

**SCHOOL-BASED FACTORS INFLUENCING STUDENTS'
ACADEMIC PERFORMANCE AT KENYA CERTIFICATE
OF SECONDARY EDUCATION IN MAKADARA
DISTRICT, KENYA**

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DECLARATION

This research project is my original work and has not been presented for a degree any other University.

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DEDICATION

I dedicate this work to Almighty God and our family members; wife Everlyne Masinde, late father Samuel Kabala, mother Rosa Kabala and brother Silvano Wesa. God bless you.

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My sincere gratitude goes to my supervisors Dr. Phylisters Matula and Mrs. Lucy Njagi for their professional advice and guidance. Their selfless support during my research work is also greatly appreciated. I wish also to specifically thank all my lecturers for personal encouragement during the learning and teaching process. They will always remain my mentors. My gratitude also goes to the Makadara District Offices especially the DEO, principals, teachers and students in the 8 secondary schools where research was carried out.

May the Almighty God bless all those who in their own way contributed in facilitating the completion of this research work, especially my colleagues in the university of Nairobi and my work mates in Nairobi Pentecostal Church Academy senior school. Thank you all for your support. Finally, and most important, I wish to thank God for sustaining me throughout the study period.

Be Ye Glorified Oh Lord.

ABSTRACT

The purpose of this study was to identify the school-based factors influencing students' academic performance at Kenya Certificate of Secondary Education (KCSE) examinations in public schools in Makadara district, Kenya. The objectives were: To establish the effects of provision of teaching and learning resources on students' KCSE performance in Makadara district. To determine the influence of head teachers supervision in teaching and learning processes on students performance at KCSE examination in Makadara district. To identify the effects of physical facilities, on the students' performance at KCSE in Makadara district. To establish whether the availability of teachers has an effect on performance at KCSE examinations. To identify the effects of teachers work load on the performance at KCSE examinations in Makadara district. The literature review comprised of information under the following sub-titles; provision of teaching and learning resources by the head teachers and school performance, supervision of teaching and learning processes and school performance, head teachers' provision of physical facilities and school performance, availability of teachers and school performance, teachers workload and the school performance. It presented information about theoretical framework and conceptual framework of the study.

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The study employed ex-post facto design. The sample size consisted of a total of 311 respondents in 8 public secondary schools: 8 head teachers, 53 Form Four subject teachers and 250 Form Four students. Data were collected using three sets of questionnaires, that is, the head teachers, Form Four subject teachers and Form Four students. The instruments were piloted and tested for validity and reliability. Descriptive and inferential statistics were used in the data analysis.

Findings of the study revealed that the school -based factors which affected performance were inadequate instructional materials and other related resources such reference books and guides for teachers. Some of the schools in the district did not have adequate teachers. Cases of teachers being transferred from the schools without replacement led to inadequate teachers which affected teaching and learning and ultimately affecting performance. Teachers gave assignments often but were not able to mark the assignments due to much work load and many classes to teach. The study revealed that most of the schools had inadequate physical facilities like the libraries, laboratories, classrooms and dormitories.

Based on the findings, the study made recommendations to arrest the school based factors which affect performance. The recommendations were as follows: The government should provide teachers to schools so that the teaching load could be minimized hence enabling teachers to perform effectively. School should be provided with learning resources by the government and parents to facilitate learning hence improves the academic performance thus the government and parents could assist in the provision of the required resources. Teachers should be

provided with the opportunities for more exposure through in service programs. This would encourage professional growth of the teacher which is significant in KCSE performance. The head teachers should be on the frontline in supervising their teachers then teaching-learning processes and making necessary interventions as far as academic performance is concerned. This could make teachers more effective in teaching.

The study also made suggestions for further research. All these suggestions were geared towards improving the academic performance of public secondary schools in Makadara district. These suggestions included among others that the researchers school conduct a study on other factors that may influence performance in KCSE other than school-based factors. A similar study should also be conducted covering the entire Nairobi province for concrete analysis. Finally, a study focusing on private secondary schools performance should also be conducted.

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LIST OF ABBREVIATIONS AND ACRONYMS

BOGs	Board of Governors
DEO	District Education Officer
JAB	Joint Admissions Board
KCSE	Kenya Certificate of Secondary Education
KNEC	Kenya National Examinations Council
MoE	Ministry of Education
MoE& HRD	Ministry of Education and Human Resource Development
MoEST	Ministry of Education Science and Technology
PDE	Provincial Director of Education
TSC	Teachers Service Commission
USA	United States of America
UNESCO	United Nations Educational, Scientific, and Cultural Organisation.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The United Nations Declaration of Human Rights (1948), the Jomtien Declaration of Education for All (EFA) of 1990, the Dakar Declaration of Education for All (2000), the Millennium Development Goals (2002) and the United Nations Convention on the Rights of the child which Kenya has domesticated to come up with the Children's Act (2001), all state that every child is entitled to basic rights including the right to Education (MOEST 2003). Globally, achievement in public

examination is of great importance to the learners. In China for example, education is transmitted by highly trained tutors and aims at success in public examination leading to employment (Encarta, 2005). Unlike China, Tanzania perceives education as a means of self reliance. This emphasis is laid on what should be acquired during learning and teaching process rather than the passing of public examination. A study in the United States of America (USA) about the influence of school plant on learners' performance concluded that, schools bring little influence to students' performance.

Liew and Pong (2004) conducted a study on factors affecting mathematics and science achievement in Malaysia. The study found out that male students performed significantly better in mathematics and science achievement than female students. Other predictors of mathematics and science achievement noted

by Liew and Pong (2004) were parental education, family structure, student's educational expectations and perceived usefulness in the subject.

Nannyonjo (2007) in her study on analysis of factors influencing learning achievement in grade six in Uganda, found out that pupil age, language spoken at home, class size, time spend on a subject, textbooks and pupil to desk ratio as significant factors influencing learning achievement. The study also revealed that, teacher characteristics such as qualifications, in-service training, age, experience, tenure and school administration were other significant factors influencing learning achievement in grade six in Uganda. Heynemann and Loxley (1983) found out that school effects are significantly determinant of achievement.

The Kenya Government is committed to the provision of education to all her citizens and this is clearly stated in several policy documents such as the Sessional Paper No. 10 of 1965, the Kenyan Education Commission report of 1964, the Presidential Directive of 1978 and the report of the National Committee on Educational Objectives and Policies (NCEOP) of 1979. Other policy documents that show the governments commitment to the provision of education to its citizens include: The Report of the Presidential Working Party on the Second University in Kenya of 1981, The Report of the Presidential Working Party on Education and Manpower Training for the Next Decade and Beyond of 1988. The Report of the Commission of Inquiry into the Education System of

Kenya of 2000. The Poverty Reduction Strategy Paper (PRSP) of September 2001 and All Kenya's Development Plans.

Secondary education forms the basic requirement for selection into tertiary institutions and further skills training (Ministry of Education, 2005). According to the 1998 Ministry of Education Science and Technology (MoEST) Master Plan, secondary education is extremely crucial in that at the end of the cycle, students sit for Kenya Certificate of Secondary Education (KCSE) examinations. Education in Kenya is a highly result-oriented discipline in that prospective candidates and employees are judged by grades on their certificates (Okumbe, 2001). This means that good performance is necessary for selection and placement of students into institutions of higher learning and also in jobs in various firms. Poor performance in KCSE examination undermines students' chances of joining institutions of higher learning and jeopardizes opportunity for job placement and in most cases reduce their active participation in national development.

Performance in KCSE examinations in Kenya has been influenced by a myriad of factors. Many studies have been conducted on factors influencing the performance in KCSE examination in Kenya. For example, Chiriswa (2002) conducted a study on probable factors responsible for poor performance in KCSE in Vihiga district of Western province where he found that inadequate number of graduate secondary school teachers, substandard internal evaluation and

inadequate revision for examinations by candidates were among the factors responsible for poor performance in KCSE examinations. The findings also showed that low teacher motivation and inadequate learning resources were other factors responsible for poor performance in KCSE in Vihiga district. According to Joint Admissions Board [JAB] (1995), most university courses require at least a C+ overall grade for admission besides good grades for the required cluster subjects. It is therefore imperative that students perform well in KCSE examinations in order to compete favourably for scarce places in the university admission.

Good performance of a school is 'relatively equated to good administration. Eshiwani (1983) noted that school administration has an impact on performance and that schools which consistently perform well tend to have sound and efficient administrators. Duignan (1986) concurs with Eshiwani (1983) and adds that school administration is a crucial factor in the success of the school. The qualities that are expected of a school head teacher includes setting an atmosphere of order, creating a climate of high expectations for staff and collaborative leadership and building commitment among students and staff to the school goals. Similar sentiments were echoed by the Provincial Director of Education of Nairobi province while addressing the Kenya Secondary School Heads Association meeting in Nairobi on 27th March 2012. The PDE commented on the academic performance in Nairobi Province and noted that while it was true that some schools in the province had maintained their positions as beacons of academic

excellence and others had registered commendable improvements, the general position was that most schools had shown a decline in academic standards. The PDE therefore challenged head teachers in their capacity as school administrators to do everything within their ability to reverse the disturbing trend.

Table 1.1 shows mean score per district in Nairobi province between years 2003-2010.

Table 1.1 KCSE Analysis - Mean score per district in Nairobi province years 2003-2010

District/Year	2003	2004	2005	2006	2007	2008	2009	2010
Embakasi	4.7434i	4.5964	4.5537	4.8072	5.0520	5.0300	4.8072	5.6190
Westlands	4.9040i	4.8815	4.8655i	5.0549	5.0488	5.2005	5.1900	5.2100
Langata	4.8161	5.0440	4.7369	4.9975	4.9437	4.8765	4.8800	5.3460
Kamukunji	4.6340	4.5740	4.4946	4.7393	4.4252	5.0303	5.0180	5.1450
Starehe	4.5363	4.3850	4.3307	4.4533	4.3996	4.7817	4.7500	5.5230
Kasarani	4.3076	4.2550	4.2680	4.4242	4.4548	4.5063	4.8900	5.2871
Njiru	4.2410	4.2411	4.1757	4.1112	4.1411	4.8010	4.7140	5.1451
Dagoreti	4.2320	4.2740	4.0210	4.0121	4.1120	4.1110	4.1200	5.1321
Makadara	4.1440	4.2121	4.0144	4.0012	4.0013	4.1095	4.1011	5.0743

ⁱ *Source: PDE office Nairobi Province, (2012)*

The mean for Makadara district is generally poor compared to most of the districts within Nairobi province. This poor performance in Makadara district (average mean grade D+) calls for a study on factors that influence schools performance in KCSE in secondary schools and consequently put into effect the necessary measures to curb this trend. Previous studies show that factors such as school culture, quality of students, learning facilities, pupil-text book ratio, school environment and administrative factors influence school performance. This study therefore aimed at investigating further the school-based factors influencing KCSE performance in secondary schools.

