

**TEACHING METHODOLOGIES AND ACADEMIC
PERFORMANCE OF STUDENTS IN AGRICULTURE
IN LOITOKITOK DIVISION
KAJIADO DISTRICT
KENYA**

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REQUIREMENT FOR THE AWARD OF
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DECLARATION:

This research project is my original work and has never been presented to any university or institution for any award.

Signature.....

FRANCIS MBUGUA NG'ANG'A

APPROVAL:

This is to certify that this research project has been submitted for examination with my approval as university supervisor.

Supervisor.....

Date.....3.5.08/2007.....

DEDICATION:

I would like to dedicate this report to my loving wife Lucy and my children Peter, Sylvia, Bernard and my dear Mum for their support and encouragement during my research work and studies.

ACKNOWLEDGEMENT:

First I would like to register my sincere gratitude to my supervisor
Nankinga Yudaya for her guidance and support in this report
Secondly, I would like to thank my lecturers, fellow course mates and the entire
Kampala International University fraternity for all their support.

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ABSTRACT:

Many resources continue to be used in trying to uphold high standard of education in our country. However the outcome from this is not reflective. Considering the above, the researcher determined the teaching methodologies used in teaching Agriculture in Loitokitok division with the view of determining if there was any relationship between the teaching methodologies and the academic performance.

The literature review was collected from different sources including books, journals and newspapers and used teachers and students from the different schools in the division. From the interpretation of data the lecture method was the most used method and the practical method was the least used method. The teachers also expressed their views on how to improve academic performance in agriculture in Loitokitok division and researchers, conclusions and recommendations from the research findings.

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CHAPTER I

THE PROBLEM AND ITS SCOPE

1.0 INTRODUCTION

This chapter highlights the background of the study, statement of the problem, theory, objectives, significance of the study and statement of null hypothesis

1.1 Rationale of the study:

Kenya formal education puts much emphasis on technical subjects to enable the school graduates to be self reliant after school. Teaching of agriculture dates back to the colonial era when the teachers of vocational and industrial subjects were recommended for the Africans by the colonial government.

Agriculture being one of the vocational subjects, it has continued to be taught in schools starting from the primary level, middle level colleges and the university. After the completion of the agriculture course, some of the graduates go back to the rural areas where they are involved in the various agricultural production processes.

When the government introduced the teaching of agriculture in secondary schools, many schools did not offer the subject because very few teachers were trained to teach this subject. Most of the schools which were offering the subject were provincial schools where

more facilities were to be found and where we had the teachers who could handle the subject.

Later, many schools joined in the teaching of the subject though the schools did not have the needed resources and manpower and most of the teachers were unqualified to teach agriculture. As a result of resources and manpower, the performance in agriculture started to decline in different schools.

In the course of teaching agriculture when preparing student for Kenya certificate of secondary education, various teaching methodologies are used by teachers depending on the availability of various resources to be found in different schools and also depending on the teacher's preferred method of teaching.

Some of the methods used in teaching agriculture in secondary schools include inspirational methods which are primarily based on high activity on the side of the teacher, Expository method in which the cognitive emphasis is very much high, while the student activity and emphasis on experience is low. One good example of this method is the lecture method in which the main emphasis is on imparting cognitive information to the learners.

Individualized methods are also used in teaching where guided search is encouraged by the teacher or instructor. This may include class and field experiments.

Teaching of agriculture may also use the Discovery method in which the learner's activity, experience and experiments by the

learners and cognitive understanding are used and the main emphasis in this method is the problem solving and providing necessary Framework to the students so that while solving the problem, the learner is also able to learn the rationale and logic of what he has done.

Group methods where the students are given a project to complete in a given time are also a method used in agriculture teaching.

Many teachers combine all the above methods with the aim of improving the students' performance. Agriculture subject being a practical subject, the use of demonstration, project and practical are a must to improve the performance as compared to other subjects where some of these methods cannot be used.

The expected good performance in agriculture subject in Kenya certificate of secondary education in Loitokitok division has not been achieved for a long period with the results showing no improvement year after year with majoring of the students scoring below average.

Many workshops and seminars have been organized in the division trying to identify the cause of this poor performance and various strategies have been put in place but with no marked improvement. This led the researchers to undertake the study and investigate teaching methods in relation to the students' performance.

Loitokitok division is a rich agricultural area bordering Kilimanjaro Province in Tanzania at the slope of mount Kilimanjaro in Tanzania.

Being at the slopes of Kilimanjaro, Loitokitok division is a rich agricultural area where various farming activities are carried on and with this in mind, the students are expected to perform better on the agriculture examination as they are expected to have much knowledge and experience from home. the division has six secondary schools and all of them offer agriculture subject in the KCSE examination. The researcher being an agriculture teacher in secondary school and the division was much aware of the poor performance after attending several meeting with other stakeholders in trying to come up with solutions to improve the results in the future. The researcher expected to use the findings to improve the performance in agriculture in the division. The researcher expected to mobilize other agriculture teachers to improve on their teaching methodologies and thereby improving the results of the students' performance.

1.2 THEORY:

This study was based on the theory of P. Eshiwani which states that Kenya industrialization by the year 2020 will only be achieved proper training and improved agricultural production through proper training and proper allocation of resources. Eshiwani lamented on the way science subjects, mathematics and agriculture continue to be performed poorly in majority of the secondary schools. He commented this when chairing a meeting of industrialist delegates from all over the world in UNEP headquarters in Nairobi.

