

**INSTRUCTURAL MATERIALS AND PERFORMANCE OF PUPILS IN
SOCIAL STUDIES IN PRIMARY SCHOOLS IN NAKASONGOLA
DISTRICT. THE CASE OF WABINYONYI SUB-COUNTY.**

BY

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**A RESEARCH PROJECT SUBMITTED TO THE INSTITUTE OF
DISTANCE LEARNING AS A PARTIAL FULFILLMENT FOR
THE AWARD OF A DEGREE IN PRIMARY
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INTERNATIONAL
UNIVERSITY**

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DECLARATION

I, OGWANG FRANCIS, declare that this is my own original work and has not been presented to any University for a ward of a degree.

Sign: 

Date: 28/9/2012

APPROVAL

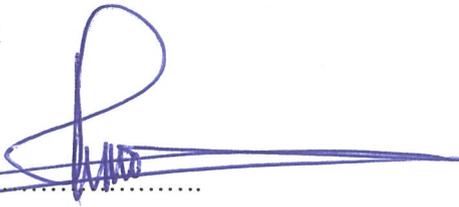
This research dissertation has been done under my supervision and is now ready for submission with my approval

Signed

Mr. Obangkwon Mark

SUPERVISOR

Sign:.....

A handwritten signature in blue ink, consisting of a large loop at the top and a long horizontal stroke extending to the right.

Date:.....

A handwritten date in blue ink, written as 28/07/2012.

DEDICATION

This research work is dedicated to my beloved parents for being my cornerstones, inspiration and foundation to my education and life.

ACKNOWLEDGEMENT

I wish to express my sincere gratitude to the following people and institution all the assistance extended to me towards the successful completion of this research report.

very special thanks goes to my supervisor Mr. Odongo Mike whose monitoring and encouragement and suggestions have helped me greatly in putting together my work

I would also like to extend my sincere thanks to the director Kampala International University Lira study center and all the lecturers whose knowledge and guidance were the source of inspiration and encouragement for the further progress in the course

Finally, I am so gratefully to my sisters and brothers Jane Odaru, Okuvuru Ann Bayo, Ewudopia Jackline, Aldo Barua and Kelen Aluma for their endless financial, moral and care they accorded to me when I was struggling with the research and the whole course.

May the Almighty God bless and reward them abundantly.

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CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter examines the background of the study, problem statement, purpose of the study, objectives of the study, scope of the study, significance of the study, limitations to the study, and conceptual framework.

1.1 Background of the study

The concern of the government is to ensure that goods and services are delivered to the people. On the side of education, the government of Uganda is concerned with providing basic education to the masses. This explains why the government introduced UPE to cater for the growing people of Uganda. Otherwise the public continues to decry the poor academic performance of pupils in primary schools. This requires concerted efforts in teaching the pupils. White & Wilmarth, (1999) contends that effective teaching and learning is the bedrock in performance.

To Brophy (1999) asserts that conceptualisation of opportunity-to-learn to enhance better pupil achievement through effective teaching is paramount. He also identified 12 principles that commonly apply across countries, cultures and cut across grade levels and school subjects. This includes the essence of the curriculum, instruction and assessment, classroom organisation and management practices among which are the principle of a supportive classroom climate that facilitates students to learn in a cohesive and caring learning environment. These principles need effective teachers to implement. Brophy posited that opportunity-to-learn is sometimes referred to as “the degree of overlap between what is taught and what is tested.

Nakabugo et al. (2007) investigated the instructional strategies for large classes in primary schools in Uganda and revealed that classroom control and management difficulties resulting into indiscipline; the difficulty in preparing teaching and learning materials enough for the big numbers; and the difficulty in reaching out and interacting with all learners, especially those with learning disabilities and the slow ones.

1.2 Statement of the problem

Oyam district just like other district is faced by a number of challenges. In the education section, there is performance factor which is quite prominent especially at primary level. A number of factors are attributed to this and lack of in structural materials is one among them. In social studies, performance has continued to infect the children leading to their poor performance at PLE (UNEB 2009). A number of children in this area have taken to the streets; others have taken short cut to wood and technical schools. On the part of girls, a number of them have been pre-maturely married off, while others got pregnant and are wasted at home.

The government of Uganda has attempted to address this problem by encouraging teachers to go for further training; there is also emphasis on workshops and trainings. Many teachers have gone back to school for upgrading. The government also has increased teachers salaries to motivate them to performance. Some NGOs have also been instrumental in providing learning materials and fees for pupils, providing counseling and guidance to pupils among others.

Much as there has been a number of an intervention to this, the problem of poor academic performance still persists. That is why the researcher intends to investigate the effect of in structural materials on academic performance of pupils oyam a district.