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1.2 Statement of the problem

According to annual surveys that had been carried out by the Ministry of Education on secondary schools that performed well in KCSE examination during the period (2003-2009) showed that out of the top 100 high achieving schools, none from Makadara district managed to be among the top schools. Similar analysis in the year 2010 showed that none of the top 100 high ranking candidates nationally was from Makadara district. Analysis conducted by the District Education Officer (DEO) in Makadara district also concurred with the national examination trends. Makadara district was the least performing district among the 9 districts of Nairobi province. The mean scores has been 2003 (4.1440), 2004 (4.2121), 2005 (4.01444), 2006 (4.0012), 2007 (4.0013), 2008 (4.1095), 2009 (4.1011) and 2010)5.0743) (Source: PDE's Office Nairobi province, (2012).

These results are low as compared to other neighbouring districts in the province: Embakasi and Starehe which had 5.6190 and 5.5230 in KCSE 2010 results respectively. Thus due to this dismal performance at KCSE examination, the study aimed at investigating the schools -based factors influencing students' academic performance at Kenya Certificate of Secondary Education in Makadara district.

1.3 Purpose of the study

The purpose of this study was to investigate the school-based factors that influence performance in Kenya Certificate of Secondary Education (KCSE) examinations in public secondary schools in Makadara district.

1.4 Objectives of the study

The objectives of the study were as follows:

1. To establish the effects of provision of teaching and learning resources on students' KCSE performance in Makadara district.
2. To determine the influence of head teachers supervision of teaching and learning processes on students performance at KCSE examination in Makadara district.
3. To identify the effects of physical facilities on the students' performance at KCSE in Makadara district.

4. To establish whether the availability of teachers has an effect on the students' performance at KCSE examinations in Makadara district.
5. To identify the effects of teachers work load on the performance at KCSE examinations in Makadara district.

1.5 Research questions

The following research questions were developed to facilitate the achievements of the objectives of the study.

1. What is the effects of teaching and learning resources on students' KCSE performance in Makadara district?
2. How do the head teachers' supervision of teaching and learning processes affect performance at KCSE examination in Makadara district?
3. What role do the provision of physical facilities play towards students academic performance at KCSE in Makadara district?
4. How does the availability of teachers affect KCSE examination performance in Makadara district?
5. To what extent do teachers work load affect KCSE examination performance in Makadara district?

1.6 Significance of the study

The findings of this study may be significant in a number of ways. First, the Ministry of Education, principals and other stakeholders in secondary schools will be informed on how to tackle those factors contributing to low academic performance. The Ministry of education in conjunction with the Teachers Service Commission (TSC) will be able to employ and post teachers to needy schools in order to help improve the KCSE examinations performance in the district and the country at large. The findings will also help the head teachers in re-examining their administrative style in order to improve students' performance. The research findings will also pave way for future researchers to be able to identify priority areas in which to carry more research in Makadara district. The research findings will instill more knowledge on school-based factors that may influence academic performance in general.

1.7 Limitations of the study

Limitations are some aspects of the study that the researcher knows may negatively impact on the research but over she or he has no control (Mugenda and Mugenda, 2003). The limitations to this study were: The performance being considered was for the students who have already left school where the study was carried out. Other factors like the demographic variables of the teachers' and head teachers in terms of age and grade have already occurred and the researcher cannot manipulate these variables. The study adopted an ex-post facto design.

This was because the researcher do not have any control of independent variables (factors) for the manifestation has already occurred and are inherently not manipulatable. The performance being considered was for students who had already left schools where the study was carried out.

1.8 Delimitations of the study

Delimitation is setting boundaries or study or limiting the scope of study to make it manageable (Mugenda and Mugenda, 2003).

The research was conducted in 8 public secondary schools in Makadara district only because public schools are owned and run by the government and are expected to have better teaching and learning facilities. The respondents of the study comprised the head teachers, Form Four subject teachers and Form Four students because they are in close contact with the school-based factors influencing performance. The researcher was not able to involve other stakeholders such as the Board of Governors (BoGs), Parents Teachers Association (PTA) members with regard to school-based factors influencing students' performance in KCSE because these members are not in close contact with the learners.

1.9 Basic assumptions of the study

The researcher assumed that:

1. It was assumed that all the respondents provided reliable responses.

2. It was also assumed that the KCSE examination results were valid and reliable measure of academic performance.
3. The study assumed that all teachers were competent enough to make students pass in KCSE examination.

1.10 Definition of significant terms

Significant terms that were used in this study include the following:

Academic performance refers to grades representing the sample of a student's achievement with respect to attained academic skills or knowledge for example KCSE.

Administration refers to the process of acquiring and allocating resources in a learning institution.

Head teacher refers to any person appointed by the Teachers Service Commission as the administrative head in the day to day management of secondary school.

Kenya Certificate of Secondary Education refers to the national examination taken by the form four students after a four-year course in secondary school in Kenya.

School-based factors refers to factors found within the school environment that influences academic performance at the Kenya Certificate of Secondary Education.

Performance refers to the students grades in the Kenya Certificate of Secondary Education as rated by the Kenya National Examinations Council with the highest grade being A and the lowest grade E.

Public school refers to a place where students learn and it is owned and run by the government.

Work load refers to the number of teaching lessons assigned to a teacher every week.

1.11 Organization of the study

The study comprise of five chapters. Chapter one, the introduction chapter contain background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, limitations of the study, delimitations to the study, basic assumptions of the study, definition of significant terms and organization of the study. Chapter two comprises of literature review and has introduction, general overview of school-based factors influencing students performance, head teachers provision of teaching and learning resources, supervision of teaching and learning processes, provision of physical facilities, availability of teachers, teachers work load, summary of

literature review, theoretical framework and conceptual framework. Chapter three focuses on research methodology which include introduction, research design, target population, sample size and sampling procedure, research instruments, validity and reliability of instruments, data collection procedures, and data analysis techniques. Chapter four covers data presentation analysis, interpretation and a summary of the research findings. Chapter five contains summary of the research, findings, conclusions, recommendations and suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to review relevant literature on factors influencing academic performance in secondary schools. The chapter include general overview of school- based factors influencing students' performance, head teachers provision of teaching and learning resources, supervision of teaching and learning processes, provision of physical facilities, availability of teachers, teachers' teaching load, summary of literature review, theoretical framework and conceptual framework.

2.2 General overview of school- based factors influencing students' academic performance

Schiefelbein and Summons (1995) identifies two determinants of academic achievement in developing countries as: school resources and processes which include the size of the class, text books, school administration and management, library and laboratory services. Another determinant is the teacher characteristics which include the teachers' qualifications, teacher-student ratio, professional commitment and transfer index.

Duignan (1986) identifies factors that may influence students' performance as: leadership^ style and decision making, school culture and climate, teacher and

student behavior among others. Attempts to put the above mentioned factors into related areas is commendable though it can also be agreed that other determinants are social characteristics and student's traits which includes previous school experience. The above attempt to cluster the factors into related areas is commendable but it can be agreed that it is difficult to generalize the factors and there's certainly no one single factor or a few factors in isolation which can explain the differences in performance between one learner and another.

2.3 Head teachers' provision of teaching and learning resources and school performance

According to Olembo, Wanga & Karangu (1992), head teachers who are accountable to themselves are involved in such activities as: improving teaching and learning, developing supervisory strategies, executing strategies for improvement, maintaining the school system and improving curriculum and library material. Eshiwani concurs that most schools which perform poorly spend less money on the purchase of teaching-learning resources. According to UNESCO Annual Report (2003), academic excellence is synonymous with schools that are able to mobilise resources in partnership with stakeholders and development partners to provide learning and teaching materials, physical facilities and accessories including sanitation, stationary and other inputs to enhance teaching and learning in schools.

Ayoo (2002) carried out a study on factors affecting students' performance in KCSE examination in public secondary schools in Maseno division and found out that from a total of 106 respondents, 85% of them indicated that inadequate availability of textbooks in schools that recorded poor performance was prominent. This implied that there is a strong relationship between availability of textbooks and performance in KCSE examinations. Her study also revealed that availability of laboratory Jibrary and duplicating machine had also strong relationship with performance in KCSE. Inadequately of the above facilities led to poor performance in public secondary schools in KCSE examination in Maseno division.

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Nyatuka (2002, July 1) indicated that heads of new schools had difficulties in teaching and learning materials and equipment. He pointed out that in some cases head teachers ended up using their own money to provide learning and teaching materials. Bett (1986 quoted by Yator , 2003) in his study on availability of teaching and learning materials , established that poor support from the local community in the provision of teaching and learning facilities was prevalent in most schools. Malford and Silins (2003), add that the quality of teaching and learning in the classroom is paramount to raising academic standards.

2.4 Head teachers' supervision of teaching and learning processes and school performance

According to UNESCO (1991), there is mounting evidence showing that the expectations and leadership styles of head teachers can lead to changes in teachers behaviour. Gray (1990) asserts that an effective head teacher should encourage teachers, students, parents and school management to identify and celebrate their moments of excellence. The Ministry of Education and Human Resource Development (1999) outlines the importance of the head teacher in the supervision of the curriculum implementation. The Ministry further indicates that the head teacher should give effective advice on programmes that will improve teaching and learning in schools. This will enable the head teacher to identify specific curriculum needs and prepare a supervisory plan that would promote teacher/pupil achievement. The head teacher is responsible for: ensuring syllabus coverage, ensuring that teaching is appropriate for the needs of the students, identifying curriculum needs and establishing and maintaining the quality of teaching/learning.

