

**CAUSES OF POOR PERFORMANCE IN CHEMISTRY
IN SECONDARY SCHOOL A CASE STUDY OF
KAUMONI BOYS' SECONDARY SCHOOL
MAKUENI, KENYA.**

BY

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DECLARATION

I, Nzioka M. Boniface, do hereby declare that "Causes of Poor Performance in Chemistry in Secondary Schools, a case study of Kaumoni boys' secondary school, Makueni, Kenya" is entirely my own original work, except where acknowledged, and that it has not been submitted before to any other university or institution of higher learning for the award of a degree.

Signed-----

Name-NZIOKA BONIFACE

Date-----25-08-2008-----

APPROVAL

This research report has been submitted for examination with my approval as the candidate's student supervisor

Signed: 

Name: Mr. Fred Ssemungenyi

Date: 

DEDICATION

I dedicate this research project first of all to my brother who assisted me in collecting the data. My dedication also goes to students, staff and the entire Kaumoni Boys Secondary School fraternity.

ACKNOWLEDGEMENTS

I acknowledge the assistance and support I got from kaumoni boys' secondary school teaching staff and student fraternity. In a special way I acknowledge my colleague Mr. Waweru for assisting me in the typing of this research report

LIST OF ACRONYMS

C.A.T – continuous assessment test

E.T.E – end of term exam

KAMSSTA – Kaiti mathematics and science teachers association

M.J.D.M.E – Makueni joint mock exam

K.N.E.C – Kenya national examination council

K.I.E – Kenya institute of education

NARC – National rainbow coalition

SMASSE – Strengthening mathematics and science in secondary schools

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ABSTRACT

This research was meant to investigate reasons causing poor performance in chemistry in kaumoni boys' secondary school. The purpose of the study is to collect the empirical data in the performance of chemistry in secondary schools. The data was collected using questionnaires. In the research sixty students were interviewed and four teachers. It was established that from the results of chemistry in Kaumoni Boys' Secondary School and at the national level, there is poor performance in chemistry. Empirical data has shown that lack of facilities, attitudes, absenteeism and drug abuse are some of causes of poor performance in chemistry. Teachers teaching experience was found not to be a factor causing poor performance in chemistry. The researcher came up with recommendations to the problem. Among these ; the T.S.C should lower the teacher student ration, the B.O.G and P.T.A to provide physical facilities, students to change their attitudes, government to give bursaries and sponsoring churches and teachers to give guidance and counseling to students among others. With this recommendations put in place, it is hoped that the performance in chemistry will improve.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Chemistry as a science is a requirement for any course both in the physical sciences and biological sciences. These courses include medicine, surgery, surveying, education, engineering, architecture, natural resources management and many others.

In any formal education a formal curriculum is used. The teaching process involves actual teaching and a standard form of evaluation to ascertain how much learning has been achieved. This is done to the learners through continuous assessment test (CATS) end of the exams (ETE), Kaiti Science and Mathematics Teachers' Joint Exam (KAMSSTA), Makueni district joint mock exams (MDJME) and Kenya certificate of secondary education (KCSE) exams.

1.1 Background of the Problem

According to GIPPS (1990) formed qualifying examinations began in Britain. Exams to qualify for professions began with the medical professions in 1815 followed by solicitors in 1935 and accountants in 1880. It was from this time that examinations became necessary to select those suitable for training as well as to issue certificates indicating competence which in turn controls access and membership to these professions

In Kenya one of the most recognized professions is medicine. In medicine and biological sciences related courses, chemistry is an integral subject which confirms its importance. Although it's not a national policy, most schools make chemistry a compulsory subject leaving learners to choose between physics and biology. This is because of the central role of chemistry to careers both in the physical sciences and biological sciences.