Agriculture being the backbone of Kenya economy, much emphasis is being put to improve the ailing agriculture sector. A lot of resources have been allocated both in capital investment and training of manpower including training of agriculture teachers, field technicians and farmers. Eshiwani insisted on the need to equip schools with proper resources and manpower in order to impart knowledge in agriculture and science subjects. Pointing that the poor performance could be attributed to lack to resources and poor teaching methodologies. Being a former teacher, Eshiwani continued to emphasize the need to improve teaching of agriculture in both secondary and tertiary institutes.

The use of various methods of teaching was highlighted as one of the areas to be studied as it was noted that some schools were offering the subject and the schools did not have even

demonstration farms and some even lacked agriculture workshop or science laboratories.

Agriculture as a subject in secondary schools is taught using various methods including inspirational method, expository method like lecture method, individualized methods like workshop experiment and discovery method where students are supposed to undertake a project which they should undertake like growing a particular crop or raising livestock before they complete the course.

When using all these methods of teaching, the teachers expect the students to perform well in their final KCSE examination especially bearing in mind that in project work, the student can score very well from their home background where most of their parents are farmers. With this in mind, comparing what majority of the students attain and what is expected, the results are not up to standard and after the analysis of KCSE results for the years 2003, 2004, 2005 and 2006 in all the schools, the researcher observed that the results were poor with the majority of the students scoring below average and this made the researchers to carry out the study on the various methods used in the teaching of the subject in different schools and to see whether there was a relationship between the teaching methodologies and the poor performances.

The Kajiado district KCSE exam analysis (2005) highlighted on the poor performance in the sciences, mathematics and agriculture citing major areas which could have contributed to the poor

performance. Some of the areas highlighted included lack of trained manpower, lack of resources and poor teaching methodologies where teachers preferred using only one method.

After deciding to undertake the study, the researcher put up a number of observations:

- I. Many teachers preferred to use inspirational methods with the students doing very poor.
- II. Many schools did not have agricultural workshop or laboratory where practicals could be undertaken.
- III. Many teachers did not give out homework or written assignments especially to do with projects
- IV. Some schools did not have demonstration plots for agriculture.

1.3 REVIEW OF THE RELATED LITERATURE.

The researcher reviewed the literature in relation to the topic of discussion. The researcher used textbooks, educational magazines, educational journals and newspapers as sources of the literature review.

According to Roussau (1712-1778) where he mentions that the child is a "hero" in the drama of education and as such he must play the dominant role according to Roussau, any process that is not based upon the student activity is not in accord with relent educational theories. With in this in mind much emphasis continues to be put in the teaching methods where learners' activities are

emphasized. These methods which are being emphasized are those which create interest in the learners making the teaching of various subjects interesting to the learners and at the same time simplifying the work of the teacher.

According to Kenya National Examination Council, (2006-2007) syllabus, the need to use various teaching methodologies in teaching agriculture has been emphasized with double lessons being incorporated in school timetables to allow for practical work and demonstrations. The secretary of the examination council emphasized the need to use locally available materials and proper allocating time in trying to finish the syllabus and the same time improving performances. The secretary emphasized this when he officially opened the Kenya Agricultural Teachers' Association meeting in Nairobi where he commented on the poor performance in agriculture subject in the National examination KATA (AUGUST 2007)

According to the Secondary Education Commission (1952-53) "Every teacher and educationist of experience knows that even the best curriculum and the most perfect syllabus remains dead unless quickened into life by the right methods of teaching and the right kind of teachers. Sometimes an unsatisfactory and unimaginable syllabus can be made interesting and significant by the gifted teacher who does not focus on the subject matter to be taught or the information to be imparted but in his/her students- their

interests and aptitudes, their reactions and response. He judges the success of his lesson not by the amount of matter covered but by the understanding, the appreciation and efficiency achieved by the student.

Still more, the commission emphasized the various methods used in teaching as very important in determining the success of the learning process which finally affects the performance of the learners. In the teaching of agriculture in secondary schools, the use of various methods has been emphasized as different topics require different approaches. Some topics are practical in nature while others are more lectures oriented and by combination of different methods, the teacher can be able to make those boring topics interesting thereby arousing the learner's interest.

Likewise the Education Commission (1964-66) which stated "In a modern society where the rate of change and of the growth of knowledge is very rapid, the educational system must be elastic and dynamic, the individual teacher among his colleagues and the individual school within the system of move in a direction or at a pace which is different from that of other similar units within the system without being unduly hampered by the structure of the system as a whole" from the above we that both the teachers and the students have to move with time embracing new technologies both in learning and teaching. New technologies in agriculture may involve use of computers in schools, exposure to new

biotechnologies like the use of tissue culture in crop production or the new technology of organic farming. With all this in mind, teachers will teach effectively and learner will understand and perform better both in their national examination and in the field.

According to M.S. Rao (1999). In order to achieve the aims and objectives of the teaching of agriculture, certain maxims are laid down. The teaching of the subject is then planned and carried out keeping these maxims as the guiding principles. No doubt teaching is an art but the success of the teachers' lies in making his subject so simple as to make it intelligible for his students. According to Rao the teaching of agriculture requires proper planning as some of the topics might be a bit difficult to the learners and therefore requiring more time for preparation and understating the level of the learners. With this in mind the teacher is able to use the most appropriate method since some methods may be too expensive and difficult for trr learners and this may lead to poor performance and also the school may lack some of the resources when teaching topics in soil science.

According to Professor Saitoti (2007) "In a modern society where the rate of change and the growth of knowledge is very rapid, the educational system must be elastic and dynamic" the minister of education said this while commenting on the poor performance in mathematics, sciences and agriculture when releasing the results for KCSE for the year 2006. The minister

emphasized on the need of using various methods and hiring of trained personnel in the teaching profession. He stressed the need for inservice training for teachers in trying to equip them with emerging trends and technologies in education which were to improve the results.