According to Lorna (2003) assessment as part of learning process allows teachers to use their judgement about students understanding during the teaching process and determine what to do for individual students. Hence, the head teachers' supervision role on teachers' performance is crucial to the students' performance. The head teacher has the role of guiding and leading the teachers as they perform their duties. It is of paramount importance that the head teacher manages and

takes control of his/her staff members in order to realize good performance in examinations. The head teacher should ensure that the teachers are familiar with a variety of teaching techniques and that they learn to use them appropriately.

The head teacher is responsible for organizing and controlling his or her staff in their teaching process. The head teacher must check the schemes of work, lesson plans, lesson notes, records of work, students' exercise books, and supervise actual teaching in classrooms. While checking individual teachers work, the head teacher must not criticize but rather should advice and encourage teachers. The head teacher should be professional during supervision that is he or she should be principled, collaborative, enhancing, And collegial and actualizing supervision for a better vision.

The head teacher should perform supervisory activities during administrative process which includes planning, organizing, coordinating, influencing, communicating and evaluation. The head teacher should also have conceptual human relation and technical skills in order to provide an effective supervisory leadership (Okumbe, 1998).

According to Olembo (1998), supervision concerns the tactics of efficient and proper management of personnel and those aspects of administration that are aimed at maintaining efforts of personnel in line with the goal of administration. Opiyo (2004) indicates that supervision is a basic component of administration.

Every administration needs an inbuilt supervision system to provide the cohesion and direction necessary to achieve the purpose of the organization.

Academic achievement is influenced by the extent to which the head teacher performs the instructional supervisory duties. Kamindo (1998) in her study in Ngong division, she sought to find out how the head teachers performed their instructional duties. The findings of the study were that the head teachers' in private schools carried instructional supervision more regularly than their counterparts in public schools. As a result, teachers in private schools were more efficient in their duties than public schools and this was manifested by better performance in national examinations. Kimsop (2002) concurred with Kamindo (1998) in a study aimed at finding out the role of the head teachers' as instructional supervisors in Kabarnet and Salawa divisions of Baringo district. The research findings showed that most head teachers do not perform their instructional supervisory duties, for example, classroom observation, checking students' notes and teaching notes of the teachers' frequently. These functions in most schools were left to the heads of departments. As a result, schools where head teachers did minimal instructional supervisory duties experienced inadequate learning resources.

A good instructional leader should acknowledge that time management is more acute in some aspects of school curriculum. Momanyi (as quoted in Kimsop, 2002) sought to find roles played by principals as instructional leaders in relation

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to students' academic achievement in Kisii central district. The findings of the study showed that head teachers of all schools provided class time tables and master time tables. Specific subjects were also allocated periods as recommended by the curriculum. However, time was not used effectively especially in areas such as co-curricular activities, long assembly, coming late to school and over testing among others . Head teachers are instructional supervisors in their respective schools and they should ensure that time is well managed for school to attain its core objectives in teaching and learning processes.

2.5 Head teachers' provision of physical facilities and school performance

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The head teacher should ensure that equipment and furniture are available in school. Lockheed (1991) observes that appropriate budgetary allocation of physical facilities such as classrooms, workshops and laboratories can highly influence the performance of the school. Southworth and Lofthouse (1990) were also keen to observe that a sound physical environment reflected in school amenities ,decorative and immediate surroundings have a positive influence to learner's progress and achievement. Heynemann and Loxley (1993) states that the presence of a school library, related significantly to academic achievement in Brazil, China, Botswana and Uganda. This was concluded after carrying a study on effects of availability of physical facilities on learning.

On the other hand, inappropriate budgetary allocation of physical facilities can also highly influence learning in public secondary schools. SACMEQ (Southern

African Consortium for Monitoring Education Quality, 1991) affirmed UNICEF's statement. When they carried a research in Kenya, and revealed that a critical shortage of textbooks and physical facilities in many schools lead to poor performance in examinations.

Awiti (2009) noted that school environment encompasses ambience atmosphere, security, safety, and the quality of the buildings should be appropriate. The quality of the physical environment of the school affects the quality of teaching and learning. According to Chan and Watkins (1994), many of the students prefer a school to be a friendlier place where both the learners and the teachers enjoy working together, executing a variety of interesting and challenging activities.

Kyalo (1984) conducted a study to find out the factors that influence the teaching of Science in Changwithya location in Kitui district and established that lack of teaching equipment in most rural schools discouraged teachers from doing their best. He concluded that if schools were well equipped, then it would motivate the teachers to facilitate learning. He further noted that most teachers were not innovative enough and failed to utilize and improvise from resources available in the school environment to improve teaching. He also noted that many science teachers complained about lack of teaching or learning resources for their subjects even though they themselves were guilty of not efficiently using whatever was available as evidenced by expired chemicals in the laboratories.

In addition, teachers ignored the fact with improvisation , they could afford numerous activities for their students. Bishop (as quoted in Shiundu and Omulando ,1985) states that local production of equipment is preferred at the expense of importing items or equipment. Teachers therefore, should develop their courses with whatever equipment and materials readily available locally. Producing one's own teaching materials can ensure that they are relevant, flexible and adaptable.

2.6 Availability of teachers, their work load and school performance

Academic performance of students in KCSE is largely affected by the availability of teachers. Lack of teachers affects adversely the performance of students . Therefore the teaching force is assumed to be a factor that affects students performance. Eshiwani (1985) concurred with this by pointing out that the quality of education relies on the quality of its teaching force. Nyatuka (2002) asserts that many schools are understaffed. He points out that th shortage of teachers continues to hamper the provision of quality education in schools. Hence, in order for good results to be realized in examinations, the role of the teacher cannot be underrated. Olembo, Wanga and Karangu (1992) point out that the teachers role involves curriculum planning and adaptation, arrangement of instructional programme and out of school activities. Lack of teachers means the translation of curriculum objective into instructional activities in a school setting lacks implementers. Therefore, success of any school in KCSE examinations

depends largely on availability of teachers. It is also necessary for the head teachers to ensure that his/her members of staff take in-service courses or attend various workshops, seminars to enable them perform teaching services with confidence and effectiveness for better results at KCSE examinations. Eshiwani (1993) points out that one of the reasons cited for poor performance of educational system in Kenya as well as in many developing countries are the weak managerial capabilities in those systems. In the case of head teachers and other education administrators, the Kenya government established the Kenya Education Staff Institute (KESI) in 1981 to serve as an instrument for the development of administrative staff for the Ministry of Education. The head teachers need to take the challenges and get in-serviced. The other teachers need also to go for in-service courses related to subject areas and other administrative demands in the school. With in-service training amongst teachers, the main goal is good academic performance.

2.7 Summary of the literature review

This section has focused on how the provision of appropriate teaching and learning resources motivates the interests and aspirations of the learner. The review has also shown that the quality of physical environment of the school affects the quality of teaching and learning which ultimately affects school performance. Effective management of students' require that comprehensive effort is made by the head teacher to ensure that student's activities and

operations in the school are efficiently and effectively administered. The effective provision of teaching and learning resources, the supervision in teaching and learning processes, the availability of physical facilities, the availability of teachers and teachers work load on the performance at KCSE examinations require comprehensive effort made by the head teacher, teachers and even the students. The role of the head teacher in the supervision of the curriculum implementation has also been discussed. Finally, the theoretical framework and the conceptual framework have been discussed showing the relationship between the school-based factors and KCSE performance in the conceptual framework.

2.8.Theoretical framework

This study adopted Production Function Theory in education. According to Psacharopoulos and Woodhall (1985), the term production function refers to the process by which inputs are converted to outputs. The production function is used to determine the maximum product which can be derived from a given combination of inputs. Students' academic performance is a function of instructional materials, instructional supervision of teachers and learners, provision of physical facilities, availability of teachers and teachers' workload.