The chemistry course for secondary schools is based on the kie syllabus and takes four years. The assessments is based on cats in the course of the term, KAMSSTA exam for form 1, 2, and 3 at the end of the year, ETE exams for form 1 to form 4 and KCSE exam at the end of the four year course which is set moderated and marked by K.N.E.C. In this case the cats, ETE, and KAMSSTA become intermediate evaluation whereas the K.C.S.E is the summative evaluation. This implies that the performance of a student in the ETE exams, KAMSSTA exams and KCSE exams has a great bearing in his career opportunities, hence his future. This calls for validity and reliability if these exams are to be relied upon as tools of education and measurement and evaluation according to Kithuka (2004), the purpose of evaluation is to make an informed judgment about the quality of a learner. He points out that in a school system evaluation is used for promotion from one level to the next and for classifying different categories of learners the challenge is whether this internal examinations meet the above objective. It is a national goal of the Kenyan government to make Kenya industrialized by the year 2030. This goal is envisaged in the NARC government policy known as “vision 2030” for this to be achieved; many competent grandaunts should be produced. These grandaunts should be well equipped with the necessary knowledge and skills otherwise industrialization by the year 2030 will remain an elusive dream.

Observations reveal that performance in chemistry in internal and national exam is peer. The mean for chemistry for kaumoni boys; secondary school was the second lowest, only above that of mathematics. This is perplexing because chemistry is a core subject for a student to pursue a course in a science related field in diploma and degree levels.

1.2 Statement of the Problem

Performance in chemistry in K.C.S.E and internal exams has been poor in secondary schools. Cats are administered by divisional and district associations' respectively. The K.C.S.E exam is administered by the K.N.E.C.

General observation show that the performance of chemistry both in the internal and external examination is wanting. Since the government, sponsors, parents, and guardians pay dearly to finance secondary education, the performance of chemistry is important not only for its own sake but for the country's development.

Few researches have been conducted on the causes of poor performance in science subjects but the trend in performance has not changed. Its in this background that this research is undertaken. This research therefore aims at studying the causes of poor performance in chemistry in secondary schools.

1.3 Purpose Of The Study

The purpose of his study is to collect empirical data on the performance of chemistry in secondary school. The research goes further to discuss the problems causing poor performance in chemistry in secondary schools.

1.4 Objectives of the Study

- (a) To analyze the availability of chemistry facilities and their bearing on performance of chemistry in secondary schools.
- (b) To analyze students attitude towards chemistry.
- (c) To analyze frequency of students absenteeism from school and its bearing on the performance in chemistry.

1.5 Research Questions

- a) Does availability of facilities and equipment have any bearing in the performance of chemistry in secondary schools?
- b) Does students' attitude in chemistry affect a students' performance?
- c) What is the effect of a student absenteeism from school on his/her performance in chemistry?

1.6 Significance Of The Study

The findings of this research may assist the following groups

- a) Learners to understand that chemistry is an important subject for qualification to a career in the sciences
- b) Teachers to understand the reasons for poor performance in chemistry as a subject
- c) School administrators, sponsors, B.O.G on their role to provide facilities and equipment for the teaching of chemistry.
- d) The ministry of education through k.i.e and K.N.E.C for their role on making the curriculum and syllabuses for chemistry in secondary schools.

1.7 Scope and Limitations of the Study

This research was conducted as a case study in one secondary school; namely kaumoni boys' secondary school in kaiti division, makueni district, eastern province, Kenya. It collected data pertaining to students' performance in chemistry from 2004 – 2007

The limitation of the study include:

- a) financial and time constraints
- b) Adequate data to exhaustively analyse the results.

1.8 Assumptions in the Study

The following assumptions were made for the purpose of this study:

- a) all examinations are reliable and valid and can therefore be used as a measure of academic achievements
- b) there is no variation in the chemistry curriculum between 2004 – 2007
- c) the entry behaviour of the learners during the chemistry exam did not vary between 2004 – 2007
- d) the teaching methods, apparatus and facilities remained the same between 2004 – 2007

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

This study was aimed at investigating the causes of poor performance in chemistry in secondary schools. It is a case study of Kaumoni boys' secondary school. Many studies have been carried out in this particular topic. This chapter will review some of the studies carried out in this particular topic.

2.1 Importance of chemistry

Chemistry is one of the oldest disciplines. Since older days, man has strived to find out the composition of rocks, minerals, and then kinds of matter and how they change and interact. The purification of metals, the production of clothing, dyes, drugs, e.t.c. are some of the earliest works involving chemistry.