According to SMMASE (April- August 2007) news journal, many teachers teaching agriculture in secondary schools were experiencing a better time compared to the earlier years and this was attributed to the inservice courses attended by science teachers who are also the agriculture teachers. The inservice course tried to highlight the importance of involving the learner through the "PDSI" approach where practicals are highly emphasized. With the PDSI approach much emphasis is put on the learners' activity as opposed to the lecture method. The journal highlighted on the major district where improvements were observed but Kajiado district where Loitokitok division lies was not among them since the SMASSE (strengthening mathematics and sciences in secondary schools) project was still in its early stages. During the various workshops organized to discuss the poor performance in agriculture, several methodologies were pointed which could but used together to improve the KCSE results. These methodologies included Natural learning methods which emphasizes that learning takes place in a natural way. Individualized methods where programmed instructions are given and guided, discovery method was given

much emphasis as was explained by Karega Mutahi, Permanent Secretary ministry of Education at the Kenya secondary schools heads association meeting in Nakuru Kenya Secondary Schools Association (2007).

Dunkin (1989) cited leadership, school culture as some of the factors that operates within school and affects students performance. With this in mind the role of the teacher is very important as it determines the method the teacher utilizes during the teaching and learning process which finally determines the academic performance of the students .

Stevenson and stigler (1992) lists a multiple of factors that a class teacher must be able to respond that are related to the learning outcome. This are school level factors, students related factors, programmed design factors , classroom instructors, climate factors and time on task.

Considering all the above factors, the methodology to be used in teaching is influenced by some of the factors including the classroom instructor, climate factors and time on task since a factor like time may make the teacher use lecture method to cover more of the syllabus as opposed to practical method which is time consuming.

Considering all the above ways in trying to improve the academic performance of students in agriculture the researcher

tried to study the various methodologies used in the various schools and

found out that there is a relationship between the degree of use of the methodologies and the poor performance.

1.4 SIGNIFICANCE OF THE STUDY.

This study will benefit the following disciplines:

- I. The ministry of education will be able to use the findings by stressing the need of using various teaching methodologies and in planning while allocating various teaching resources in secondary schools.
- II. The district supervisors will be able to use the findings when doing their routine school inspection work on curriculum implementation.
- III. The teachers will benefit because they will be able to understand their shortcomings in the various methods they use and the need to use a combination of methods for better results.
- IV. The parents will benefit from the study as they will understand the need to help in equipping school with various resources to be used for the various methodologies.
- V. The future researcher will benefit from the study as they will be bale to move research on new methods of

teaching and also improving of the present methodologies of teaching

1.5 OBJECTIVES OF THE STUDY.

General: This study determined the effects of teaching methodologies and academic performance of students in agriculture in Loitokitok division of Kajiado district.

Specific: this study sought to;

1. Determine the profile of the respondents as to:
 - 1.1 Socio demographic data
 - 1.1.1 Age
 - 1.1.2 Gender
 - 1.1.3 Academic level
2. Determine the degree of teaching methodology as to
 - 2.1 Demonstration
 - 2.2 Lecture method
 - 2.3 Practical
 - 2.4 Project
3. Determine the level of academic performance of the students.
4. Determine if there was significant relationship between degree teaching methodology and level of academic performance.

1.6 Statement of the Null Hypothesis

There was no significant relationship between teaching methodologies and academic performance of students in agriculture in Loitokitok division Kajiado district, Kenya.

CHAPTER II

RESEARCH METHODOLOGY

2.1 Research design

The researcher used survey design where information was gathered systematically using record sheets to determine the level of teaching methodologies and academic performance of students in agriculture.

2.2 Research Environment

The study was conducted in Loitokitok division of Kajiado district, Kenya. The researcher opted for this area because;

- I. The researcher is a practicing teacher in this division therefore he is concerned with the poor performance of the area.
- II. Loitokitok division is one on the divisions in Kajiado district. This area is fertile agricultural area with two big rivers passing across the division; these rivers are river Kikelelwa and Kimegere river. The division has Loitokitok town as its divisional headquarters with three locations namely Odomongi, Kisanjani and Rombo.
- III. The area being fully agricultural potentially and high percentage of the people depending on agriculture matters touching agriculture are sensitive and the need for consideration by all stakeholders.

2.3 Research respondents

Loitokitok division being a small division in terms of the number of secondary schools, the researcher used all the six secondary Schools in the division since the schools are close to each other and gathering of the data was easy. The researcher collected data from 120 students in form four from all the schools.

Each class in every school had forty students, using the class registers; every student having an odd number was selected. All the schools were mixed schools and the students were registered according to admission numbers and therefore the probability of boys and girls being selected were equal. All the schools being single streamed, the researcher used all the agriculture teachers since each school had only one agriculture teacher.

2.4 RESEARCH INSTRUMENTS

This study used researched made instruments which included:

- Students' questionnaires
- Student record sheets
- Teachers' questionnaires

The researcher used a predetermined multiple answer with the corresponding rating scale.

Excellent 5, very good 4, good 3, fair 2, poor 1. The respondents were required to circle on the best option using the above rating.

The researcher gave a record sheet for the selected students to carry out an evaluation of their teacher's performance on the teaching methodology.

Open ended questions were also used by the researcher to get the feelings and viewpoint of the respondents.

2.5 DATA COLLECTION PROCEDURES

Using the transmitted letter, the researcher took the students questionnaires, data collection sheets and the teacher's questionnaires to the different schools where permission was granted by the principle. The researcher handed over the students' questionnaires, data record sheet and the teachers' questionnaire. The respondents were given one week time allotment to fill and answer the questionnaires. The researcher collected the filled questionnaires and the data was processed, interpreted and summarized in forms of bar graphs and descriptive statements.