$$P=f(I_m, I_s, P_f, T)$$

where P - Performance in examinations

f- Function of

Im- Instructional material

Is- Instructional supervision

Pf- Physical facilities

T- Teachers availability

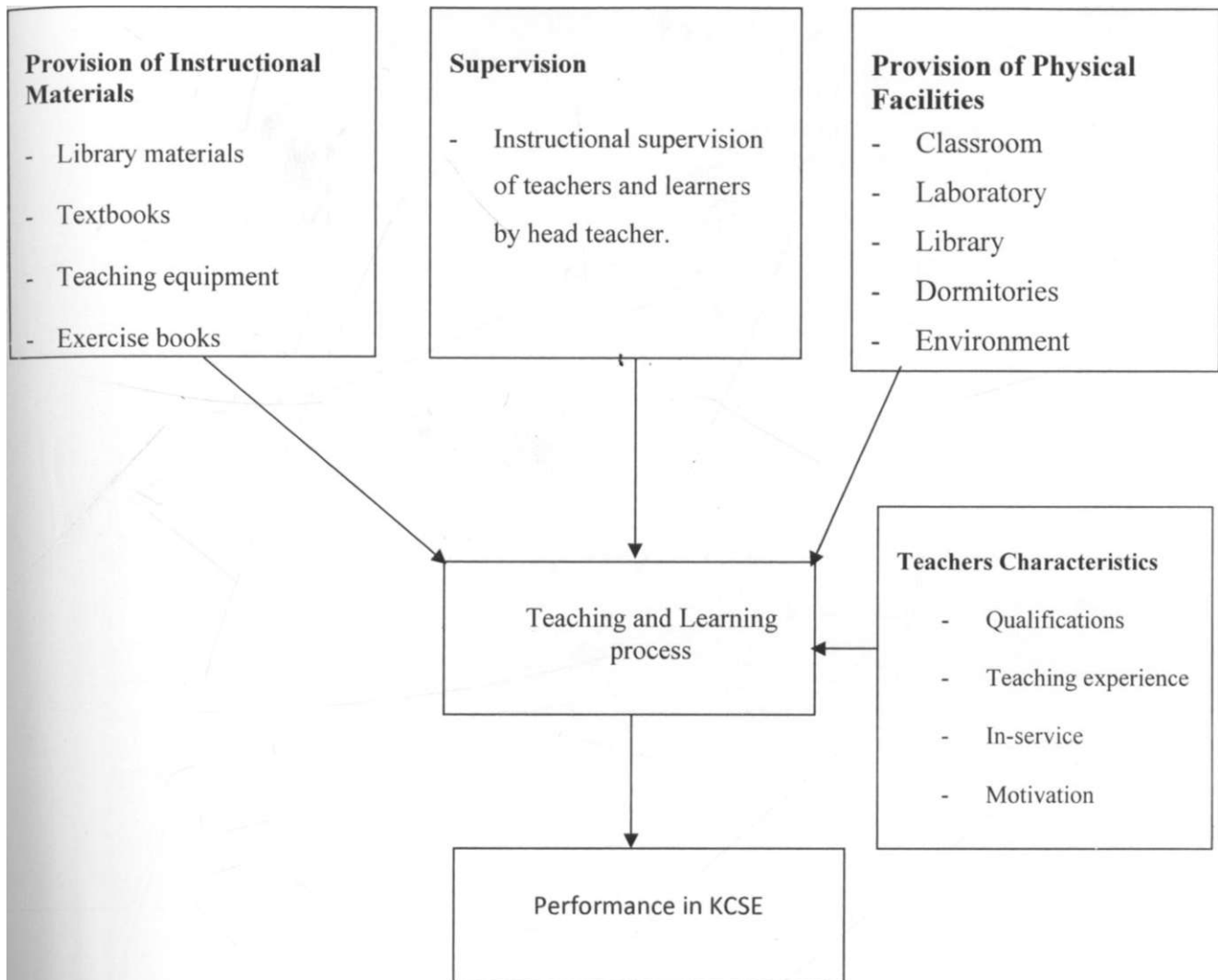
The study is linked to the Production Function Theory because for better academic performance at the KCSE , a school has to be provided with the above mentioned fundamental variables that include the provision of instructional materials , supervision of teaching and learning processes, provision of physical facilities and availability of teachers. As a result therefore, Production Function Theory enables students enhance their performance in KCSE examinations through the combination of the above stated variables.

2.9 Conceptual framework

The framework for this study is premised on the concept of school performance being a function of school-based factors. The school head may possess various characteristics which can be clustered into specific selected variables; provision of instructional material which include library materials, textbooks, computers, charts, models among others. It also entails supervision of teaching- learning process, provision of physical facilities such as the classrooms, libraries, dormitories, provision of conducive environment for studying and ensures the school is provided with teachers and their workload is well catered for Figure 1.1

Shows envisage effect of various school-based variables connected to each other which tend to affect the degree of school performance in KCSE.

Figure 2.1 Conceptual Framework: School- based factors influencing students' academic performance in KCSE examinations



In a school organization, the most important inputs include: the provision of instructional materials, supervision of teaching- learning process, provision of physical facilities and availability of teachers. All the enlisted variables put

together will lead to a better teaching and learning process, then the end result will be better performance at KCSE examinations.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers the research design, target population, sample and sampling procedure. The chapter also covers research instruments, validity and reliability of the instruments. Piloting, data collection procedures and data analysis techniques are going to be discussed at the end of the chapter.

3.2 Research design

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Borg and Gall (1983) identify research design as a process of creating an empirical test to support or refute knowledge claims. The study took an ex-post facto design because it involves, studying conditions and events that have already occurred and do not exist. The KCSE performance under study has already occurred and does not exist while the school-based factors influencing it cannot be manipulated. The ex-post facto design has been recommended for reasons that the researcher does not have direct control of independent variables because their manifestations have already occurred.

3.3 Target population

The target population for the study was derived from the 8 public secondary schools which was 1352, it consisted of 8 head teachers, 64 Form Four subject teachers and 1280 Form Four students in Makadara district. The head teachers

were targeted because they were the key administrators in the school while the Form Four subject teachers could explain the performance in their respective subjects. The Form Four students usually have a greater insight on the reasons behind their fore runners performance hence best suited for the study.

3.4 Sample size and sampling procedure

Sampling is a process of selecting few cases in order to provide information that can be used to make judgment about a much larger number of cases. The sample consisted of all the 8 head teachers, 56 from 64 Form Four subject teachers and 291 from 1280 Form Four students in Makadara district . The names of the (teachers (head teachers) were written on a piece of paper folded and placed in an empty container. One piece of paper was to be drawn from the container bearing the name of the subject teacher to participate in the study. The study used stratified sampling for schools to ensure reasonable representation of all categories of the schools. Simple random sampling technique was used to pick out the actual respondents.

3.5 Research instruments

The researcher used questionnaires and document analysis as the main instruments for data collection. The questionnaires are fast administered and are easy to analyze, one can fill in the questionnaire at his or her own pace and it is relatively cheap. The self administered questionnaire was given to the respondents to fill the gaps as instructed. There was three sets of questionnaires;

head teachers, Form Four subject teachers and Form Four students. The head teachers' questionnaire consist of five sections: A,B,C,D and E. They were geared towards school-based factors influencing performance especially on their administrative task. The Form Four subject teachers' questionnaire which has two sections geared toward the teaching and learning process, while the Form four students' questionnaire covers their general view on school-based factors influencing performance. Both qualitative and quantitative data required for the research was collected. There was two types of questions; structured and unstructured. In the structured questions, options were given among which the respondents were expected to choose from.

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3.6 Pilot testing of research instrument

This was done in two public secondary schools in the neighbouring Embakasi district before actual data collection was done. The two schools assisted in checking the validity and reliability of the instrument and appropriateness of the language used. The district was used because it was assumed that the experience of the teachers and students in the neighbouring district were similar to those of Makadara district and as such, the responses of teachers and students in the two districts would be reasonably similar. The four schools were not part of the sample in the final study.

3.7 Validity of instruments

Mugenda and Mugenda (1999) define validity as the accuracy and meaningfulness in inferences which are based on the research results. Prior to the main research, the researcher tested for validity. In this research, two schools from the neighbouring Embakasi district were randomly selected for pilot testing of the research instruments. These schools were not used in the actual study. This increased the validity and reliability of the instrument where necessary corrections of the instruments were made before the actual research. The study used content validity which indicated whether the test items represent the content that the test was designed to measure. The pilot study ensured the accuracy, clarity and suitability of the research instrument. It helped identify inadequate and ambiguous items such as those that fail to measure the variables they are intended. They were modified or discarded completely and new items added. To ensure validity, expert advice was sought from my supervisors whose comments and suggestions were used.

3.7.1 Reliability of instruments

Reliability refers to internal consistency of measuring device overtime (Koul 1992). Test-retest reliability was used in the study to measure the stability of the instruments. Cronbach's Coefficient Alpha was computed to determine how items correlated. The Kuder-Richards or KR 20 formula was used as adopted by Mugenda and Mugenda (1999) which is as follows:

- $\sqrt{\frac{v}{n}}$

$$KR_{20} = \frac{(K)(S^2 - I s^2)}{(S^2)(K-1)}$$

$$(S^2)(K-1)$$

Where: KR20 = Reliability coefficient of internal consistency

K = Number of items used to measure the concept

S^2 = Variance of all scores

s^2 = Variance of individual items

Responses of each question in the questionnaire were correlated. The internal consistency was calculated using Cronbach's Coefficient Alpha for each questionnaire. All the three sets of questionnaires were found to be reliable since they had a high coefficient of above 0.7 (head teachers' 0.8423, subject teachers' 0.7315 and students 0.7943). This implied that items correlated highly among themselves meaning that there was consistency among the items in measuring the concept of interest.

3.8 Data collection procedure

The researcher sought permission to conduct the study from the National Council for Science and Technology and then proceeded to seek authority from the District Commissioner and the DEO Makadara district in order to carry out the research. The researcher then booked appointments and visited the participating schools and the head teacher introduced the researcher to the Form

Four subject teachers and Form Four students in order to familiarize and administer the questionnaires personally to the head teacher, Form Four subject teachers and Form Four students. After filling in the questionnaires by the head teacher, Form Four subject teachers and Form Four students, the researcher collected them for analysis. The respondents were requested not to disclose their names or those of their schools and that their responses would be confidential and that data collected will be used for research purposes only.

3.9 Data analysis techniques

After data collection, the researcher cross - examined the questionnaires to ascertain their completeness, accuracy and uniformity of information obtained. Qualitative and quantitative data were collected. The researcher coded the data by assigning numerals to answers so that responses are put into limited number of categories or classes. The researcher then arranged the data in a logical order by tabulation. Frequency distribution tables were used to represent the information from all respondents for each item of the questionnaire. The data collected was analyzed and presented in frequency tables, bar charts and pie charts using Statistical Package for Social Sciences (SPSS) software. Qualitative data were analyzed qualitatively using content analysis based on respondents' information on academic performance. The qualitative data was presented thematically in line with the study objectives and research questions. Thematic representation involved analyzing the finding according to the subject matter using the given

objectives. Major concepts and themes were identified and discussed. The themes were inline with the previous study findings and the relationship was explained.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter covers the presentation of the data, which was collected in 8 public schools, the analysis and interpretation. The chapter begins with the questionnaire return rate, the demographic information of the respondents, the demographic information of the head teachers, demographic information of the teachers' demographic information of the students, other factors influencing students' academic performance, effects of the provision of in structural materials and equipment on schools performance and the strategies for improving performance.

4.2 Questionnaire return rate

Completion rate is the proportion of the sample that participated in all the research procedures. All the 8 head teachers sampled returned the questionnaires; which was 100% return rate. Out of 56 Form Four subject teachers sampled, 53 returned the questionnaires; which was 94.6% return rate. Out of 291 Form Four students sampled, 250 returned the questionnaires which was 85.9% return rate. These return rates were therefore considered adequate for the study since majority of the respondents returned the questionnaires as indicated in table 4.1.

Table 4.1 Sampling of the target population

No	category	Population	Sample size	%
1.	Teachers	8	8	100
2.	Form 4 subject teachers	56	53	94.6
3.	Form 4 students	291	50	85.9
	Total	355	31	

4.3 Demographic information of the respondents

The research has discussed the demographic information of the respondents starting with that of the head teachers', Form Four subject teachers and then Form Four students.