In Kenya one of the natural goals is to achieve industrialization by the year 2030; in the sessional paper no. 20 of 1996, on industrial transformation in the country TIQUET report (1999) Industrial development depends on a well trained workforce in many aspects of chemistry. Also worth (1981 comments that "mathematics is necessary in the study of most science subjects."(pg 23)" perhaps that is why students are failing in chemistry. Chemistry is useful as it's a requirement for most science oriented courses "80%" of secondary school leavers who fail in chemistry are technically barred from joining many professions "(Maya, 1996 pg 13)

2.2 General Trends in Performance in Chemistry

A survey carried out by third international mathematics and science study (Timss) 2003) showed that understanding and performance in mathematics and sciences is poor.

Iranian 4th and 8th graders ranked poorly among the participating countries in 2003. According to the daily nation (august 12th, 2004),

Chemistry is one of the worst performed subjects in Kenyan secondary schools, only second to mathematics.

The KNEC (2005) report on the 2004 K.C.S.E examination also confirm that chemistry is poorly performed nationally with a mean of 4.028 out of 12 and with 24.38% all students who sat for chemistry scoring a mean grade of D+ and below

In the analysis done by the D.E.O's office in Makueni district , over 57% of all students who sat for chemistry scored D+ (plus) and below this results are poor hence the reason for the researcher to carry out this research in Makueni district.

2.3 Factors Affecting Student Performance in Chemistry

There are several factors which have contributed to student poor performance in chemistry in secondary schools. These factors have been analyzed under the categories; student related factors; teachers related factors and curriculum and environmental factors; attitude and drugs.

2.3.1 Student Related Factors

In his international encyclopedia on education Torton (1985) quotes that" there is a widespread belief amongst scientist and science teachers that attitude of students toward science is negative "in the same student in north America, a group of students ranked science at number seven out of ten subjects in terms of usefulness in later life .Mudhai(1998) in his research found that 78% of students in secondary school would choose art subject if given a choice between mathematics and sciences and the arts. Wagura (1988) and Kamau (1988) found in their research that negative attitude towards science is one of the major causes of poor performance. This negative attitude is passed from one generation of students to another.

Research has shown that students learn 11% through hearing and 83% through sight. 20% of what is heard is retained while 80% of what is seen and heard is retained. "A good chemistry exhibit arouses Interest--- (curdy, rollet, 1981 pp.14). Instructional materials are useful in teaching chemistry as they bridge the gap between concrete and abstract. Instruction materials are very important (ayot, patel, 1987). Mudhai(1988) quotes "there is inadequate facilities such as text books, laboratories and laboratory equipment in most schools" for this reason, effective teaching and learning of chemistry proves illusive. In the recent past, research has proved that 62% of secondary students have atone time taken some form of drugs (Nacada newsletter, 2001) these drugs range from cigarettes, khat(miraa), alcohol, bang, heroine, marijuana, and many others. Besides brain damage, these drugs cause lack of concentration and indiscipline hence contributing to poor performance.

Victor (1980) found that understanding child development stages is important for teaching and learning chemistry. Behavioral psychologist believe that learning consist of making connections between stimuli and response. Learners should create a strong connection between questions (stimuli) and answer (response) and this should be reinforced to encourage this particular behaviour.

2.3.2 Teachers Related Factors

When poor performance is observed an accusing finger is always pointing at the teachers. This may not always fair, but the teacher cannot exonerate himself as he is a central person in the learning process. The qualification, attitude and characteristics of a chemistry teacher can influence students' performance. Depending on how he/she handles the subject, students will like or hate the subject. "The teachers' clothing, appearance and personality are important. After being taught for sometime, they will have known the teachers well enough to judge him. "(Agot Et Al 1987 pp 198). A chemistry teacher should design tasks for student to learn by discovery other than teaching theories (Otieno, Onditi, 1996).

Poor performance has also been caused by failure to mark assignments and exercises by teachers (Wilkins, 1975). This leads to lack of effective evaluation. Sadker (1988) in America national centre for education statistics did a research on the top ten lists of things people would like to change about their job. 55% of teachers said they would like to change their salary. This means that teachers are not motivated. One of the key factors emanating from teachers is low motivation and frustration by the employee (TSC) and the school administrators in the schools they work in. Wagura (1988) (Kamau, 1998) notes that teachers are not motivated. The Koech commission (1999) came up with the following findings as pertains how teachers' morale:

- Teachers have low morale due to lack of career mobility and non implementation of scheme of service for non-graduate teachers.
- Many trained teachers took their teaching careers as a last result after failing to secure lucrative jobs in the public and private sector; hence they are teachers by default hence contributing to poor performance.