2.6 STATISTICAL TREATMENT OF DATA

After gathering data, the researcher interpreted the data using bar graphs and pie charts. The researcher calculated the degree percentage of the various methodologies and using a bar graph and pie chart showing each methodology. To calculate the percentage of each methodology, the following formular was used. $\text{Percentage (\%)} = n/N \times 100$

Where n = number of respondents

N = Total population

CHAPTER THREE

3.0 RESEARCH FINDINGS, DISCUSSION AND ANALYSIS

Presentation and interpretation of collected data was computed using percentages in order to show the distribution of the respondents on the various questions.

The percentages were obtained by using the formular

$$\text{Percentage (\%)} = n/N \times 100$$

Where n = number of respondents

N = total population

Below are the questions finding of the students response

3.1 TABLE I - STUDENTS PROFILE

Students category	Frequency	Percentage %
Age (yrs)	Frequency	Percentage
16 – 18	76	63.33
19 – 20	43	35.83
Above 20	1	0.01

From the analysis of the above data, most of the respondents were males with a percentage of 60% and the female were 40% this could be attributed possibly to the schools having more males than the females students.

Most of the students were aged between 16 – 18 years making 63.33% and those above 18years but below the aged 20 were about 35.83% above the age 20 we had only 1 student with 0.01% this indicates majority of the students of form four fall at this age of 16-18 years in the division.

3.2 Level of student's academic performance.

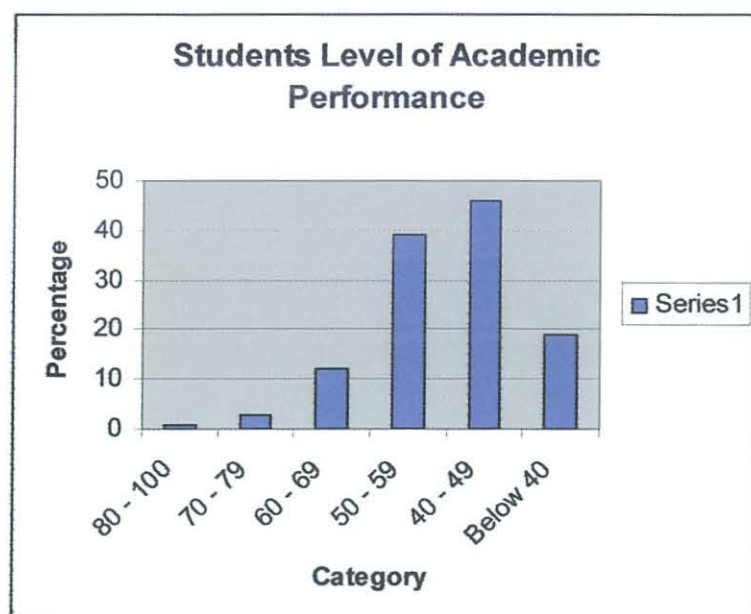
majority of the students of form four fall at this age of 16-18 years in the division.

3.2 Level of student's academic performance.

From the interpretation of the data on student academic performance the following information was obtained.

TABLE II
student level of academic performance

Category marks	Frequency	Percentage (%)
80 – 100	1	0.83
70 – 79	3	2.5
60 – 69	12	10.0
50 – 59	39	32.5
40 – 49	46	38.33
Below 40	19	15.83
Total	120	100



From the above table of bar graph, it can be observed that only one student with a 0.83% scored above 80, three students score at the range of 70 – 79 making 2.5%.

Those scoring at the range of 60 – 69 were 12 or 10% of the total population. About 32.5% of other students scored at the range of 50 – 59. Majority of the students scored at the range of 40 – 49 with about 38.33%^ and those below 40 marks made about 15.83%. In total those scoring below average or below 50 were about 57.26%, of the total population. This is an indication of poor performance.

3.3 DEGREE OF TEACHING METHODOLOGY –

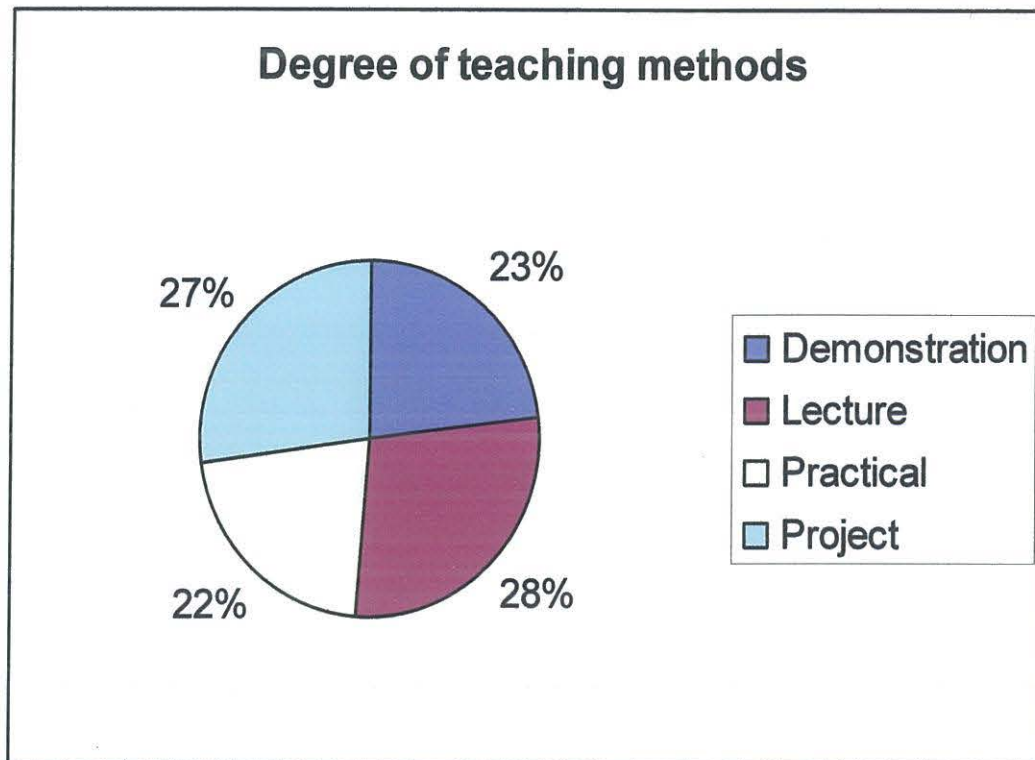
Students questionnaire analysis:

