedial.
- Teachers didn't help learners to speak English voluntarily.
- Students were not allowed to borrow books for private work.
- Team teaching and demonstration lessons lacked.
- Poor background of the learners.
- Low salaries for classroom teachers.
- Time for carrying out roles that are supposed to be done at school lacked for both head-teachers, teachers and students.

5.3 Recommendations

Since the school is the only readily available contact point for learning mathematics. There is need for it to take an active role in laying strategies that can enable students master mathematics.

Schools provide all the exposure and indicates what and how to teach it. In light of the above observation and what has already been outlined, in my conclusion, the researcher recommends that the following be done to alleviate the problem of poor performance of

mathematics in secondary school in Bugahya county in Hoima District.

5.3.1 Head teachers role

- There is need for schools to acquire sufficient and up to date mathematics books and syllabus to teachers.
- The Head-teachers should liaise with the national curriculum development to in this regards to get appropriate books.
- There need for Head-teachers put up remedies to construct libraries and if expensive or difficult spare a room that could work as a library.
- Head-teachers should organize refresher causes, where teachers are exposed or reminded on the new approaches of teaching of mathematics. Good teaching methods can expose learners language skills including speaking which teachers complained of about.
- As Head-teachers, there is need for them to conduct regular staff / assessment in order to establish deficiencies that could affect the performance of the subject for example problems in lesson preparation, scheming and syllabus interpretation etc.
- There is need for the ministry of education to increase on the number of teachers in school especially those in mathematics and this greatly helps in control and management which turn facilitate learning.
- There is need for management training programmes for head teachers to check the discrepancy of professional incompetence among school manager and it is necessary because the Head-teachers

are curriculum supervisors who should be well versed with all instructional activities and the related problems.

- There is need to sensitize parents, politician and community on the roles as the education stake holders.
- There is need for the government to supply the grant in time and Head-teachers to put into vote correctly.
- There is need for board of governors to functional properly.
- Headteachers needs to appraise the teachers performance this could act as an important of motivation.

5.3.2 Mathematics teacher's role

Formal education is based on assumption that human beings can transfer what they have learned in one situation to another either in school setting or out side the school. For that matter according to (Klausmerier and Good win 1986) advanced two essential factors for the above variable.

- (i) "Retention can only occur if some thing has been initially acquired"
- (ii) "Transfer of acquired out comes to raw situation can only occur if the out come has been retained.

In light of the above psychologists, the researcher recommends the followings measures to teachers of mathematics to enable learn factors which can affects students' performance in subject.

- (i) There is need for the teacher to employ different instructional strategies and goals which will ultimately increase students' level of achievement and retention.
- (ii) There is need for mathematics teachers to provide to learners with opportunities for the application of newly learned concept and principles for example by assessment or evaluation.
- (iii) There is need for teachers to guide in the pupils the mathematical content in books.
- (iv) The need for teachers to carry out individual difference in terms, of sex age and ability.
- (v) There need for teachers to intensify evaluation.
- (vi) There is need for teachers to carry out guidance and counseling (Career Guidance).
- (vii) There is need for teachers to motivate their learners especially in mathematics subjects.
- (viii) There is needs for teachers to curb absentism, late coming and lesson dodging.

5.3.5 The role of students

- (i) There is need for students to attend regularly.
- (ii) There is need student to be punctual in both lessons and schools.
- (iii) There is need for parents to provide lunch for their students.
- (iv) There is need for students to cooperate and work in groups
- (v) Students needs to have discipline and obey their teachers.

APPENDIX 1: TRANSMITTAL LETTER



Kampala International University
Institute of Continuing and Distance Education

P. O Box 20000
Ggaba Road, Kansanga, Kampala, Uganda

Office of the Deputy Director, ICDS Tel: 256-41-373-498

REF: C:\Documents and Settings\RAU\My Documents\letters\research referral.doc

August 22, 2007

TO WHOM IT MAY CONCERN

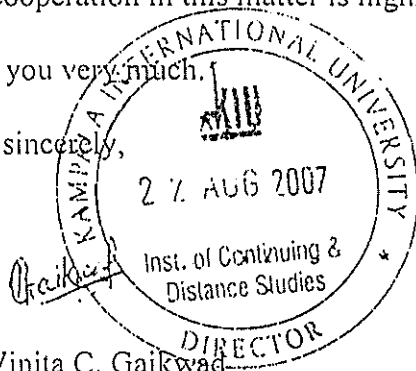
This letter serves to request your permission for our student

to conduct a student research in your school. This research is done on student basis as part of the learning process, and no information learned about the school shall be used for any other purpose.

Your cooperation in this matter is highly appreciated.

Thank you very much.

Yours sincerely,



Mrs. Vinita C. Gaikwad
Deputy Director, ICDS

APPENDIX 2: QUESTIONNAIRE FOR HEAD TEACHERS

Confidential

This questionnaire seek to find out problem of teaching mathematics in secondary schools in Bugahya County in Hoima District so as to find or find or com up with remedies or suggestions for improvement.

Instructions

- (i) Tick the most appropriate answer or fill in the required information.
- (ii) Do not write your name and your school on this questionnaire.