The qualification of some teachers is also under scrutiny. Eshiwani (1982) (In Chesoni, 1997) cite teacher qualification and school administrators among others as some of the factors which influence performance. In his study, Achola (1982) (Chesoli, 1997) show that many schools had a lot of unqualified staff.

Eshiwani (1974) in Kamau (1998) cites the use of inappropriate teaching methods in sciences, shortage of qualified teachers, high rate of transfers of science teachers as causes of poor performance in chemistry. Kamau (1998) in his research found out the following:

- Teachers give less tests and assignments
- Teachers do not prepare lesson plans, schemes of work and lesson notes.

Lack of knowledge about the student on the part of the teacher is a factor contributing to poor performance. Level (1969) in his study notes:

- Teachers should know their students needs, interest entry behaviour, language and personal problems.
- They are individuals with growing mental physical and emotions abilities and should not be regarded as young children.
- They cannot be controlled by power and authority but be convinced to do things for their own good.

2.3.3 Curriculum and Environmental Factors

Tuiyot (1992) in his research found out that only 40% of all secondary schools by 1991 had functional laboratories. He also observed that schools with well equipped laboratories performed better in chemistry.

The KNEC report of 1992 states that many students were unable to use laboratory apparatus, follow instructions make accurate observations, draw conclusions and inferences and analyze data. This is due to lack of practice in using apparatus. This is because the apparatus were not available in the schools.

Apart from apparatus and equipment, a great number of students perform poorly because they come from poor backgrounds whereby they are away from school due to lack of school fees. This tends to breakdown continuity of teaching. The home environment can enhance positive esteem which will enhance academic performance especially the parents' view and their status (cooper 1987). Among children with good education capacity as estimated by intelligence tests; these from better home conditions were more successful in school (punset, 1989)

It follows that contrary to the above studies, is bad home environment is one of the factors contributing to poor performance in chemistry.

The KIE developed the 8-4-4 curriculum used in secondary schools after recommendations of the MacKay report of 1981. It was prepared hurriedly and did not undergo the ten developmental stages outlined by Shindu and Omulando (1992) in the development of a curriculum. The quality of such a curriculum is questionable and directly culminates to poor performance in national exams including in chemistry.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter deals with research design, procedures as followed, sampling procedures, samples or target population, instruments used in data collection, type of data collected, tools used in data collection and finally how the data will be analyzed.

3.2 Research Design

The research design for this study is predictive as the research is interested in answering the research questions. This will be done from the data collected from the respondents who are both students and teachers and also from the past years results in chemistry exams.

3.3 Target Population or Sample

The research carried out in a school with five hundred students and four chemistry teachers. Only form three and form four students were involved in this study.

3.4 Sample and Sampling Technique

Form three and form four class has a total of 120 boys. Simple random sampling technique was used as it gave the chosen population in equal opportunity to be included in the sample. Out of the 120 boys, 60 were sampled and used for the study. The four chemistry teachers were also used to answer the questionnaires for teachers.

3.5 Instrumentation

The written questionnaires are the main instruments of this research. A written questionnaire was given to each student to collect primary data which would not be possible to collect from secondary sources.

There is also a teacher questionnaires designed to give information on facilities available, their motivation, qualifications, attitudes, treatment, by the school administrator and personal opinions.

3.6 Data Collection Procedures

The research was be conducted by first reading related literature from various authors; published and unpublished information as reflected in chapter 2 review of related literature. The groundwork of acquiring the data and the procedural flow are put in place." An estimate of the budget for materials and facilities needed for the research is written. An introductory letter for permission to conduct the research is sought from Kampala international university after which questionnaires are issued to respondents. Once the data is available it is analyzed and conclusions and recommendations are made. Finally the research report is written and presented to Kampala international university by November 2008.

3.7 Data Analysis

The primary data collected from the questionnaires was registered, coded and translated so as to answer the research questions of the study descriptive and inferential statistics will be majorly used in data analysis in this study

CHAPTER FOUR

PRESENTATION OF FINDINGS AND ANALYSIS

4.0 Introduction

This chapter deals with analysis of the data obtained from the questionnaires as reported by various respondents. Through the information gathered from the raw data, the researcher discusses various issues related to the study. In particular the study hopes to look at teaching experience and motivation of students attitudes towards chemistry. The role of chemistry facilities, student absenteeism and use of drugs will also be analyzed. A comparative study will be done between national results and those registered by kaumoni boys' secondary school for the four years.