From the questionnaire findings the following data was obtained after summarization of % use of every method using the given scale.

Table III Degree of teaching methodology

Method	Frequency	Percentage
Demonstration	273.05	24.19
Lecture	335.47	27.70
Practical	258.5	21.34
Project	324.0	26.75

From the above, it can be concluded that the lecture method was the most used method of teaching with 27.70 %. This method was followed by project with 26.75 %. Demonstration method was thirdly used method with 24.19 %. The least used method was the practical method with 21.34 %. This can be represented in form of a pie Chat below.



According to Roussau 1712 – 1778, when he mentions that a child is a “hero” in the drama of education and therefore most play the dominant role. From the above observation the lecture method which is teacher oriented does not give the child its role of doing things and this might lead to poor performance.

The Kenya National Examination Council (2006 – 2007) also emphasizes the need to use practical methods in teaching agriculture, this being not the case with practical method having the least percentage of 21.34. Then, the students are not likely to perform better.

TEACHERS PROFILE

3.4 From the teachers questionnaires the following data was obtained and summarized.

DISTRIBUTION PROFILE

Category	Frequency	Percentage %
Gender		
Male	4	66.67
Female	2	33.37
Age (yrs)		Percentage
25 – 30	2	33.37
31 – 40	3	50%
41 – 50	1	16.63
Above 50	0	
Academic level		
Master Degree	0	0
Bachelors	4	66.67
Diploma	2	33.33
Certificate	0	0

Finding from the above table indicates that majority of the agriculture teachers were males making a total of 66.67% compared to female with 33.33%.

Majority of the teachers were at the ages of 31 – 40 years about 50%, about 33.33% teachers had their age ranging from 25 – 30 years and only one teacher was above 40 and below 50 making up 16.17% of the total number of teachers, this indicates that majority of the teachers had enough experience and therefore capable of producing good results from the students.

Also from the table majority of the teachers had bachelor degree making up 66.66% of the teacher all tow teachers had diploma certificates with 33.33%. These two academic levels are enough when teaching from four students and therefore the performances are expected to be good.

3.5 Degree of teaching methodology

From the teacher questionnaires, the following interpretation on the degree of teaching methodology was obtained using the scale provided.

TABLE V - DEGREE OF TEACHING METHODOLOGY

TEACHER	DEMONSTRATION	LECTURE	PRACTICAL	PROJECT	AVERAGE	INTERPRETATION
I	1.75	3.75	2.25	3.00	2.68	FAIR
II	2.50	3.25	2.25	3.00	2.75	GOOD
III	2.25	3.00	2.75	1.75	2.44	FAIR
IV	3.00	2.25	3.00	2.25	2.63	FAIR
V	2.50	3.75	3.25	1.75	2.94	GOOD
VI	1.75	3.00	2.25	3.25	2.56	FAIR
TOTAL	13.75	19.00	16.25	15	2.66	FAIR

Using of lecture method was the most used method by the teachers with 30% of the total. The teachers used practical method as their second best method with 25.44%, project method was thirdly used with 23.10% all the least used method was demonstration method. This indicates that the students were not actually involved when lecture method was being used and this may have led to the poor performance.

Using a Bar chart

Degree of teaching methodology

Demonstration $\frac{13.75 \times 100}{64} = 21.50\%$

64

Lecture $\frac{19 \times 100}{64} = 30$

64

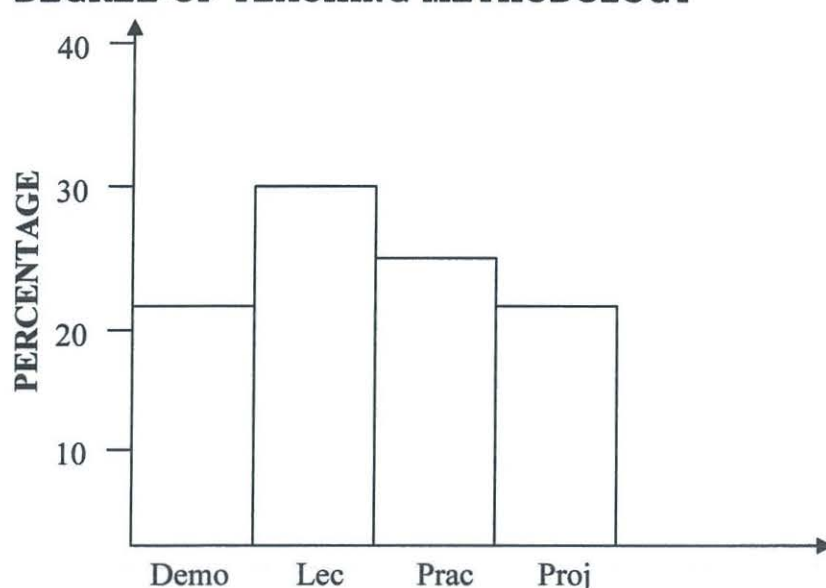
Practical $\frac{16.25 \times 100}{64} = 25.40$

64

Project $\frac{15 \times 100}{64} = 23.10$

64

DEGREE OF TEACHING METHODOLOGY



DEGREE OF TEACHING METHODOLOGY

From the above bar graph lecture method was the most used method having 30% followed by practical method with 25.40% with project method being No. 3 with 23.10 and the least used method as by the teachers was demonstration method with 21.50%. With this information whereby lecture method was mostly used as opposed to teaching of agriculture, more student performance poorly with more use of the lecture method.