1.3 Purpose of the study

The purpose of the study is to examine the influence of in structural materials on performance of primary school pupils in social studies in primary schools in oyam district.

1.4 Research Objectives

This study is guided by the following objectives:

- 1.4.1 To examine how real objects affect academic performance pupils in oyam district primary schools

1.4.2 To find out how group discussion affects academic performance of pupils in oyam district primary schools.

1.4.3 To assess the extent to which the use of illustrations in class affect performance of pupils in oyam primary schools.

1.5 Research Question

The following are some of the questions which will be used as guides during the study

1.5.1 How does the use of real objects affect academic performance of pupils in oyam district primary schools?

1.5.2 How does group discussions affect academic performance of pupils in oyam district primary schools?

1.5.3 To what extent does the use of illustrations in class affect performance of pupils in oyam district primary schools?

1.6 Scope of the study

1.6.1 Subject scope

In carrying out this study focus will be on examining the teaching techniques and performance of primary school pupils in mathematics in private and government aided schools in oyam district.

1.6.2 Geographical scope

The study was conducted in oyam focusing on oyam trading center. Oyam a is one of the districts located in nothern Uganda.

1.6.3 Time scope

The study will utilize data and facts from the years 2006 to 2010. this particular area voted immensely towards NRM' s third term and yet the area still continue to lag behind in terms of education.

1.7 Significance of the study

The study intends to benefit the following people;

1.7.1 The researcher

The researcher will benefit from the research through gaining confidence of meeting top executives from various schools to discuss matters of school performances in mathematics subject and he will gain knowledge as far as education system in Entebbe Municipality is concerned and the research will award him a Bachelor Degree in Education.

1.7.2 Future Researchers

The study will be relevant to future researchers in the area of improving mathematics subject and also form part of pertinent literature to be used on by those researchers.

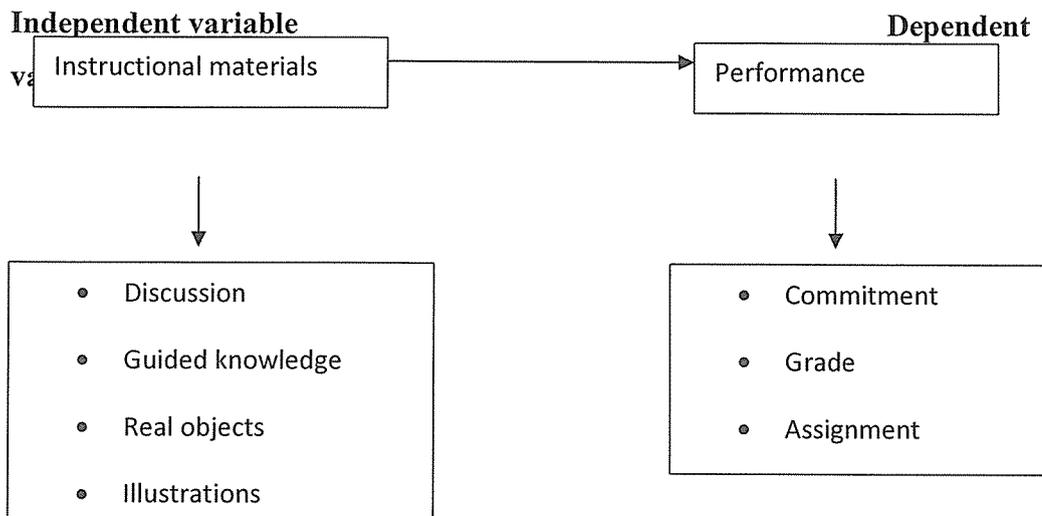
It will help the other municipals and districts that ignored the value or benefits of scoring high in mathematics as an essential subject and attach more value to it.

Policy Makers

The research will be of great value to the policy makers as they will be alerted where they should direct their funds in both government aided schools and private schools.

1.8 Conceptual Frame Work

Conceptual framework showing how instructional materials affect performance



Group discussions provides students with an opportunity to assimilate their knowledge through discussion with their peers; hence supporting each other's learning thus leading to high performance, improved grades of pupils, retention in school having passed beyond average.

The role of the teacher in this case is, one of directing or guiding the students, facilitating and monitoring their learning process. It is her responsibility to plan activities in such a way that children could work effectively in groups under the guidance of their teacher.

Teaching tools and teaching materials to meet teaching objectives will involve illustrations for the pupils to scrutinize the ideas thus leading to better performance, high score grades which leads to retention of the learners at school thus, having task accomplishment.

Adequate well prepared instructional materials determine the amount of learning that can be placed in a learning setting. Good quality materials can motivate interest, maintain concentration and make learning more meaningful and enjoyable, Rogers (1994). The need for the use of instructional materials by the subject teacher in the modern age cannot be overemphasized; the traditional method of talk and chalk approach can no longer improve the performance of students in primary schools academically but also involving the use of real objects.