4.3.1 Demographic information of the head teachers'

The demographic information on head teachers' was based on their gender, age, academic qualifications, head teacher's highest professional qualifications and teaching experience. This was because the researcher wanted to establish whether the above mentioned variables concerning head teachers influenced academic performance of the students in their respective schools. To establish the gender of the head teachers, they were requested to tick on the appropriate head teachers'

gender. The findings that were deduced were 5 (62.5%) females as compared to 3 (37.5%) males. Data of the gender of the head teachers' is presented in table 4.2

Table 4.2 Head Teachers' gender

Gender	Number	%
Males	3	37.5
Females	5	62.5
Total	8	100

Figure 4.1 Head teachers' teaching experience

TEACHING EXPERIENCE

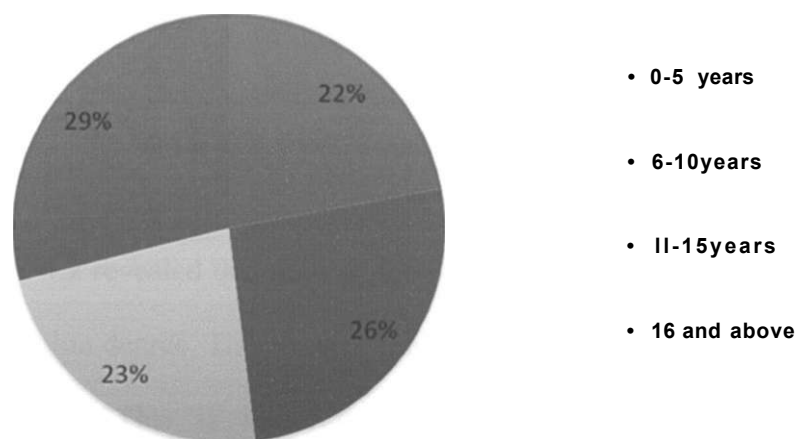
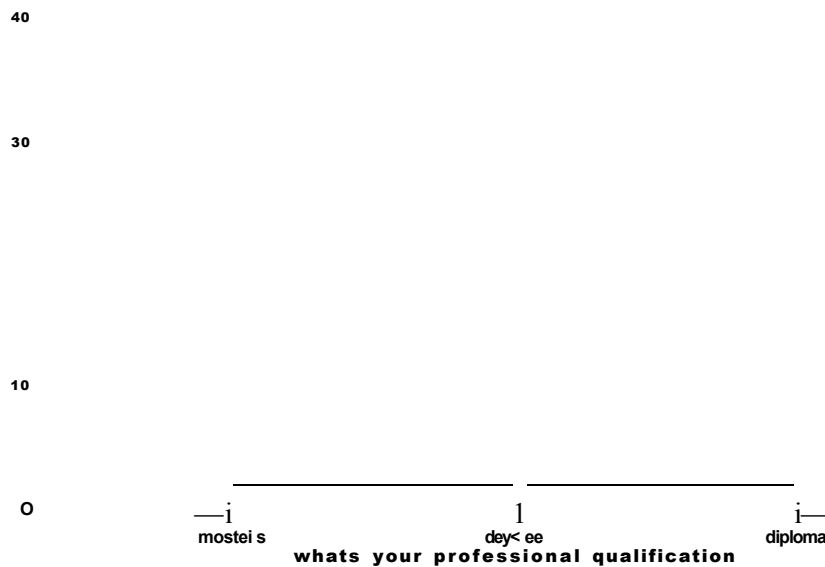


Figure 4.1 indicates that 29 % of the head teachers had a teaching experience of 16 years and above, 22% had between 0-5 years of teaching experience, 26% had between 6-10 years and 23% had between 11-15 years of teaching experience. This means that majority of the head teachers were experienced.

The head teachers were also asked to indicate their professional qualifications. The findings are represented in figure 4.2 .

Figure 4.2 Head teachers' professional qualification



Data in the figure 4.2 revealed that 35% of the head teachers were holders of the Bachelor of Education degree. This showed that most of the teachers had the first degree in education. This is important because the head teacher is the implementer of the school curriculum and without appropriate academic

qualifications, the head teacher may not be in position to be a good curriculum implementer(Okumbe 1998).

The head teachers were further asked to indicate their school categories. The findings were represented in table 4.3

Table 4.3 Categories of schools

Category	frequency	percentage
Girls Boarding	2	25
Boys Boarding	2	25
Mixed Boarding	2	25
Girls day	1	12.5
Boys day	0	
Mixed Day and Boarding	1	12.5
Total	8	100

Data revealed that 25% of the schools in the district are girls boarding, boys boarding and mixed boarding respectively. 12.5% of the schools are girls day, and mixed day & boarding respectively and none of the schools is boys day. The

presence of day schooling could be a hindrance to academic performance since students are faced with a myriad of challenges in a day school.

The head teachers' were then asked to state the current number of the students in the school. The findings were represented in table 4.4.

Table 4.4 Schools' current number of students

Number of students	frequency	%
0-100 students	1	12.5
101-200 students	1	12.5
201-300 students	1	12.5
301-400 students	1	12.5
401-500 students	1	12.5
501-600 students	3	37.5
Total	8	100.0

Data revealed that 37.5% of the schools had a population of between 501-600 students. Most of the schools in the district had less than 500 students that was 0-100 students were (12.5%), 101-200 students were represented by (12.5%), 201-

300 students were represented by (12.5%) while 301-400 students were represented by (12.5%). This indicated that the schools required adequate instructional materials, provision of adequate physical facilities and adequate provision of the teaching staff.

The head teachers' were also asked to indicate their school performance. The responses are presented in table 4.5.

Table 4.5 Head teacher's response on school performance

Rate	frequency	%
Good	1	12.5
Average	7	87.5
Below average	0	0.0
Others	0	0.0
Total	8	100.0

Data revealed that the performance in their schools is average that was 7 (87.5%) of the head teachers revealed that academic performance in their schools was average. While (12.5%) of the head teachers rated their school as good in terms of academic performance. Given that 87.5% of the schools revealed average

performance, this was one of the reasons to why this study had to be conducted to investigate factors influencing academic performance in the district.

The head teachers were also asked to indicate the number of teachers in their respective schools. The responses were as indicated in table 4.6.

Table 4.6 Number of teachers in their schools

Gender	Range	Frequency	Percentage
Male	less than 5	1	12.5
		2	25.0
Female	6-10	3	37.5
		2	25.0
Total		8	100.0

Data revealed that schools had less than 5 female teachers 3(37.5%).Some schools had between 6-10 male and female teachers 2 (25%). This numbers therefore called for heavy workload to the teachers, unable to finish marking students assignments in time thus a recipe for poor academic performance in examinations by the students. The head teachers were also asked to indicate the

qualifications of their teaching staff and the response were interpreted as shown in table 4.7.

Table 4.7 Head teachers' response on staff members qualifications

Qualification	frequency	percentage
Masters of Education	2	25.0
Bachelor of Education	4	50.0
Diploma in Education	1	12.5
	(
Untrained teachers	1	12.5
Total	8	100.0

Data revealed that majority of the teaching staff were holders of the Bachelors degree in Education 4 (50.0%). Some of the staff members had Masters of Education degree 2 (25.0%). The Diploma in Education holders staff members were represented 1 (12.5%). The 2(25%) with Masters of Education degree indicates aspects of professional growth by head teachers in Makadara district. However, the head teachers professional qualifications matters but their academic qualifications is enviable hence the schools with the best qualified head teachers tend to be the most successful in KCSE examination performance.

The head teachers were also asked to indicate the availability of the physical facilities and equipment in their school and the responses were interpreted as shown in table 4.8.

Table 4.8 Head teachers' response on the facility/equipment

Facility/Equipment	Available		Adequate		Inadequate		Not available	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Teachers office	6	75.0	1	12.5	0.	0.0	1	12.5
Staff room	5	62.5	2	25.0	1	12.5	0	0.0
School dining hall	4	50.0	2	25.0	1	12.5	1	12.5
Playground	2	25.0	4	50.0	1	12.5	1	12.5
Laboratory	1	12.5	4	50.0	2	25.0	1	12.5
Library	2	25.0	3	37.5	2	25.0	1	12.5
Dormitories	1	12.5	2	25.0	3	37.5	2	25.0

Data on the head teacher's responses on the availability of the physical facilities and equipment as presented in the table 4.8, indicated that most of the schools did not have adequate physical facilities and equipment. For example 1 (12.5%) head teachers indicated that their school had inadequate staffroom, inadequate school

dining hall and the playing ground. Most of the schools in the district had computers 4 (50.0%) and adequate library 3 (37.5%). This is in agreement with Heynmann and Loxey (1993) who stated that the presence of the school library contributes positively to the school performance. The dormitories were highly inadequate 3 (37.5%).

The head teachers were also asked to indicate the availability of the physical facilities and equipment in their school and the responses were interpreted as shown table 4.9.

Table 4.9 Head teachers' response on the physical facilities

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Materials/Equipment	Available		Adequate		Inadequate		Not available	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Laboratory apparatus	6	75.0	1	12.5	0	0.0	1	12.5
Computers	5	62.5	2	25.0		12.5	0	0.0
Models	4	50.0	2	25.0	1	12.5		12.5
Reference books	2	25.0		12.5	4	50.0		12.5
Students exercise Books	6	75.0		12.5		12.5	0	0.0

Findings from the head teachers' responses indicated that they did not have some necessary materials and equipment. For example, 4 (50.0%) said that they had inadequate reference books. Most of the schools had some of the materials like students exercise books 6 (75.0%) and the laboratory apparatus which was 6 (75.0%). The head teachers were also asked to indicate the frequency with which they check teachers' professional documents in their school and their responses were interpreted as shown on figure 4.3 and 4.10 table respectively.