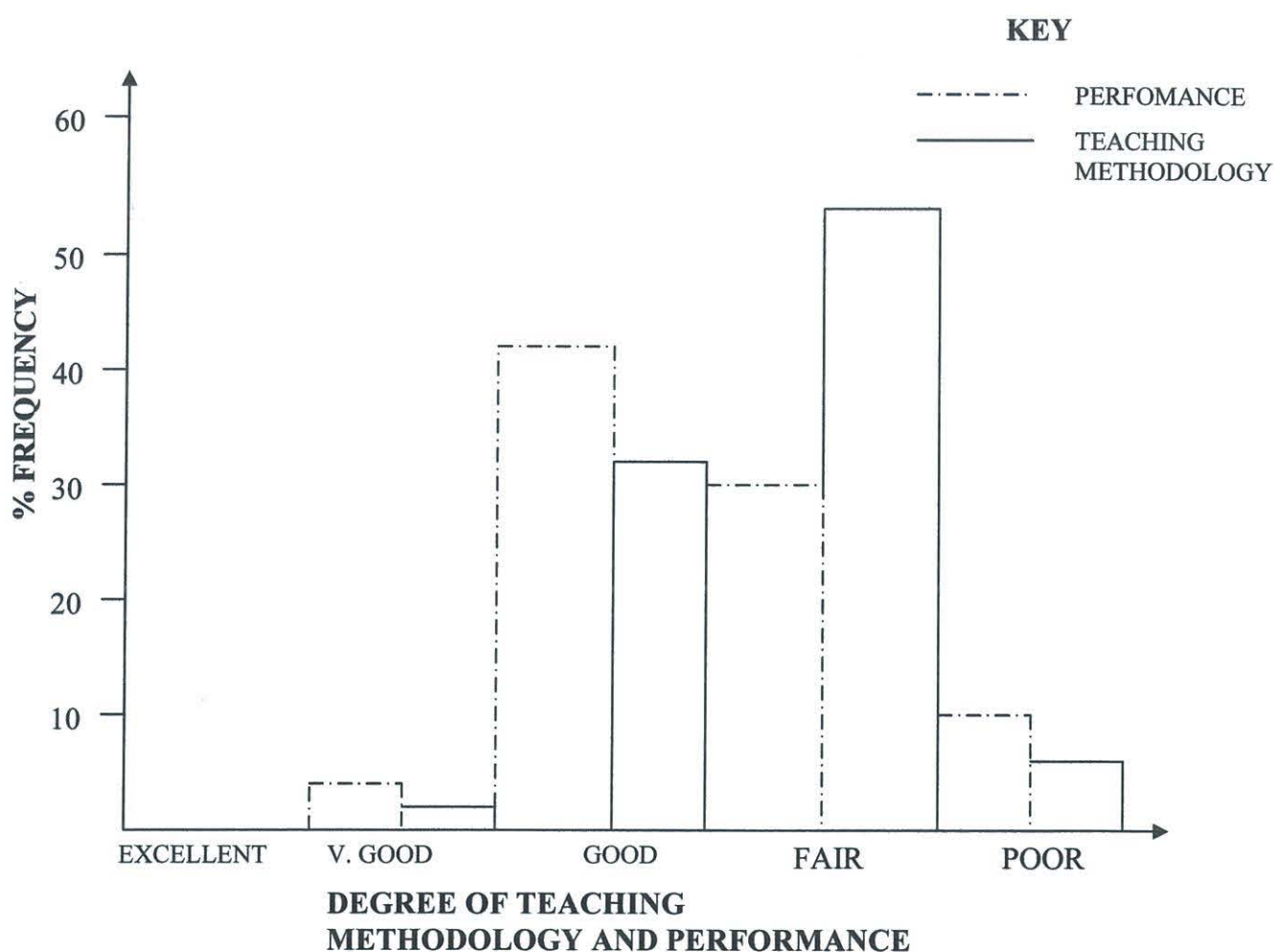
3.6 Relationship between student performance and degree of teaching methodology.

Table VI

	EXCELLENT	V.GOOD	GOOD	FAIR	POOR
STUDENTS PERFORMANCE	0	5	51	38	13
PERCENTAGE	0	4.2	42.5	31.7	10.8
DEGREE OF TEACHING METHODOLOGY	0	5	41	65	8
% PERCENTAGE	0	4	34.16	54.17	6.67

From the above table, on the relationship between student performance and degree of teaching methodology, it can be observed that the percentage of the scale very good for student restoration with a ranking of 42 and that of performance with a ranking of 4 show a correlation also of good and poor with scale of 42.5 and 34.16, 10.8 and 6.67 respectively indicates a degree of relationship between teaching methods and performance using a bar graph.

Relationship between degree of teaching methodology and performance.