4.1 Research Findings

4.1.1 comparative analysis of chemistry performance in order to get an insight on the performance of chemistry at kaumoni boys' secondary school, the research obtained data from the Kenya national examination council showing performance in chemistry at national level for the last four years which is presented in the table below

Table 4.1 candidates' performance in chemistry in K.C.S.E

Year	Candidature	Mean score	Mean grade
2003	181,948	35.04	D
2004	193,702	31.45	D
2005	195,463	33.22	D
2006	198,784	37.43	D

In order to relate performance at kaumoni boys' secondary school at national level, the principal was asked to give the schools performance for the last four years and the following table was constructed from the response.

Table 4.2 student chemistry performance at kaumoni boys' secondary school for the period 2003 to 2006 in K.C.S.E

Year	Candidature	Mean grade
2003	98	D-
2004	92	D
2005	96	D+
2006	98	D+

Fig 4.1 comparative analysis of chemistry performance

4.1.1 Student Attitude towards Chemistry

The sixty students sampled responded differently to the questions intended to show their attitude towards chemistry. Most respondents said that they liked chemistry but responded negatively to the question on whether they would like to do more tests in chemistry 75% of the respondents also do not complete their assignments on time. These clearly indicate the student have a negative attitude toward chemistry.

Table 4.2 student attitude toward chemistry

Question	No. of. students	
	Yes	No
Do you like chemistry?	43	17
Would you like to do more assignments?	21	39
Do you complete your assignments on time?	16	44

From the table above the researcher was able to come with another table showing the average student attitude toward chemistry.

Table 4.3 deduced student's attitude

Attitude	Number of students	Percentage
Positive	15	25
Negative	45	75

4.1.2 Availability of Teaching/Learning Facilities and Resources

Data from most the questionnaires show that there is acute shortage of facilities and teaching resources. 47% of the student interviewed did not have chemistry text book. Teachers were relying on one reference book. They also have very few laboratory apparatus and chemicals, charts, models and visual aids. Teachers could not organize practicals due to lack of apparatus. The head teacher agreed the school was handicapped financially and could not provide adequate teaching/learning resources. 70% of the students agreed there are no enough text books in the library.

Table 4.5 availability of teaching/learning resources

Teaching/learning resource	No.of.pieces
Chemistry charts	5
Chemistry models	4
Chemistry visual aids	0
Chemistry text books	175
Chemistry laboratory apparatus	Less than 250

4.1.3 Absenteeism

It was noted that absenteeism was serious problem at kaumoni boys' secondary school. This was majorly due to fees problems which made students to be out of school. The table below shows the absenteeism record of the sampled students in the first term of 2008

Table 4.7 students' absenteeism record for term I 2008

Period of absence	No.of.students	Percentage
Less than 5 days per term	5	8.3
5 – 10 days per term	12	20
11 – 15 days per term	23	38.3
16 – 20 days per term	13	21.7
More than 20 days per term	7	11.7

From the table it can be seen that over 80% of the interviewed students were absent from school for more than 10 days in a term. Clearly this trend is not conducive for good performance hence absenteeism is a factor causing poor performance in chemistry.

4.2.0 Review

From the tables and data in this section we can summarize by answering the research questions. This is tabulated in the table below

Does availability of facilities /equipment affects performance ?	Does student attitude affect performance ?	Does absenteeism affect performance ?
Yes	Yes	Yes

The next chapter discusses the findings draws conclusions and makes recommendations from the study.

CHAPTER FIVE

DISCUSSIONS, CONCLUSION AND RECCOMENDATIONS

5.0 Introduction

This chapter discusses some of the causes of poor performance in chemistry. It gives a brief conclusion deduced from the discussion. The chapter ends with recommendation on what can be done to improve performance in chemistry not only at Kaumoni Boys' Secondary School but at the national level in general.