2.1.3 Guided discovery and academic performance of students

The role of the teacher in this case is, one of directing or guiding the students, facilitating and monitoring their learning process. It is commonly seen that the students in a class have different attitudes and strengths. Therefore, the teacher is a person, who shows acceptance of children, praises each child's strengths and recognizes each child's uniqueness by planning purposeful task having clarity of goals and way it is presented to groom their abilities. In this regard, Cordon (2000) has outlined the duties of the teacher during group task. He states, that during the tasks the teacher should introduce the activity and establish a collaborative working climate; by clarifying expected outcomes. The teacher should ensure that children have a clear understanding of the ground rules for the group work, respective rules and interdependency.

Hence, it proves that although group-work is a student-centered approach but the teacher still has to play a lead role in that, the teacher's role acts as a beacon for his/her pupils. She has, in fact the central role in the whole process of group work. It is her responsibility to plan activities in such a way that children could work effectively in groups under the guidance of their teacher. Cordon (2000) cites Lyle (1993) who points to the importance of teachers encouraging children to see themselves as responsible learners by designing the activities, which ensure children pose questions, make observations and contribute opinions. (p.195)

2.1.4 Group discussions and their effects on performance

Traditionally, a teacher has always been treated as an indemnified personality who leads the whole class, dictating his/her notes and lectures to the students trying to put everything into the minds of the students, this one-way mode of communication has not been that efficient as compared to the new trend of forming different small study groups among the students and they put across their ideas. Effective teachers do understand the effects and outcomes of promoting team-work in their students. It has been ascertained that the existence of the group in the classroom is not a new phenomena. According to Kutnick and Rogers (1994), "From earliest recorded writing about education (certainly from Platto and Socrates), learning used to take place in a group context. Hence, the importance of social interaction in learning can not be overlooked" (P.2)

The idea of group work carries with it a vision of students talking to each other, sharing, reshaping and refining their ideologies and concepts. It means those children's enthusiasm and consequently learning opportunities increase with in-group situations, both cooperative and collaborative. Moyles (1992) also cites Cullingford (1991) about children's preferences for teaching strategies "Of all styles of classroom organization, the possibility of working with some one else seems to them one of the most important, not because they just enjoy working with a friend but because they can receive help, give help and exchange ideas."

Group work provides students with an opportunity to assimilate their knowledge through discussion with their peers, hence supporting each other's learning.

It has also been observed that young students very often in the classroom do not have the opportunity to develop their listening and speaking skills in whole class situation. This have been stated in hand - out 'Use of Language: A Common Approach' issued by School Curriculum and Assessment Authority which says that the amount of time any individual pupil can speak in a whole class situation is limited, so group discussions can increase the opportunities for talk and encourage pupil's to organize their own discussion. Thus, it is through

discussions in a group that students develop a better ability to listen and accept others opinions and develop confidence in expressing their own views by speaking with clarity. Wells (1985) states that all children learn most activities when there are frequent opportunities of collaborative talk with teachers and fellow pupil's. Therefore, this proved that while engage in-group work, students in a way take charge of their own learning.

Recent results for 2010 PLE, UCE and UACE also show most students confessing having performed well as a result of discussion groups they had at their various schools. (Daily monitor; No 070, Friday, Mar 11 2011 pg15)

Group size and type of group is also a very important factor in a learning process of a child. As far as group size and structure is concerned its teacher's ability and competency that how she divides children equally according to the level of the task and their mental ability in the way students support each other, listens to each other and even corporate in finding the solutions of different problems which are given to them for discussion and for writing. According to Kyriacou (1991), "the setting up of group work activities involves a number of decisions about the logistics of their organization. First, the size of the group and how groups are to be formed, second the nature of the task, third the aspect of group work concerns the teacher monitoring, forth the clear time management and the group work activities". (p.58)

After knowing the importance of group work, I analyzed my role as a primary teacher to implement effective group work in my class. I have always felt that very young students attain better outcome if we give them opportunity to interact with their peers in their classroom and to discuss the tasks. Hence, according to the purpose and objectives of the lesson I have tried to make use of group work in my classroom in order to develop the students' communicative and explorative skills. In the feedback session that followed, I emphasized to see the variety and depth of ideas. The group came up with such brilliant points, which were because of the exchange of different ideas with each other. Therefore, I observed, the outcomes of segregating my students in different small study-groups were more

result-oriented and the students did their assigned tasks vigorously and in a better way.