Questions

1. How many students do you have
male Female Total
2. How many teachers do you have in your school?
Female Male Total
3. What is the number of male and female teachers who teach mathematics.
No. of male No of female Total
4. What are their levels of qualification.
LT GV GT
MS PHD
5. What is the work load for each teacher?
6. Do your teachers have staff house
Yes No
7. Are your teachers punctual?
Yes No
8. If No in a question above why
Lack of responsibility

Long distance
Part timers

9. How often do you supervise your teachers (use tick)
Always Some times rarely

10. Do they use a variety of methods in their teaching mathematics?
Yes No

11. If No why?
lack of experience
Lack of time
Environment
Lack of money

12. (a) What common method do your teacher use in teaching mathematics in your school?
Lecture Guided discovery
Brain storming Mining
Rote

(b) If none mention

13. (a) Do your teachers attend seminars, workshops or refresher courses?.
Yes No

(b) If no why in above question (13a)?
Lack of money Lack of time
The government doesn't organise Teacher's refuse

(c) If yes how often in above question (13 a)?
Once a term Year After a month
Never

14. Do you provide to your teachers enough and appropriate instructional Materials?

Yes No

If No in a above why?

Lack of money Teaching materials are expensive

not available None of these mention

15. Identify some of the strength and weakness of mathematics teaching in your school.

(a) Strength

- (i)
- (ii)
- (iii)
- (iv)

(b) Weakness

- (i)
- (ii)
- (iii)
- (iv)

16. What is the general comment?

.....
.....

APPENDIX 3

QUESTIONNAIRE FOR MATHEMATICS TEACHERS

Confidential.

This question seeks to find out problems in the teaching of Mathematics in Secondary Schools in Bugahya County in Hoima District so as to come out with remedies or suggestions for improvement.

Instructions

- (i) Tick the most Appropriate answer or fill in the required information.
- (ii) Do not write your name and your school please on this questionnaire.

Questions

1. Are you a full time teacher or a part timer?
Yes No

2. How many lesson do you have on the time table per week, per class.

Per week Per class Total

3. Is the work load enough for you to cover the syllabus (Tick one box)?
Yes No Less
Beyond expected I don't know

4. If the load is not enough what do you do
cover what I can afford
Give as much notes as possible
Concentrate on revision using past papers

Remedial teaching

None of the above Mention

5. What do you do when the load is too much for you?

Do you Dodge

Encourage student study on their own

Group students and give extra work

None of the above (Specify)

6. Do you think your student

Perform well perform poorly

Average

7. If your students perform poorly in mathematics what is the cause of this?

Pupils are dull Frequent absenteeism

Poor attitude of parents towards learning

School has many programmes

Too much work load

Indiscipline

8. What is the general attitude of student towards mathematics?

quite low Just average

very good Good

Rather low I don't care attitude

9. What problems do you encounter when teaching mathematics in your School?
- | | | | |
|---------------------------------|--------------------------|---------------------|--------------------------|
| Instructional materials | <input type="checkbox"/> | Content | <input type="checkbox"/> |
| Indiscipline of Students | <input type="checkbox"/> | Community | <input type="checkbox"/> |
| Lack of motivation / low salary | <input type="checkbox"/> | Methods of teaching | <input type="checkbox"/> |
10. (a) Does your head teacher provide you with enough instructional Materials?
 Yes No
- (b) If no why?
 Lack of money expensive to buy
11. Do you carry out assessment?
 Yes No Some times
12. How often do you carry out assessment?
 Monthly Weekly Termly
 Every day
13. What type of assessment do you carry out?
 Summative evaluation Placement evaluation
 Diagnostic evaluation Power Exams
14. What types questions do you give to your students?
 open ended questions closed question
 both

15. Do you give to your students?
 Holiday package Home work daily
 Weekly work
 Do the opening term Exams Monthly

16. What teaching method do you normally use when teaching mathematics in your school?

Question and answer

Discovery method

67

Brains storming

Talk and chalk

Rote method

Field excursion

17. (i) Does the method you use encourage students to participate in Mathematics?

Yes No

(ii) If No why

18. What is your general comment?

.....

.....

APPENDIX 4

QUESTIONNAIRE FOR STUDENTS

Confidential

This Questionnaire seeks to find out problems of learning mathematics in secondary schools in Bugahya county in Hoima District.

Please be free, open and sincere when filling this questionnaire.

Instructions

Tick the most appropriate answers or fill in the correct and required information.

Questions

1. Did you like mathematics when you were in primary or lower secondary School?
Yes No Low marale

(b) If No or low marale why?
.....

2. Are you willing to take the subject up to the higher level?
Yes No I don't know

3. Do you show willingness to participate the lesson when the teacher is mathematics?
Yes No Some time

4. (a) Male and female teachers whom do you prefer
male teacher female

(b) If male why?
Approachable not shire

seems to know the content

(c) If female why?

Behave like parents friendly punctual

use polite language

5. Do you go to the library?

Yes No

6. How often do you go to the library?

Every day once a week rarely

7. Does your school have enough mathematics text books?

Yes No

8. How do you find the content in these mathematical text books?

Shallow Hard brief easy

9. Does your teacher guide you how to use the mathematics text books in library?

Yes No Pupils are too many

Lack of time

10. During teaching, does your teacher associate (be friendly with) you?

Yes No

11. Have you ever done any group work?

Yes No Once

12. Do you do Exams?

Yes No

(a) If Yes how often do you do those Exams?

Daily some times termly

weakly opening of term or year

(b) If No why?

Lack of money teacher is lazy to mark

lack of time

13. Who supervises those Exams you normally do?

Teacher Dos Student Head teacher

Deputy Headteacher Go with them at home

14. Do you do home work?

Yes No

15. Do you teachers mark and correct after they have given you home work?

Yes No

16. Have you ever received any of the following when going home?

Holiday package Home work

weekly test

17. What is your general comment?.

.....

.....