5.1 Discussion

This study was intended to investigate the factors leading to poor performance in kaumoni boys' secondary school. This research report was necessitated by the fact that chemistry has continued to post poor results even at the national level as shown by table 4.1 from the table the mean grade in chemistry has remained at D (plain) as opposed to other subjects which scored grade B (plain) at the national level. Table 4.2 shows that kaumoni boys' secondary school is not better off; as it has continuously registered a mean grade of D (PLAIN).

In summary the study has found that poor permission is caused by lack of chemistry facilities, poor students' attitudes, absenteeism, drug abuse and lack of motivation among teachers. The research has also shown that poor performance in chemistry is not caused by a teachers teaching experience. One of the factors causing poor performance is lack of adequate facilities for teaching chemistry. Table 4.5 is evidence to the fact that most schools lack teaching resources and materials. The worst hit is the chemistry laboratories which lack basic apparatus. Tuiyot (1992) in his research found that Only 40% of secondary schools by 1991 had functional laboratories. He also observed that well equipped laboratories performed better in chemistry.

Due to lack of adequate apparatus, teachers are not able to organize practicals. Teachers teaching experience does not affect students' performance in chemistry. All the four teachers interviewed have taught for not less than three years. In spite of this wide experience in teaching, the performance of chemistry has not improved. This is an indication that student performance does not depend on teachers teaching experience. Another factor causing poor performance in chemistry which shows that 57% of students have a negative attitude in chemistry over 73% of the students interviewed do not complete their assignment on time 65% of all the interviewed students also would not like to take more assignment in chemistry. This shows that their attitude towards chemistry is negative. Lack of completion of assignment demotivates the teachers and consequently delays the coverage of syllabus. This delay in coverage of the syllabus translates to poor performance in chemistry in the national exams. Table 4.5 over 80% of all students interviewed had been absent from school for more than ten days in a term. Absenteeism is a serious deterrent to the learning process. It breaks the orderly and sequential teaching process and disturbs learning continuity. One of the possible explanations of absenteeism is lack of school fees. This study has been carried out in a poverty stricken area. The community depends on agriculture but the rainfall is unreliable. Another explanation to absenteeism is sickness among students over 77% of the sample have at one time taken some form of drug some of these drugs like alcohol, cigarettes, khat, bhang, cocaine etc some of these drug like khat cause nervous disorder and anxiety. Others like alcohol depress the mind hence lowering concentration. Cocaine and bhang cause hallucination. Continuous uses of these drugs cause loss of memory and eventual mental breakdown. Students under the influence of drugs are indisciplined and are not mentally set to learn hence perform poorly. Sadker (1998) in American national centre for education statistics showed that 55% of teachers would like to change their salary.

This research has shown that 75% of the teachers interviewed are not motivated in their work. Some possible explanations for this are low salaries, delayed promotions by the T.S.C and poor working relation with the school administrators. An unmotivated teacher cannot beat deadlines and will not take his duties seriously leading to poor performance.

5.2 Conclusion

This research was meant to come up with the causes of poor performance in chemistry. The research comes up with the following conclusions:

- There is poor performance in chemistry at kaumoni boys' secondary school and also at the national level.
- Student attitude and drug abuse are some of the factors causing poor performance among students.
- On the side of the teachers, lack of motivation. From the employee and good working relations with the school administrators.
- The study also showed that teachers teaching experience does not contribute to poor performance in chemistry

5.3 Recommendations

Though this study was carried out at kaumoni boys' secondary school, it's worthy noting that the factors investigated are not restricted to one school. The same factors are widespread to many schools hence the researcher came up with the following recommendations:

1. At Kaumoni boys' secondary school the teacher student ratio is 1: 43. The teachers' service commission should work towards narrowing this gap for effective learning by employing more teachers.

2. The B.O.G and the P.T.A should strive to build a modern laboratory and equip it.
3. School administrators should strive to purchase enough text books, charts, models and writing materials. They should check students' entry behavior before admission.
4. Students should work to change their attitude towards chemistry teachers can help in encouraging the learner by giving relevant examples.
5. The government should give subsidies and bursaries to students from poor backgrounds.
6. The teachers and school sponsoring churches should provide regular guidance and counseling to students to reduce incidences of drug abuse.
7. The ministry of education should seek for more funds from the government to raise the salaries of teachers to motivate them.