Students of kindergarten were somewhat accustomed to group work strategy since they had been introduced to group work in the previous class. Therefore, I did not face much problem in the organization of group work activities. Initially, I made use of friendship grouping because student felt more secure working with their friends (according to Galton and Williamson (1992) many primary teachers regularly group by friendship, because these groups are more than the seating arrangements. It also fosters collaboration and cooperative learning setup). Once they started enjoying working in groups, then gradually, I started sorting them into mix ability groups with usually high to low or middle ability and high or middle to low ability members. This has worked quiet well since the clever student tends to pull the slow learners along with them as well and therefore providing all students an equal opportunity to extend their ideas.

2.1.5 Illustrations and academic performance

The means or strategies employed by teachers in an attempt to impact knowledge to the learner are referred to as methodology. Osokoye (1996) sees teaching method as the strategy or plan that outlines the approach that teachers intend to take in order to achieve the desirable objectives in subjects like mathematics. It involves the way teachers illustrate, organize and use techniques of subject matter, teaching tools and teaching materials to meet teaching objectives.

Sometimes when a teacher teaches and at the end of the lesson, evaluation is carried out and it is discovered that students are unable to carry out the behavioral or instructional objectives what the teacher needs to do is to examine his teaching methods rather than looking at students as the causes.

Most untrained teachers point accusing fingers on students rather than on themselves when the students are unable to carry out the expected behavior at the end of the lesson or in examinations. Therefore, teachers planning should include: Choice of appropriate teaching materials for illustrations and choice of appropriate teaching methods

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter describes the methods and tools that will be used in collecting the available data. It includes the research design, sampling design, data collection methods and instruments, data processing and analysis and the likely limitations to be encountered.

3.1 Research Design

The research will be conducted using quantitative and qualitative methods and so it will combine descriptive and analytical research designs based on the results from the questionnaires and interviews. The descriptive design will involve examining the teaching techniques and performance of primary school pupils in mathematics in private and government aided primary schools and the analytical design will analyze and explain various phenomena and establish the relationship between the research variables.

3.2 The Study Population

Population is a complete set of individuals, cases or objects having some common observable characteristics that are of interest to the researcher. The target population will be 01-DEO, 02 Division Education Officers, 06 Head teachers, 18 mathematics teachers, 90 Pupils, 20- local community staff which total will comprise 136 people.

3.3 Sampling Design and Sample Size

Table 1 showing the sample size

Respondents	Total number	Sample size
Key informants (education officials head teachers,)	10	Purposive
Teachers	80	
Local community members	40	
Total	130	

Table II Showing sampling techniques

Respondents	Sample size	Method
Key informants	10	Purposive
Teachers	38	Systematic sampling
Pupils	88	Simple random sampling
Local communities	40	Simple random sampling
Total	130	

3.4 Data collection methods

3.4.1 Questionnaires

Data was collected using questionnaires that was carefully constructed to extract information about the study. This was employed to gather information from teachers and pupils.

3.4.2 Interview

The key informants were reached through the use of interviews. Interview is appropriate for collecting in-depth information (Amin 2005). It is also cheaper to apply. This method was applied on the key informants since they don't have time to peruse through the long questionnaire.

3.4.3 Observation review

Instructional materials such as charts, text books, real objects among others were identified through observation method. This is because observation provides the opportunity for physical viewing of the materials.

3.5 Data collection instruments

Data was realized through the use of questionnaires, interview guides, observation check lists, and documentation review. The researcher applied questionnaire to gather information from teachers and students.

3.5.1 Questionnaires

Both structured and unstructured questions were designed. This instrument was used on the teachers and pupils. The respondents were simply made to tick the appropriate responses.

3.5.2 Interview guides

This was used to gather information from the key respondents. This category includes the DEO, head teachers, and district education officials. A list of open

ended questions were constructed. This gave the opportunity to gather in depth information from the key informants.

3.5.3 Focus group discussion

This was applied to collect information from a group of parents and local communities. A small group of 5-10 were organized where data were realized.

3.7 Validity and Reliability

Data were Pre-tested at oyam trading centre. This was meant to show the level of acceptability of instruments to be used in research and any weaknesses or deficiencies of the instruments to be identified and then corrected before the research is conducted like a problem in the questionnaire. This will help ensure validity and reliability of instruments. Reliability refers to the appropriateness of instruments while validity refers to consistency in measuring whatever it is intended to measure.

3.8 Procedure of data collection.

The researcher will upon submission of the final proposal to the supervisor issued a letter of introduction from Kampala International University. This shall then be presented to the DEO for permission to reach the field.

3.9 Data Analysis

Data collected from the field will be first edited, then coded and tabulated. In accordance with the research objectives, the findings will be interpreted using reviewed literature in order to attach meaning to the data collected in order to make it as error free as possible.