From the bar graph it can also be seen that excellent performance and excellent degree of teaching show a relationship with no scores, very good method and performance also indicates relationship with range of 4.2a and 4 respectively, this also applies to good and poor with range of 42.5 and 34.16, 10.8 and 6.67 respectively. Mark relationship was not observed in the scale of fair where the student performance and degree of teaching methodology do not tally.

From the open-ended questionnaires of the teachers said they finished the syllabus and time and expressed the need for more practical work and more resources for practicals and demonstrations. According to the data all the teachers are qualified with 66.7% of the teachers being graduates are 33.33 being diploma holder all the teachers admitted completing the syllabus on time. On the issue of academic performance, the teachers expressed the need for teaching agriculture as a technical subject and the need for more practicals. All the teachers said they were poorly motivated as one teacher lamented that "the money we get is hardly enough to meet for expenses bearing in mind we are occupied the whole day in school with no time to get involved with other income generations activities."

On improving the performance the teachers expressed the need for higher salaries so that they can take more time with the student doing extra tuition.

CHAPTER FOUR

CONCLUSIONS AND RECOMMENDATIONS

4.0 INTRODUCTION

This chapter contains conclusions and recommendations of the research findings.

4.1 CONCLUSIONS

From the interpretation of the various data through the statistical means, all the four methods of teaching were used but the degree of use varies. The lecture method was the most used method with 27.70% as per the students and 30.0% as per the teachers. The least used method of teaching was the practical method with 21.34 by the students, Demonstration project methods were used scoring 24.19% and 26.75% respectively.

The use of all the four methods of teaching was ranked fair and this can be reflected by the students performance where majority of them scored below average indicating that all the four methods were used together and especially the use of practical method and minimizing the use of lecture method since agriculture is a practical subject.

The use of demonstration method should also be emphasized since students will see and do and put the theories into practice. Most teachers admitted covering the syllabus on time and expressed the need for more resources for practicals and demonstration. According to the data all the teachers are qualified with enough experiences to teach and the teachers expressed the need approaching agriculture as a technical subject and the need for more practicals. All the teachers said they were poorly motivated.

4.2 Recommendations.

From the above findings, the researcher recommends that;

1. The schools administration should emphasize the need for more practicals and projects during the teaching of agriculture..
2. The school administration should also provide more resources for the practicals Lessons.
3. The researcher also recommended that the school administration to Motivate the teachers so that they can work harder to improve on the results.
4. Teachers should also use the methods of teaching effectively but emphasize the need for more practical work since practical method was the most emphasized one by the teachers who are more conversant with the curriculum implementation.

4.3 Suggestion for further research.

The researcher expects to do further research on the salary factor and teacher performance in Private schools in Loitokitok Division.

4.4 Limitations of the study.

1. Many teachers did not open up on the areas or ways of improving the performances as they thought the results could be used by administration against them.
2. Most respondents took a lot of time to fill the questionnaire and therefore follow up had to be made.
3. The short duration or time given by the university to undertake the research.
4. Transport – The area being hilly with no permanent road transport was a problem to get from one school to another.
5. Negative attitude. Many respondents showed negative attitude as they did not know how they could benefit from the research.

However the researcher managed to overcome such limitations and carried out research the researcher persuaded the teachers by making several follow ups and also persuaded the respondents to fill them quickly. On transport the researcher hired taxis where public means was a problem.

DEFINITION OF TERMS

For the purpose of this study, the following terms were defined operationally:

Methodology: It's an orderly process in teaching, an arrangement of subject matter which avoids wastage of time and energy and redistribution of emphasis, which aims at securing greatest cooperation from learners and maintains active interest.

Agriculture: This is the study of art and science of crops and livestock production.

Demonstration: A teaching methodology that involves the presentation of pre arranged series of events to a group for other observation.

Performance: Final grade attained by student after sitting for their K.C.S.E examination.

Lecture: A method of teaching pedagogical method where the teacher formally delivers a carefully planned expository address on some particular topic or problem.

Project: A teaching method in which a unit of activity in which students are made responsible for planning and purposing.

ACRONYM

K.C.S.E : Kenya Certificate of Secondary Education

P.D.S.I : Plan, does, see and implement.

S.M.M.A.S.E: Strengthening Mathematics and Sciences in
Secondary Education.

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APPENDIX A

STUDENT QUESTIONNAIRE

This study is trying to find if there is any relationship between the degree of teaching methodologies and academic performance in agriculture in Loitokitok division in Kajiado district, as KCSE student, kindly assist by filling the questionnaire objectively as possible.

TICK ON THE RIGHT RESPONSE

AGE

10-15 ☐

16-20 ☐

ABOVE 20 ☐

GENDER

MALE ☐

FEMALE ☐

DEGREE OF TEACHING METHODOLOGIES

SCALE

5-STRONGLY AGREE

4-AGREE

3-DISAGREE

2-STRONGLY DISAGREE

1-NOT APPLICABLE

Dear respondent, you are requested to circle the best option representing your degree of satisfaction.

5 4 3 2 1

1.Demonstration:

I. Demonstration method always used

II Class room well organized for demonstration

5 4 3 2 1

Iii All students are able to see and follow demonstration.

5 4 3 2 1

IV. The school has enough resources for demonstration.

5 4 3 2 1

2 Lecture method

i. Lecture methods always used in all topics

5 4 3 2 1

ii.

ii. Teachers always well prepared for the lecture

5 4 3 2 1

iii. Teacher always audible when giving lecture

5 4 3 2 1

iv. Various tones always used by the teacher when giving lecture.