5.4 Review

This research was meant to investigate reasons causing poor performance in chemistry in kaumoni boys' secondary school. It was established that from the results of chemistry in Kaumoni Boys' Secondary School and at the national level, there is poor performance in chemistry. Empirical data has shown that lack of facilities, attitudes, absenteeism and drug abuse are some of causes of poor performance in chemistry. Teachers teaching experience was found not to be a factor causing poor performance in chemistry. The researcher came up with recommendations to the problem. Among these ; the T.S.C should lower the teacher student ration, the B.O.G and P.T.A to provide physical facilities, students to change their attitudes, government to give bursaries and sponsoring churches and teachers to give guidance and counseling to students among others. With this recommendations put in place, it is hoped that the performance in chemistry will improve.

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Appendix A

Students Questionnaire

Please tick in the following questions to the best of your assessment

Do not write your name on this paper for your identity will be kept anonymous kindly attempt to answer all the questions.

Class (tick where applicable)

Form 3 () form four ()

Below is a list of statement relating to various issues in chemistry as a subject? Use the scale below to rate them according to your opinion.

Circle the appropriate score as follows.

1. strongly agree
2. agree
3. neutral
4. disagree
5. strongly agree

Statement

- | | | | | | |
|---|---|---|---|---|---|
| a) Do you like chemistry as a subject | 1 | 2 | 3 | 4 | 5 |
| b) Would like to do more assignments in chemistry | 1 | 2 | 3 | 4 | 5 |
| c) Do you complete chemistry assignment on time | 1 | 2 | 3 | 4 | 5 |
| d) Do you believe you can attain grade A in chemistry | 1 | 2 | 3 | 4 | 5 |
| e) Chemistry text books are adequate in the library | 1 | 2 | 3 | 4 | 5 |
| f) There are enough apparatus in the laboratory | 1 | 2 | 3 | 4 | 5 |

- g) my parents encourage me to do chemistry 1 2 3 4 5
- h) I have taken some form of drug at home or at school 1 2 3 4 5
- i) my teacher organizes practicals regularly 1 2 3 4 5

APPENDIX B

TEACHERS QUESTIONNAIRES

The following questions are intended to establish teaching methods, presence of facilities, motivation and working relations in your school. Your identity will remain anonymous. Kindly attempt all the questions.

Tick which is applicable

1. gender male () female ()
2. what is your academic/professional qualifications
K.C.S.E () DIPLOMA () B.S.C/B.A. () B.E.D ()
Any other (specify) _____
3. for how many years have you taught chemistry
0- 3 yrs () 3 – 6 () 6 – 9 () more than ten yrs ()
4. . What de-motivates you in your teaching career?

Below is a list of statements relating to methodology, facilities and teaching resources. Use the scale below to rate them according to your opinion.

1. strongly agree
2. agree
3. neutral
4. disagree
5. strongly disagree

Statements

- a) There are enough chemistry textbooks in the library 1 2 3 4 5
- b) The chemistry laboratory has enough apparatus and chemicals 1 2 3 4 5
- c) I organize practicals regularly 1 2 3 4 5
- d) There is need to give more exams 1 2 3 4 5
- e) There is team teaching among chemistry teachers 1 2 3 4 5
- f) Cases of drug abuse have been reported among my students 1 2 3 4 5
- g) There is good working relation with the school administrators 1 2 3 4 5
- h) I was promoted to the next job group by the T.S.C on time 1 2 3 4 5
- i) How many students were absent from your chemistry class in last term

Less than 10 days () 10 – 20 days () 30 – 40 ()



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Office of the Director

24th April 2008

TO WHOM IT MAY CONCERN:

Dear Sir/Madam,

RE: INTRODUCTION LETTER FOR MS/MRS/MR...NZIOKA BONIFACE.....

REG. #.....BED/13238/61/DF.....

The above named is our student in the Institute of Open and Distance Learning (IODL), pursuing a Diploma/Bachelors degree in Education.

He/she wishes to carry out a research in your Organization on:

CAUSES OF POOR PERFORMANCE IN CHEMISTRY IN
SECONDARY SCHOOLS; A CASE STUDY OF KAUMONI BOYS
SECONDARY SCHOOL.

The research is a requirement for the Award of a Diploma/Bachelors degree in Education.

Any assistance accorded to him/her regarding research will be highly appreciated.

Yours Faithfully,

MUIWEZI JOSEPH
HEAD, IN-SERVICE