CHAPER FOUR
PRESENTATION, DISCUSSION AND INTERPRETATION

4.0 Introduction

This chapter examined the data presentation, discussion of finding and interpretation.

Group discussion and performance

	Agree	Not sure	Disagree
Teachers who are engaged in discussion are facilitated well	38	22	40
Group discussion improves performance of pupils	45	18	37
Pupils are encouraged to form discussion groups	47	12	41
Group discussion is best for pupils	45	10	45

When asked whether teachers involved in group discussions are better motivated, 38% of the respondents agreed to the statement while 40% disagreed with the statement and 22% remained un decided. This implies that teachers don't receive any incentives for holding group discussion.

Fig 1 showing responses on facilitation of teachers who conducts group discussion

Another 40% strongly agreed that their schools hire experts in mathematics to handle mathematics discussions in groups, 20% agreed while 40% disagreed. It implies that many schools hire expert teachers to engage pupils in discussion to improve performance in mathematics. 50% of the respondents disagreed that group discussions can not be used

due to very large number of pupils in the class, 30% strongly agreed while 20% agreed. The implication is that most schools have small population of pupils who can easily be organized for discussions in mathematics.

55% of the respondents disagreed that teachers who engage pupils in group discussions are given incentives by the school administration, 45% strongly agreed. Since most participants disagreed, it can be confirmed that most schools do not give incentives to teachers who arrange group discussions for pupils. 40% of the respondents disagreed that teachers who teach mathematics are rotated in order to give each individual chance to exploit his teaching potential, 33% strongly agreed while 17% agreed. This implies that most school teachers are not rotated.

50% of the respondents disagreed that pupils at times engage in group discussions without the presence of their mathematics teachers, 45% strongly agreed while 5% were not sure. The implication is that most pupils do not take self initiative to discuss mathematics in groups. 42% disagreed that pupils from different schools meet and engage in mathematics discussions, 60% disagreed that group discussion is a poor method of teaching.

4.5 The extent to which guided discovery affects academic performance of mathematics

The researcher used some indicators of guided discovery such as guidance by teachers, quizzes, coaching of pupils, seminars for mathematics to seek the opinions of the respondents.

Using SA = Strongly Agreed, A = Agreed, DA = Disagreed, SD= Strongly Disagreed and NS = Not Sure

Table 5: The extent to which guided discovery affects academic performance of Mathematics

Source: Primary data

According to the results in the table, 90% of the respondents strongly agreed that the pupils are given guidance by their teachers to discover the tricks of passing mathematics,

10% agreed with the statement. The implication is that pupils in primary schools in the area of study are guided to pass mathematics. 60% of the respondents strongly acknowledged that their schools organize quizzes in mathematics for pupils in order to help them discover their talents, 20% agreed while another 20% disagreed. The implication is that quizzes are organized in most schools to test the ability of pupils in mathematics.

20% of the respondents strongly agreed that their schools organize special coaching in mathematics to enable pupils discover skills, 40% agreed while 30% disagreed. 10% were not sure. It implies that special coaching of students is done in many schools to help the pupils discover their talents. 30% of the respondents strongly agreed that mathematics seminars are organized and teachers are always encouraged to attend to gain more skills of making pupils discover their talents, 25% agreed with the view while 45% disagreed. The implication is that some schools encourage their teachers to attend seminars in order to improve their capacity to teach pupils.

4.6 Effect of illustrations on academic performance of mathematics

The study examined the effect of illustrations on academic performance of mathematics. Using indicators like illustrations during lessons, graph work, pencils.

Using SA = Strongly Agreed, A = Agreed, DA = Disagreed, SD= Strongly Disagreed and NS = Not Sure

Table 6: Effect of illustrations on academic performance of mathematics

Source: Primary data

Table 6 showing view of respondents on illustrations

Agree	Disagree	Not sure
70%	29%	1%

As seen in the table, 40% of the respondents strongly agreed that the pupils in their schools were given enough illustrations during mathematics lessons, 30% agreed while another 1% were not sure and 29% disagreed. The implication is that illustrations are

emphasized during English lessons. 30% of the respondents strongly acknowledged that the pupils are given graph papers to illustrate graph work, 22% agreed and 48% disagreed. The implication is that most schools do not provide graph papers for illustration.

Table 6 showing responses on purchase of graph papers

Agree	Disagree	Not sure
60%	20%	20%

60% of the respondents strongly agreed that their schools rarely buy graph papers and the pupils perform very poorly in illustrative work, 20% agreed and another 20% disagreed. 56% strongly agreed that pupils are provided with pencils to use in illustrations, 33% agreed and 11% disagreed. The implication is that most schools provide pencils for illustration. 60% of the respondents strongly acknowledged that children who fail to illustrate are given more time to learn, 30% agreed while 10% disagreed. The implication is that children are allowed time to learn illustrative work in mathematics.