Figure 43 Supervision of the teachers' professional documents by the head teachers

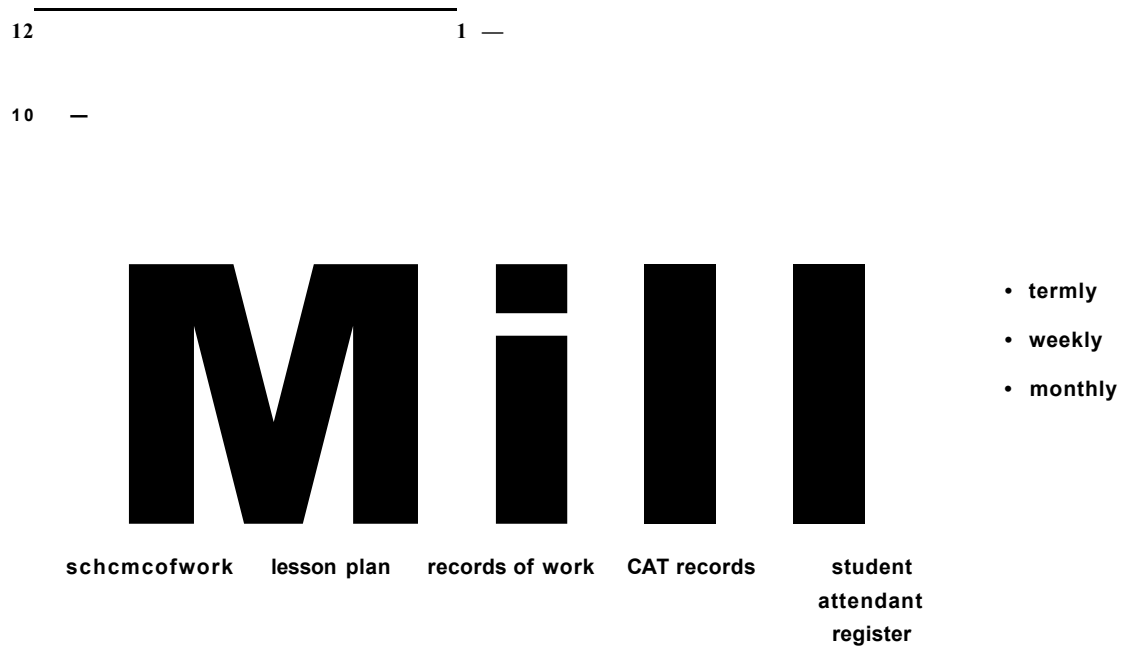


Table 4.10 Supervision of the teachers' professional documents by the head teachers'

Professional documents	Weekly		Monthly		Termly	
	Frequency	%	Frequency	%	Frequency	%
Schemes of work	1	12.5	3	37.5	4	50.0
Lesson plan	2	25.0	3	37.5	3	37.5
Records of work	1	12.5	2	25.0	5	62.5
CATs record	3	37.5	3	37.5	2	25.0
Students register	6	75.0	1	12.5	1	12.5

Data revealed that most of the head teachers checked the schemes of work termly 4 (50.0%), and checked the students register weekly 6 (75.0%). The record of work was checked mostly termly by the head teachers 5 (62.5%). The CATs results were checked weekly and termly by the head teachers 3 (37.5 %).

Campbell (1986) observed that effective and efficient management of curriculum and instruction in an educational institution is a basic prerequisite for stability and improvement of academic performance and hence the schools where the head teachers did minimal supervision of the teachers professional documents such as the lesson plans experienced poor performance at examination. That's why this

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study had to investigate the effects of the head teachers supervision of the instructional materials.

The head teachers were also asked to indicate the frequency with which they check the students' academic progress. The responses were as indicated on the table 4.11.

Table 4.11: Head teachers response on the student academic progress

Students academic progress	Twice		Thrice		Fortnight	
	Frequency	%	Frequency	%	Frequency	%
Continuous assessment test	1	12.5	3	37.5	4	50.0
Mid term exam	2	25.0	3	37.5	3	37.5
End of term one exam	1	12.5	2	25.0	5	62.5
End of year exam	3	37.5	3	37.5	2	25.0

Data revealed that most of the head teachers check the Continuous Assessment Test results fortnightly 4 (50.0%), and checked the end term exam results fortnightly 5 (62.5%). The end year exam results was represented by 5 (62.5%) of the head teachers. The schools where the head teachers did minimal checking of the students academic progress such as the End of term exam, the Continuous

Assessment Tests (CATs), experienced poor performance in the KCSE examination in Makadara district.

4.3.2 Demographic information of the teachers

The demographic information on teachers was based on their gender, academic qualifications, professional qualifications, category of their school, academic performance of their school and on their numbers in their respective schools. To establish the gender of the teachers, they were asked to choose. The findings that were deduced were 32 (60.37%) males as compared to 21 (39.6%) females. Data of the gender of the teachers is presented in Table. 4.12.

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Table 4.12:Teachers gender

Gender	Number	%
Females	21	39.6
Males	32	60.37
Total	53	100

The 21 (39.6%) of the female teachers could mean that the girl child was disadvantaged in terms of acquisition of education in Makadara district as compared to the males 32 (60.37%). Findings indicated that majority of the teachers in Makadara district were male (60.37%) while females were represented

(39.6%). This implies that the government had employed more male teachers in Makadara district than female.

The teachers indicated their teaching experiences. The findings are shown in the table 4.13.

Table 4.13 Teachers' teaching experience

Number of years	frequency	%
0-5 years	6	11.32
6-10 years	15	28.30
11-15 years	11	20.75
16 and above years	21	39.6
Total	53	100.0

The above table shows that most of the teachers were experienced. Majority being in the profession for more than 16 years 21 (39.62%). The teachers who had 16 years and above of teaching experience were the majority accounting to almost half the total sample population 21 (39.62%).

Kinyanjui (as quoted in Wamahiu, 1995) notes that teachers with limited professional background can be disastrous in influencing good performance in the KCSE examination. They can teach what they know , and so cling to the

textbooks and depend on narrow ,formal framework of systems to give them their sense of security hence in Makadara district most of the teachers have experience thus this should affect performance positively.

Table 4.14 Academic/ professional qualifications of the teachers

The teachers indicated their academic /professional qualifications. The findings are shown in table 4.14.

Professional Qualification	frequency	percentage
Masters of Education	19	35.84
Bachelor of Education	27	50.94
Diploma in Education	5	9.43
Other	2	3.77
Total	53	100.0

Teachers' findings showed that 27 (50.94%) of the teachers had Bachelors degree of Education while 19 (35.84%), had Masters in Education. A small percentage (0.45%) were untrained while 9.43% of the teachers had Diploma in education indicating the aspect of professional growth by teachers.

A small percentage 35.84% are those with Masters of Education degree indicating some aspect of professional growth by teachers in Makadara district. The teachers professional qualifications matter but their academic qualifications is inevitable (Ngatu, as quoted in Mulusa, 1990). Hence the schools with the best qualified tend to be the most successful in KCSE examination performance

Table 4.15 Teaching load of teacher

The teachers were requested to indicate the teaching load in their respective schools. The output of the analysis is presented in table 4.15.

Teaching load	frequency	percentage
Heavy	19	35.8
Moderate	32	60.37
Light	2	3.77
Total	53	100.0

The above table reveals that most of the teachers have a moderate work load as recommended by the TSC. About 32 (60.37%) of the total teachers indicated that the work load is moderate while 19 (35.8%) had a heavy work load as indicated in table 4.15.

This shows most of the teachers in public secondary schools in Makadara district had a moderate work load hence this influenced the performance positively. However, 35.8% revealed that there was a heavy work load inadequate numbers of teachers in those schools hence influenced the KCSE performance negatively.

Table 4.16 Frequency with which teachers give assignments / home work

The teachers were requested to indicate the frequency with which they give assignments / home work to students in their respective schools. The output of the analysis was presented in table 4.16.

Assignment frequency	frequency	percentage
Oftenly	40	75.47
Occasionally	11	20.75
Not at all	2	3.77
Total	53	100.0

The above table revealed that most of the teachers gave the students homework oftenly. About 40 (75.47%) of the total teachers indicated that they gave students homework often while 11 (20.75%) gave the assignment occasionally as shown in table 4.16.

The schools where the teachers did minimal provision of the assignments/ homework, experienced poor performance in the KCSE examination in Makadara district .Since 75.47% of the teachers in Makadara district gave assignments, the students failed to take it, hence affected the performance negatively in Makadara district.

Table 4.17 Teachers' responses on the preparation of the professional records

Qualification	frequency	percentage
Schemes of work	53	100%
Lesson plan	28	52.83%
Records of work	34	64.15%
Students progress records	52	98.11%
Student registers	53	100%

Findings revealed that all the teachers prepared schemes of work and the students registers thus 53 (100.0%).Majority of the teachers indicated that they prepared the students progress records 52 (98.11%). Table 4.17 shows that most of the teachers did not prepare lesson plan 25 (47.16%) while 20 (37.73%) did not

prepare records of work. Teachers were supposed to prepare the lesson plan for effective and efficient teaching. Failure to prepare the lesson plans indicates lack of proper preparation for teaching hence affects the performance in the KCSE examination negatively. However, some records like the schemes of work, students' attendance registers were checked daily hence denotes a positive effect on the KCSE performance in Makadara district.

Table 4.18 shows completion of the syllabus by the subject teachers in their respective schools.

Table 4.18 Completion of the syllabus in the schools by the teachers

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The teachers were asked to indicate when they normally complete the syllabus for their respective subjects in the schools. The findings are represented in table 4.18.

Completion	frequency	percentage
3 months before examinations	19	35.84
A month to examination	5	9.47
Just in time for examination	27	50.94
Never complete	2	3.77
Other	0	0.0
Total	53	100.0

Data revealed that almost half of the teachers, 27 (50.94%) indicated that they completed the syllabus just in time for the examination thus KCSE. While 19(35.84%) completed 3 months before the examination, 5 (9.47%) completed a month before the examination, 2 (3.77%) never completed the syllabus. When the syllabus is not covered in time students may not be well prepared for examinations and hence this could affect their performances.

Schools where the teachers completed the syllabus in time that is 3 months before the KCSE examination experienced good performance because the teachers had enough time to revise with the students. More so, the students had enough time to prepare for the KCSE examination hence good performance. Since most of the schools in Makadara district only completed the syllabus in just the time of examinations, denied the students time for proper revision thus affecting the KCSE performance negatively.