5 4 3 2 1

3 Practical

i. Practical lesson always given

5 4 3 2 1

ii. Practical materials always provided on time

5 4 3 2 1

iii. The school has an operational library

5 4 3 2 1

iv. All students actively involved during practical lessons

5 4 3 2 1

4 Project

i. Students always given project work

5 4 3 2 1

ii. Project instruction always given on time

5 4 3 2 1

iii. Project materials always provided on time

5 4 3 2 1

iv. Project work always marked on time

5 4 3 2 1

v. Project report always written and marked on time.

5 4 3 2 1

TEACHERS' QUESTIONNAIRE

Introduction:

This study is trying to find if there is any relationship between the degree of teaching methodology and academic performance in agriculture in Loitokitok division, Kajiado district. As

an agriculture teacher in the division, kindly assist by filling the questionnaire objectively.

TICK ON THE RIGHT RESPONSE WHERE APPROPRIATE

GENDER

MALE ☐

FEMALE ☐

AGE

25 – 30 ☐

31 – 40 ☐

41 – 50 ☐

Above 50 ☐

ACADEMIC LEVEL

Masters Degree ☐

Bachelors Degree ☐

Diploma ☐

Certificate ☐

Other,
specify.....

DEGREE OF TEACHING METHODOLOGY

SCALE

5 – STRONGLY AGREE

4 – AGREE

3 – DISAGREE

2 – STRONGLY DISAGREE

1 – NOT APPLICABLE

TEACHERS' QUESTIONNAIRE

Introduction:

This study is trying to find if there is any relationship between the degree of teaching methodology and academic performance in agriculture in Loitokitok division, Kajiado district. As

an agriculture teacher in the division, kindly assist by filling the questionnaire objectively.

TICK ON THE RIGHT RESPONSE WHERE APPROPRIATE

GENDER

MALE ☐

FEMALE ☐

AGE

25 – 30 ☐

31 – 40 ☐

41 – 50 ☐

Above 50 ☐

ACADEMIC LEVEL

Masters Degree ☐

Bachelors Degree ☐

Diploma ☐

Certificate ☐

Other,
specify.....

DEGREE OF TEACHING METHODOLOGY

SCALE

5 – STRONGLY AGREE

4 – AGREE

3 – DISAGREE

2 – STRONGLY DISAGREE

1 – NOT APPLICABLE

Dear respondent, you are kindly requested to circle the best
Option representing your satisfaction.

Demonstration method

- | | | | | | |
|---|---|---|---|---|---|
| I. Demonstration method always used | 5 | 4 | 3 | 2 | 1 |
| II. Classroom well organized for
demonstration | 5 | 4 | 3 | 2 | 1 |
| III All students are able to see and follow
instructions | 5 | 4 | 3 | 2 | 1 |
| IV The school has enough resources for demonstration | 5 | 4 | 3 | 2 | 1 |
| V The school has a demonstration farm | 5 | 4 | 3 | 2 | 1 |

Lecture Method:

- | | | | | | |
|--|---|---|---|---|---|
| I. Lecture method always used in all the topics | 5 | 4 | 3 | 2 | 1 |
| II. Teachers always well prepared to the lecture | 5 | 4 | 3 | 2 | 1 |
| III. Teachers always audible when giving lecture | 5 | 4 | 3 | 2 | 1 |
| IV. Various tones always used by the teacher while giving lectures | 5 | 4 | 3 | 2 | 1 |

Practical:

- | | | | | | |
|---|---|---|---|---|---|
| I. Practical lessons always given | 5 | 4 | 3 | 2 | 1 |
| II. Practical materials always provided an time | 5 | 4 | 3 | 2 | 1 |
| III. The school has an operational laboratory or workshop | 5 | 4 | 3 | 2 | 1 |
| IV. All students actually involved during practical lessons | 5 | 4 | 3 | 2 | 1 |

Project:

- | | | | | | |
|---|---|---|---|---|---|
| I. Students always given project work | 5 | 4 | 3 | 2 | 1 |
| II. Project instructions always given on time | 5 | 4 | 3 | 2 | 1 |

APPENDIX B

1973 Land Use Loitokitok Area, Kajiado District, Kenya



APPENDIX C
TRANSMITAL LETTER FOR THE HEADTEACHER

AUGUST /10/2007

MR. JOHN MUTAI

PRINCIPAL OLOITOKTOK SECONDARY SCHOOL

P.O BOX 230

LOITOKTOK

Dear Sir,

I am a graduating student at the faculty of education, Kampala International University undertaking a research on teaching methodologies and academic performance in agriculture in Loitokitok division, kindly assist by granting me permission to gather data from your students and teachers by allowing them to fill the record sheets and questionnaires. Their responses will be treated with outmost confidentiality and will only be used for academic purposes and not otherwise.

Respectively yours,

FRANCIS MBUGUA NG'ANG'A

NOTED BY,

NANKINGA YUDAYA

Supervisor.

APPENDIX E

**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

CURRICULUM VITAE

PERSONAL BACKGROUND

NAME : NG'ANG'A FRANCIS MBUGUA
REG NO. : BED/7001/51/DF
AGE : 45 YEARS
GENDER : MALE
MARITAL STATUS: MARRIED
ADDRESS : P.O. BOX 23071-LOWER KABETE
DATE OF BIRTH : 1961
CONTACT : +254 722 257 408

EDUCATIONAL BACKGROUND:

COLLEGE : EGERTON UNIVERSITY
KENYA TECHNICAL TEACHER'S
COLLEGE
SECONDARY : DAGORETTI HIGH SCHOOL
PRIMARY : NKAMA PRIMARY SCHOOL
COURSE : BED SCIENCE

RESEARCH TITLE: TEACHING METHODOLOGIES
AND ACADEMIC PERFORMANCE OF STUDENTS IN AGRICULTURE IN
LOITOKITOK DIVISION KAJIADO DISTRICT-KENYA