4.7 performances of pupils in mathematics

The study sought information from the head teachers of the selected schools on the indicators of performance of mathematics by pupils such as number of teachers, qualifications, enrolment of pupils, instructional materials available, supervision of lessons, parents' involvement, and motivation of teachers among others.

Table 7: Enrolment by class and gender

Source: School registers

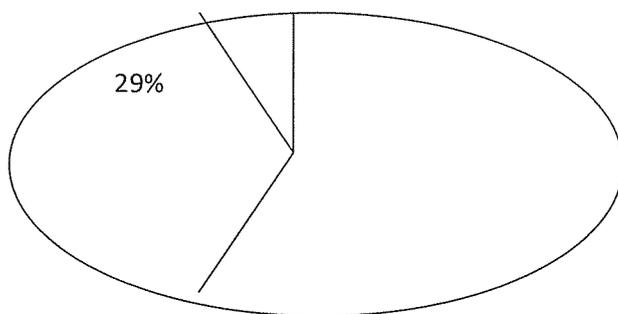
Statistics on enrolment indicated that there were more boys in total across the selected schools in the area of study accounting for 4930 (51%) relative to the girls with 4740 (49%). More pupils were found in the lower classes compared to the higher classes, with P.1 leading in numbers. The implication is that most schools in the area of study have a reasonable number of pupils.

Head teachers were asked to rate the teaching of core subjects like mathematics in their schools. 70% of the head teachers indicated serious teaching of core subjects by experienced and senior teachers. This indicated that they had a committed staff in their schools. 30% indicated otherwise. They cited limited resources for facilitation of teachers due to poor attitude of the parents towards making timely payments. 80% of the head teachers indicated presence of high quality instructional materials such as relevant books, adequate rooms with sufficient lighting, and writing materials among others.

On supervision of lessons, 75% of the head teachers indicated strict supervision of teaching. They indicated use of arrival and departure books signed by teachers on regular basis. Records of work done by teachers were also available in some cases and marked exercises done by pupils were seen in their various books. They indicated that the director of studies (DOS) ensures teaching and testing are done well especially in core subjects like mathematics. Parents involvement was also emphasized, parents are supposed to follow up the performance of their children whenever they visit schools.

A number of methods were suggested for motivation of teachers to ensure they register better results. Recognition and reward systems were indicated. 60% of the head teachers indicated that they motivate their staff through rewarding those who manage to obtain distinctions in PLE. They also cited increased pay as way of motivating teachers. 40% of the head teachers indicated lack of funds to motivate their staff. Students and pupils are given lunch at school as indicated by 56% of the head teachers, 30% indicated that food is only given to teachers while 14% indicated they could not afford lunch at all.

According to the head teachers, performance in mathematics could be improved through changing the attitude of the pupils towards mathematics by continuous counseling, allowing extra time for coaching, rewarding best performing teachers and students, increasing the involvement of the parents towards performance.



55% of the respondents disagreed that teachers who engage pupils in group discussions are given incentives by the school administration, 29% strongly agreed. Since most participants disagreed, while 16% were not sure. it can be confirmed that most schools do not give incentives to teachers who arrange group discussions for pupils. 40% of the respondents disagreed that teachers who teach mathematics are rotated in order to give each individual chance to exploit his teaching potential, 33% strongly agreed while 17% agreed. This implies that most school teachers are not rotated.

50% of the respondents disagreed that pupils at times engage in group discussions without the presence of their mathematics teachers, 45% strongly agreed while 5% were not sure. The implication is that most pupils do not take self initiative to discuss mathematics in groups. 42% disagreed that pupils from different schools meet and engage in mathematics discussions, 60% disagreed that group discussion is a poor method of teaching.

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According to the results in the table, 90% of the respondents strongly agreed that the pupils are given guidance by their teachers to discover the tricks of passing mathematics, 10% agreed with the statement. The implication is that pupils in primary schools in the area of study are guided to pass mathematics. 60% of the respondents strongly acknowledged that their schools organize quizzes in mathematics for pupils in order to help them discover their talents, 20% agreed while another 20% disagreed. The implication is that quizzes are organized in most schools to test the ability of pupils in mathematics.

Agree	Disagree	Not sure
40%	50%	10%

The above response is graphically represented as below(fig one)

Fig one

20% of the respondents strongly agreed that their schools organize special coaching in mathematics to enable pupils discover skills, while 50% disagreed. 10% were not sure. It implies that special coaching of students is done in many schools to help the pupils discover their talents. 30% of the respondents strongly agreed that mathematics seminars are organized and teachers are always encouraged to attend to gain more skills of making pupils discover their talents, 25% agreed with the view while 45% disagreed. The implication is that some schools encourage their teachers to attend seminars in order to improve their capacity to teach pupils.