4.4 Demographic information of the students

The demographic information of students was based on their gender, academic qualifications, category of their school, academic performance of their school, availability of teachers, availability of physical facilities (head teachers office, staff room, classrooms, library, dormitories and laboratories), availability of teaching and learning resources (text books). To establish the gender of the students, they were asked to choose. The findings that were deduced were 149

(62.5%) males as compared to 101 (37.5%) females. Data of the gender of the students is presented in table 4.19.

Table 4.19 Demographic information of the students

Gender	Number	
Males	149	59.6
Females	101	40.4
Total	250	100

The above data denotes that the male 149 (59.6%) population was higher in schools than that of females 101 (40.4%). This is because the KCPE registered fewer girls than boys. For example, last year (2011), girls took 41.3% of the entire candidates while boys took 58.7%. This automatically affected the girls' population intake into secondary schools in Makadara district.

Information derived from the students on the factors affecting performance was that the students were asked to indicate on the following factors as shown in table 4.20.

Table 4.20 Students responses on the availability of the physical facilities

Factors	frequency	percentage
Inadequate physical facilities	243	97.2
Inadequate learning and teaching resources	249	99.6
Inadequate teaching staff	233	93.2
Unfriendly assessments	211	84.4
Inappropriate students' personnel	126	50.4

The students pointed out that the students personnel services were not adequate and therefore the teachers and the head teachers should look into this matter. This accounted for 126 (50.4%) of the total sample population. Inadequate physical facilities was another outcry from the learners accounting to 243 (97.2%) of the total sample 250(100%).This could lead to poor performance since the facilities are insufficient for example laboratories , dormitories and classrooms.

The students complained of inadequate text books, laboratory equipment and others. About 211(84.4%) of the entire sampled population indicated that, they were unfriendly with the assessment process by their teachers in their respective schools.

Inadequate instructional materials such as reference books, models, computers in most of the schools in Makadara district influenced the KCSE performance negatively. The students were keen to observe that those schools which lacked basic instructional materials performed poorly in KCSE examination.

Table 4.21 Students responses' on some of the factors that influences performance in their schools

They were asked to indicate on the following factors as shown on the table below.

Factors	frequency	percentage
Is the syllabus covered within stipulated time	245	98.0
Does your school offer organized guidance and counseling services	246	98.4
Are there measures to curb students absenteeism in your school	204	81.6
Is the remedial teaching offered to weak students	211	84.4
Are exam/CATs given regularly	213	85.2
Are your note books checked by teachers	187	74.8

Findings from table 4.21 showed that most of the students agreed that the syllabus coverage was well done within the stipulated time 245 (98%). The findings also indicated that the students had a well organized guidance and counseling

departments in their schools 246 (98.4%), 204 (81.6%) of the total sampled population agreed that measures to curb absenteeism in their schools was perfect. While 211 (84.4%) denoted that the remedial classes assisted the weak students hence enhanced the ability to comprehend the activities taught. The CATs and exams were given regularly thus 213 (85.2%). However, only 187 (74.8%) of the total students indicated that their books were checked by the teachers.

Schools where the CATs, remedial, exercise books were checked regularly, experienced good performance in the KCSE examinations hence most of the schools in Makadara district were not dependent on the frequency at which CATs were given, books checked and remedial classes* offered thus affected negatively the performance at KCSE examination.

4.5 Other factors influencing students' academic performance

Other factors that the head teacher felt that influenced poor performance included lack of funds to purchase the necessary learning resources, indiscipline, poor attitude of the students towards school, lack of parental involvement in the education of their children, poor payment of school fees and the external influence of the day schooling.

The teachers were further asked to indicate other factors that influenced students performance. The teachers revealed that uncooperative students and truancy were some of the factors that affected students' performance. Among the students

respondents, they stated that indiscipline, ignorance and laziness, missing classes, suspensions because of indiscipline, peer pressure, overcrowded classrooms and low morale were other factors that affected the students' performance in their respective schools.

4.6 Effects of the provision of instructional materials and equipment on school performance

The study also sought to establish the effect of the provision of the instructional materials and equipment on the school performance. The respondents were therefore asked to respond to items that sought to establish how the provision of the instructional materials and equipment influenced school performance.

The head teachers for example, the findings indicated that 62.7% had the instructional materials and equipment, while 37.3% indicated that the instructional materials and equipment were not available. Hence this affected their schools performance academically.

4.7 Strategies for improving performance

The study also sought to establish the views of the respondents on the strategies that could be implemented so as to improve the students' performance. Among the strategies proposed by the head teachers included acquiring of more relevant text books for students and teachers, more parental involvement in their childrens' education, provision of more teachers, provision of laboratories and other

facilities, staff motivation, team work among teachers and head teachers and remedial teaching for the weak students. They also proposed that day schooling should be abolished since it interfered with the students learning.

Among the teacher's respondents, they suggested that there should be provision of more teachers, encouragement to students, having single sex schools and provision of more teaching and learning resources. Students recommended that there was need to provide the required materials, having effective guidance and counseling, provision of bursary to needy students to avoid students missing out classes, enhancing discipline and frequent supervision by both parents and the teachers.

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CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introductions

This chapter summarizes the findings of the study and present conclusions, recommendations and suggestions for further research.

5.2 Summary of the study

The main aim of the study was to investigate the school-based factors that influence students' performance at KCSE examinations in Makadara district. The dependent variable KCSE performance was investigated in relation to selected independent variables which are: the head teachers provision of teaching and learning resources and school performance, head teachers supervision of teaching and learning processes and school performance, the head teachers provision of physical facilities and school performance, availability of teachers ,their workload and school performance.

Stratified sampling was used to cater for all the school categories and simple random sampling was used to select the respondents. A total of 8 schools were used, 250 students, 53 teachers and 8 head teachers were used in the study. There were three sources of data: subject teachers who taught the Form Four students, head teachers of the sampled schools and the Form Four students. The data was collected through the questionnaires.

Data from the head teachers' questionnaires indicated that the majority of the head teachers had teaching experience of 16 years and above. They were professionally qualified with majority holding the Bachelors degree in Education. The study also indicated that majority of the head teachers were females and most of them were qualified. The students data showed that males were more than females who were admitted to high schools.

1. The findings revealed that schools did not have adequate teaching and learning materials. For example 5 (62.5%) head teachers indicated that they had inadequate teachers reference books and guides, 6 (75%) indicated inadequate students' text books and inadequate laboratories. 200(80%) students revealed that they had inadequate dormitories and 180 (72%) said they had inadequate students text books.
2. Most schools in the district did not have adequate teachers. For example 203 (81.2%) students reported that there were inadequate teachers in the schools. It was also revealed by 6 (75%) head teachers that there were inadequate teachers in the schools.
3. It was also revealed that teachers were transferred from schools without replacements which led to inadequate teachers which affected teaching and learning and ultimately performance. For example, students indicated that the teachers who were transferred were rarely replaced as represented by 180 (72%).

4. Most of the teachers had teaching load of between 25 and 30 lessons a week which was heavy for teachers. For example, findings revealed that head teachers 5 (62.5%) indicated that teachers had teaching load of between 25 and 30 lessons and 2 (25%) indicated that the teachers had a teaching load of over 30 lessons a week.
 5. It was also revealed that teachers prepared professional documents except lesson plans. For example, data on preparation of professional documents by the teachers indicated that all the teachers prepared schemes of work and records of work as reported 8 (100%) head teachers 7 (87.5%).
- !
6. Findings on the effect of supervision of teaching and learning processes by the head teachers on students' performance revealed that majority of the head teachers 7(87.5%) rarely supervised schemes of work lesson plans, progress records and students note books.

5.3 Conclusions

Based on the findings, it was concluded that:

- 1) Schools did not have adequate teaching and learning materials such as reference books and guides for teachers, library, staffroom and offices, students text books and laboratories. Lack of these essential learning materials affected performance.

2) Lack of adequate teachers was a factor that culminated to poor performance in examination. Transfer of teachers without replacements greatly interfered with the students learning hence affected performance. Teachers work load was too much hence hindered them from closely monitoring their students' progress and they did not have enough time to mark students' assignments which ultimately affected student's performance.

3) Lack of physical facilities and failure by students to complete assignments had a negative effect to performance in schools.

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4) Absenteeism among students due to lack of school fees was also noted as a factor that led to poor performance in Makadara district.

5) Failure by head teachers to check teachers professional documents such as schemes of work, lesson plans, records of work and students progress records were influencing factors to poor performance in Makadara district.

5.4 Recommendations

Based on the findings, it was recommended that:

1. Teachers should be provided with opportunities for more exposure through in-service programs. This could be organized at school, district, provincial or national levels. This would encourage professional growth of

the teacher which is quite significant in KCSE performance. This could be done during the school holidays when the students are on recess.

2. The government should provide teachers to schools so that the teaching load could be minimized hence enabling teachers to perform effectively. BoG in schools could also hire more teachers in areas with inadequacy to supplement the governments efforts as soon as possible so as to enhance academic performance in KCSE.
3. Schools should be provided with physical facilities to facilitate learning hence improve academic performance. The government and parents could assist in the provision of the required resources as soon as need arises in order to enhance academic performance in KCSE.
4. The head teachers should be on the frontline in supervising their teachers during the teaching and learning processes and making necessary interventions as far as academic performance is concerned. This could make teachers more effective in teaching. The supervision of teaching and learning process should be done regularly and feedback given to the teachers as soon as possible so as to create an impact.
5. The head teachers should ensure that schools have the required instructional materials and equipment and the syllabus is well covered by

the teachers. The head teacher has the responsibility of purchasing the required materials and equipment in good time .

6. The head teacher should facilitate working in collaboration with the parents and ensuring that school fees is paid in time. This will help curb absenteeism among the students and will enhance academic performance in KCSE.
7. Remedial teaching for free was also recommended so as to assist the weak students to improve in academic performance. No extra fees should be charged from the students. The remedial can be done during the morning preps, evening preps, weekends and school holidays.

5.5 Suggestions for further study

The following areas were suggested for further study:

1. A study to establish the relationship between availability of resources and academic performance.
2. A study to determine factors influencing academic performance in private secondary schools in the district for comparison.
3. A study on how parental involvement on students' school life affects students' performance.

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APPENDICES

Appendix I

LETTER OF INTRODUCTION TO THE RESPONDENTS:

Willis Opula Kabala,
University of Nairobi,
P.O. Box 30197,
Nairobi.

Respondent

Makadara District

Dear Sir/Madam,

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REF: REQUEST FOR INFORMATION

I am a postgraduate student at the University of Nairobi. I am carrying out a study on School-based factors that influence students' academic performance at Kenya Certificate of Secondary Education in Makadara District.

Kindly fill in the questionnaire and provide any other necessary information that may help to carry out the research. The information gathered will be used for study purposes only.

Thank you.

Yours faithfully,

Willis Opula Kabala.

APPENDIX II

HEAD TEACHERS' QUESTIONNAIRE

This questionnaire is designed to gather data about factors influencing students' academic performance in KCSE in Makadara District. Please fill in each question using a tick on the spaces provided where applicable. Kindly respond to all questions.

Part A: Background Information

1. Please indicate your gender

a) Male

b) Female

2. Please indicate your teaching experience in years

a) 0-5 years

b) 6-10 years

c) 11-15 years

d) 16 and above

3. What is your professional qualification?

a) Masters

b) Degree

c) Diploma

d) Others (specify)

4.. In which category is your school?

- a) Girls boarding
- b) Boys boarding
- c) Mixed boarding
- d) Girls day

- e) Boys day
- f) Mixed day and boarding []

5. How many students are currently in your school?

- a) Boys []
- b) Girls []

Part B: Academic Performance

6. Following the 2003-2010 KCSE results how many students were admitted to public universities? []

7. How would you rate your school performance?

- a) Good []
- b) Average []
- c) Below average []
- d) Others (specify) []

Part C: Human Resource (Teachers)

8. How many teachers are in your school?

- a) Male []

b) Female

TOTAL

9. What are the professional qualifications of your members of the teaching staff?

a) Masters of Education

b) Bachelor of Education

c) Diploma in Education

d) Untrained

10. Do you have enough teachers in your school?

a) Yes

b) No

c) If no, how many more do you require?

11. On average, what is each teachers work load per week?

Part D: Physical facilities

12. Below is a table of physical facilities and equipment the school may be having. Tick as appropriate.

Facility/Equipment	Available	Adequate	Inadequate	Not a
Headteacher's office				
Staff room				
Classrooms				
School dining hall				
Playground				
Laboratory/Science & computer				
Library				
Dormitories				

Part E: Teaching-Learning Resources

13. Do your students have enough textbooks for all the subjects?

a) Yes []

b) No []

If No, explain your answer

14. On average, what is the students' text books ratio per class []

15. In your opinion, does the above establishment of text books contribute to your schools KCSE performances?

a) Yes []

b) No []

If No, explain your answer

16. The table below shows instruction materials that may be available in the school. Tick as appropriate:

Materials/Equipment	Available	Adequate	Inadequate	Not available
Laboratory apparatus				
Computers				
Models				
Reference books				
Students exercise books				

17. In your own opinion do the number of textbooks and other teaching learning materials contribute to student's performance in KCSE?

a) Yes

b) No

If No, give reasons

18. i) Do you supervise teachers in class as they teach?

a) Yes

b) No

If Yes, how often?

ii) How often do you check teachers' professional documents to ensure that they are hand in hand with the syllabus?

- a) Schemes of work
- b) Lesson plan
- c) Records of work
- d) Continuous Assessment Tests Records
- e) Students attendance register
- f) Teachers lesson notes

19. After evaluation how long do you take to give the feedback to the teachers?

20. How do the teachers respond to the feedback?

21. How do you assess student's academic progress; through: (tick as appropriate)

- a) Continuous assessment test
- b) Mid-term exam
- c) End of term exams
- d) End of year exam

22. a) Do you have any motivation given to students and teachers?

Yes []

No []

If Yes, what kind of motivation?

b) How often do you motivate them?

23. What are other factors that generally influence performance in your school?

Thank you.

Appendix III

FORM FOUR SUBJECT TEACHERS' QUESTIONNAIRE

This questionnaire is designed to gather data about factors influencing students' academic performance in Makadara District. The questionnaire is divided into two sections: A and B. Please complete each section according to instructions given. Do not write your name or the school name to ensure complete confidentiality. You are kindly requested to respond to all questions in both sections.

Section A: Background information

Respond to each item by ticking where appropriate.

1. Please indicate your genderⁱ
 - a) Male []
 - b) Female []
2. Indicate your teaching experience in years
 - a) 0 - 5 years []
 - b) 6 - 10 years []
 - c) 11 - 15 years []
 - d) 16 and above []
3. What is your professional qualification?
 - a) Master []
 - b) Degree []
 - c) Diploma []

d) Other (Specify) []

[]

4. Indicate the subject(s) that you teach

Section B

Please indicate using a tick where appropriate and write down the answer as directed.

5. What is your current teaching load per week?

; []

6i) How do you rate this work load?

a) Heavy []

b) Moderate []

c) Light []

ii) Are you assigned to teach subjects that you were not trained?

a) Yes []

b) No []

If Yes, give reasons

7. How often do you give your students assignment / homework?

a) Oftenly []

b) Occasionally []

c) Not at all []

8. Do the students complete their assignments / homework as required?

a) Yes

b) No

If no, give reasons.

8. Please indicate whether you prepare the following professional documents by ticking as many as appropriate:

a) Schemes of work []

b) Lesson plan []

c) Records of work []

d) Students progress records

e) Students register []

9. How often does the head teacher make a follow up to ensure that the above mentioned documents are prepared as required?

a) Once a week

b) Once a term []

c) Once a year []

d) Not at all []

10. When do you normally complete the syllabus for your subjects?

- a) Three months before examination
- b) A month to examinations
- c) Just in time for examination
- d) Never complete
- e) Any other

(specify) _____

11. Have you ever been supervised in class while teaching by the head teacher?

- a) Yes
- b) No

12. In your own opinion, what are other factors that influence academic performance in KCSE in your school?

13. What in your opinion can be done to improve the performance?

Thank you

APPENDIX IV

FORM FOUR STUDENTS' QUESTIONNAIRE

This questionnaire is designed to gather data about school-based factors that may influence students' academic performance in Makadara district. Kindly respond to all questions and do not fill in your name or the name of your school.

SECTION A: Demographic information

1. i) What is your gender?

- a) Male
- b) Female

ii) Do you like your school?

- a) Yes
- b) No

Explain your answer above

2. What is the category of your school?

- a) Boys school
- b) Girls school
- c) Mixed school

SECTION B: Factors influencing performance

3. How do you rate your school in terms of performance?

a) Excellent []

b) Good []

c) Average []

d) Below average []

4. Does your school have enough physical facilities?

a) Yes []

b) No []

If No, give reasons for your answer

ii) Do you have adequate teaching staff in your school?

a) Yes []

b) No []

If No, explain your answer

iii) Are there enough teaching and learning resources in your school?

a) Yes []

b) No []

If No, explain your answer

5. How often are you assessed?

a) Daily []

b) Weekly []

c) Fortnight []

d) Monthly []

e) Twice per term []

f) Once per term []

6. Has the head teacher ever checked your exercise book?

a) Yes []

b) No []

If Yes, indicate the number of times and when

7. Are there cases of teachers transferred from your school?
- a) Yes
- b) No
8. How many students are you in your class?
9. What is the ratio of students to textbooks in most subjects?
10. In your opinion what factors lower students performance in your school?
11. Answer the following questions about factors influencing performance in your school by ticking either Yes or No

Question	Yes	No
Is the syllabus covered within the stipulated time frame?		
Does your school offer organized guidance and counseling services?		
Are there measures to curb students' absenteeism in your school?		
Is remedial teaching offered to academically weak students?		
Are exams/ CATS given regularly?		
Are your note books checked by teachers?		
Does your school have enough physical facilities?		

What do you think could be done to improve students performance in your school?

Thank you.



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telephone: 254-020-2213471, 2241349

254-020-310571, 2213123, 2219420

Fax: 254-020-318245, 318249

When replying please quote

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P.O. Box 30623-00100

NAIROBI-KENYA

Website: www.ncst.go.ke

NCST/RCD/14/012/999

23rd July 2012

Our Ref:

Date:

Willis Opula Kabala
University of Nairobi
P.O.Box 30197-00100
Nairobi.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*School based factors influencing students' academic performance at Kenya Certificate of Secondary Education in Makadara District, Kenya,*" I am pleased to inform you that you have been authorized to undertake research in **Makadara District** for a period ending **30th September, 2012**.

You are advised to report to **the District Commissioner and the District Education Officer, Makadara District** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. M. K. RUGUTT, PhTFTmC.

DEPUTY COUNCIL SECRETARY

Copy to:

The District Commissioner
The District Education Officer
Makadara District
Nairobi.

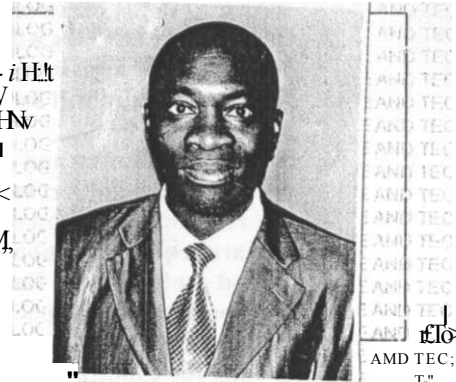
THIS IS TO CERTIFY THAT:
Prof./Dr./Mr./Mrs./Miss/Institution
Willis Opula Kabala
of (Address) University of Nairobi
P.O Box 30197-00100, Nairobi.

Date of issue *23rd July, 2012*
Fee received *KSH. 1,000*

Makadara
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for a period ending: 30th September, 2012.

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CONDITIONS

1. You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed with-out prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2)/four(4) bound copies of your final report for Kenyans and non-Kenyans respectively.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice



REPUBLIC OF KENYA

RESEARCH CLEARANCE PERMIT

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