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Table 7: Enrolment by class and gender

P1	P2	P3	P4	P5	P6	P7	Total
219	202	149	158	162	171	190	1251

Source: School registers

Statistics on enrolment indicated that there were more boys in total across the selected schools in the area of study accounting for 672 (51%) relative to the girls with 579 (49%). More pupils were found in the lower classes compared to the higher classes, with P.1 leading in numbers. The implication is that most schools in the area of study have a reasonable number of pupils.

Head teachers were asked to rate the teaching of core subjects like mathematics in their schools. 70% of the head teachers indicated serious teaching of core subjects by experienced and senior teachers. This indicated that they had a committed staff in their schools. 30% indicated otherwise. They cited limited resources for facilitation of teachers due to poor attitude of the parents towards making timely payments. 80% of the head teachers indicated presence of high quality instructional materials such as relevant books, adequate rooms with sufficient lighting, and writing materials among others.

This represented in fig one below:

Fig one

On supervision of lessons, 75% of the head teachers indicated strict supervision of teaching. They indicated use of arrival and departure books signed by teachers on regular basis. Records of work done by teachers were also available in some cases and marked exercises done by pupils were seen in their various books. They indicated that the director of studies (DOS) ensures teaching and testing are done well especially in core subjects like mathematics. Parents involvement was also emphasized, parents are supposed to follow up the performance of their children whenever they visit schools.

A number of methods were suggested for motivation of teachers to ensure they register better results. Recognition and reward systems were indicated. 60% of the head teachers indicated that they motivate their staff through rewarding those who manage to obtain distinctions in PLE. They also cited increased pay as way of motivating teachers. 40% of the head teachers indicated lack of funds to motivate their staff. Students and pupils are

given lunch at school as indicated by 56% of the head teachers, 30% indicated that food is only given to teachers while 14% indicated they could not afford lunch at all.

According to the head teachers, performance in mathematics could be improved through changing the attitude of the pupils towards mathematics by continuous counseling, allowing extra time for coaching, rewarding best performing teachers and students, increasing the involvement of the parents towards performance.

Table 8: Mean score for the achievement test

Scores	Class mark (x)	Frequency (f)	fx
31 – 40	35.5	13	461.5
41 – 50	45.5	8	364
51 – 60	55.5	15	832.5
61 – 70	65.5	11	720.5
71 – 80	75.5	8	604
81 – 90	85.5	5	427.5
		$\Sigma f = 60$	$\Sigma fx = 3410$

Source: Achievement test results

Considering the above results a total of 36 pupils out of 60 scored less than 60% giving an average of 56.8% and these included 22 girls and 14 boys. This clearly shows that mathematics is still being performed poorly in oyam district since only 40% (24 pupils) got between 60 and 91%.

Following the above discussions, 60% of the respondents agreed that there has been poor performance in mathematics and English subjects, 36% disagreed with the statement while 4% were not sure. This is represented in fig one below.

Fig one

Showing responses on teaching subjects

Figure 7: Showing responses on consultation

Figure 7: Showing responses on consultation

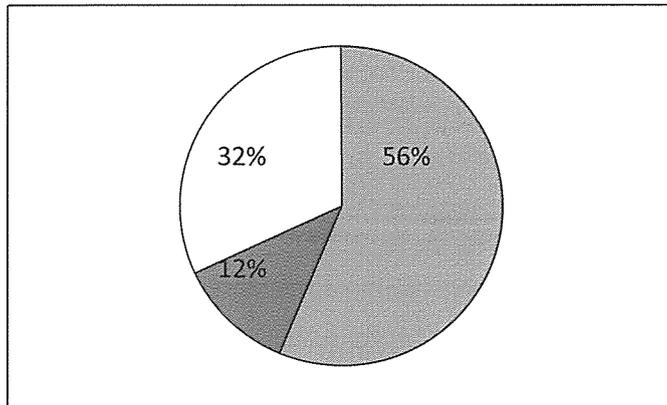
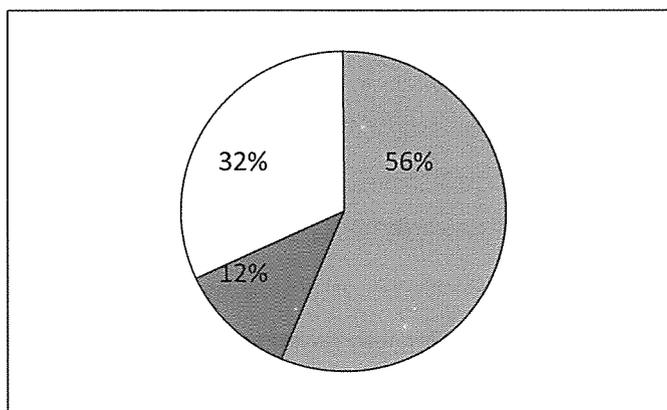


Figure 7: Showing responses on consultation



References

1. Brophy, J. (1999). *Teaching, Educational Practices Series, No. 1*, Paris: UNESCO.
2. Ministry of Education and Sports, (2005). *A comprehensive analysis of basic education in Uganda*. Kampala: Author.
3. Nakabugo, M. G., Opolot-Okurut, C., Ssebbunga, C. M., Ngobi, D. H., Maani, J. S., Gumisiriza, E. L., Mbagha, R., Alupo, C., Byamugisha, A., Tukesiga, J., Bisikwa, R., Ndawula, R. & Bbosa, D. (2007). *Instructional strategies for large classes: Baseline literature and empirical study of primary school teachers in Uganda. Centre for the Study of International Cooperation in Education (CICE), Africa-Asia University Dialogue for Basic Education Development: The second reflective dialogue meeting report (November 15 – 17, 2006, Kampala – Uganda) (pp. 191-206)*. Hiroshima: CICE.
4. Oldfather, P., West, J., White, J., & Wilmarth, J. (1999). *Learning through children's eyes: Social constructivism and the desire to learn*. Washington DC: American Psychological Association.
5. Uganda National Examinations Board (1997). *Teachers' work experience and pupils' schooling experience as determinants of achievement in primary schools*. Kampala: Author
6. Uganda National Examinations Board (2003). *The achievement of primary school pupils in Uganda in English Literacy and numeracy*. Kampala: Author
7. Onyait (1990) and Wambuzi (1991) *Teacher education in Uganda: A research review*. In R. P.
8. Tisher & M. F. Wideen (Eds.) *Research in Teacher Education International Perspectives*, (pp. 11-32). London: The Falmer Press.
9. Corden, R. (2000) *Literacy and Learning through Talk: Strategies for the primary Classroom*. Buckingham: Open University Press

10. Galton, M. and Williamson, J. (1992) *Group work in the Primary School*. London: Routledge
11. Kutnick, P. and Rogers, C. (Eds.) (1994) *Groups in Schools*. London: Cassell Education
12. Kyriacou, C. (1991) *Essential Teaching Skills*. United Kingdom: Stanley Thornes.
13. Moyles, R.J. (1994) *Organizing for learning in the Primary Classroom*. Philadelphia: Open University Press
14. Use Of Language: A Common Approach. (1997) *School Curriculum and Assessment Authority*. SCAA Publications
15. Vygotsky, L. S. (1978) Mind in Society: *The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press
16. Wells, G. (1985) *Language and Learning: An Interactional Perspective*. Brighton: Falmer Press
17. Esyericck and Cookson (1969)*Social research methods: qualitative and quantitative approaches*, (4th edn.). Boston: Allyn & Bacon.
18. Opolot-Okurut, C. (2008). Research-evidence: *A tool for policy and practice adjustment in mathematics, science and technology education. A Paper presented at the 16th Annual Conference of the Southern African Association for Research in Mathematics, Science and Technology Education, (SAARMSTE)*, 14-18th January 2008, Maseru, Lesotho.
19. Patton, M. Q. (1990). *Qualitative research and evaluation methods, (2nd edn.)*. Newbury Park, CA: Sage. Raudenbush, S. W. & Willms, J. D. (Eds.). (1991). Schools, classrooms and pupils: International studies of schooling from a multilevel perspective. New York: Academic Press.
20. Rowe, K.J. & Hill, P.W. (1994). *Multilevel modelling in school effectiveness research*: How many levels? In P.W. Hill, P. Holmes-Smith, K. Rowe, & V.J. Russell (Eds.), Selected reports and papers on findings from the first phase of the Victorian Quality Schools Project. Melbourne: University of Melbourne, Centre

for Applied Educational Research. Effectiveness and School Improvement, 4(1), 17-36.

21. Scheerens, J., Vermeulen, C. J. A. J., & Pelgrum, W. J. (1989). Generalizability of instructional and school effectiveness indicators across nations. International Journal of Educational Research, 13(7), 789-799.
22. Scheenes, J. (1999). School effectiveness in Developed and Developing countries: A review of Facing the consequences: Using TIMSS for a closer look at US mathematics and science education.
23. Sjoberg, S (2005). The Relevance of Science (ROSE) Project. Interim Report. SLS: University of Oslo
24. Andrew Bagala Makerere College stars say discussion group did it for them, Daily monitor news paper No 070 (Mar 2011, pg 15)