

**SCHOOL BASED FACTORS INFLUENCING PUPILS ACADEMIC
ACHIEVEMENT IN KENYA CERTIFICATE OF PRIMARY
EDUCATION IN MAKADARA DISTRICT, NAIROBI COUNTY**

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DECLARATION

This research project is my original work and has not been presented for award of a degree in any other university

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I dedicate this work to my dearest friend Pastor Lubangah, our children David Lubangah, Deogracious Ongode, Lydia Jambiha, Laura Vuyanzi, Lorraine Angano and grandson Jabez Mujumba.

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ABBREVIATIONS AND ACRONYMS

| | |
|--------------|--|
| DEO | District Education Officer |
| DQASO | District Quality Assurance and Standards Officer |
| EFA | Education for All |
| FPE | Free Primary Education |
| HRD | Human Resource Department |
| KCPE | Kenya Certificate of Primary Education |
| KNEC | Kenya National Examination Council |
| MCAS | Massachusetts Comprehensive Assessment System |
| MDGs | Millennium Development Goals |
| MOEST | Ministry of Education, Science and Technology |
| OVC | Orphaned and Vulnerable children |
| PTR | Pupil-teacher ratio |
| SPSS | Statistical Package for Social Sciences software |

ABSTRACT

Low academic achievement has been defined as failing to meet the average academic performance in tests or examination scores as defined by a set cut off points. This study investigated the school based factors influencing academic achievement in Kenya Certificate of Primary Education in Makadara District, Nairobi County. The specific objectives were to establish the influence of pupil-book ratio, teacher-pupil, rate of syllabus coverage and instructional leadership on pupils' academic achievement in Kenya Certificate of Primary Education in Makadara district. The study adopted a descriptive survey design. The theoretical framework was based on input-output theory. The input is reflected in the end product. The study targeted 26 schools, 26 head teachers, 96 teachers 348 pupils. The sample size of this study was 8 schools, 8 head teachers, 29 teachers and 104 pupils of class 7 and 8. The study utilized all the 55(100%) questionnaires from head teachers and teachers and focus group discussion for the pupils to collect data. Reliability of the instrument was done through a Pearson's product correlation. The validity was done by conducting a pilot study on four schools that were not included in the actual study. Both quantitative and qualitative techniques were used to collect and analyze data. The Statistical Packages for Social Science (SPSS) software package were utilized in analyzing the data. The data was presented in frequency tables and bar graphs. The study provides insight to stake holders on ways of improving academic achievement in KCPE in Makadara District. The administrators and teachers to evaluate the findings of this study to establish the school based factors hindering pupils' academic achievement. Findings may assist head teachers to re-examine and improve on their supervisory skills. The study findings indicate that less number of books for the pupils and minimal access to text books make pupils unable to study effectively. Minimal individual exposure to books compromise pupils' academic achievement. The findings indicated that teacher-pupil ratio is as high as 1:70 and that there existed minimal interactions between teachers and their learners hence least assistance is accorded which has an adverse effect on academic achievement. The rate, at which the syllabus is covered, was slow in the affected schools this limited the learners' area of scope to study and revise from. This affected pupils' academic achievement. The study showed that most of these schools scored below 250 marks for the four years consistently. The researcher suggested that head teachers should carry out frequent instructional supervisions and advice their teachers accordingly where necessary. The researcher recommended that the staffing officer should balance deployment so that all schools received enough teachers to attend to learners adequately, and especially the slow learners. The head teachers to sensitize their parents on the importance of having enough teachers in their respective schools to be able to teach effectively

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Low academic achievement has been defined as failing to meet the average academic performance in tests or examination scores as defined by a set cut off points (Fletcher, Coulter, Reschly, & Vaughn, 2004); (Fletcher, Shaywitz, Shankweiler, Katz, Liberman, Stuebing, 1994). Poor performance is a worldwide problem and has been an issue of concern at all levels of education. UNESCO (1980) report raised concern that in many parts of the world, most of the learners who sit for the end of year examinations do not make it through their examinations. The UN Declaration of Human Rights adopted in (1948), the Jomtien Declaration of (1990), the Dakar Declaration of Education and the United Nations on the Right of the child, which Kenya has adopted in the Children's Act 2001, states that every child has a right to all basic rights which includes education, Ministry of Education Science and Technology (MoEST, 2003). In 1990, Thailand raised a great urge for basic education.

The future of every country depends on rapid and effective development of its education system. Future standards depend highly on the level of literacy in the country. Education is perceived to be an important determinant of upward mobility, and so is employment eligibility in a modern society. The Kenyan

system of education borrowed its leaf from the British colonial administration and through years attempts have been made continuously to review the system to ensure it serves and satisfies the interest of the 'mwananchi'. This therefore has seen Kenyans strive to ensure that all its citizens regardless of age are educated through free primary education, food programmes and standardized examinations.

The government, teachers and parents have been in constant review of educational policies, viable, effective and sustainable ways to enhance the quality of education in the country (Abagi, 1997). This has been evaluated through educational commissions, session papers and presidential working political parties.

Teacher-pupil ratio is one of the main reasons for poor quality and low achievement in education, which characterize most public primary schools' education in Africa. Many policy oriented interventions and research studies advocate a 1:40 ratio as most ideal teacher-pupil ratio in developing countries. World Bank-financed primary education projects are also designed with an average teacher - pupil ratio of approximately 1:40. However in Kenya, the national teacher to pupil ratio increased steadily from the recommended 1:40 to as high as 1:60 and sometimes 1:90 pupils per teacher per class (MOEST, 2010), and this was as a result of introduction of free primary education (FPE). While the primary school teaching force remains standing at about 280,000, the enrolment

of pupils in primary level of education is far above 10 million. Abagi (1997) pointed out that educators and administrators of private schools believe that a low teacher - pupil ratio, which characterizes their schools, boosts pupils' performance; hence good performance is realized in private schools more than their counterparts.

The Education for All (EFA) goal is to achieve Universal Primary Education (UPE), to remove disparities and inequalities in education. Kenya, like any other developing country, puts an emphasis on provision of basic education. Education is a great necessity that the government and parents can jointly offer to a child. It equips the child with knowledge, skills, competency and values for the future.

Education is the key to transition into the job market, and is viewed as a tool used to eradicate poverty, ignorance, improve on health care and empower economy both locally and nationally. KCPE being a result oriented discipline, prospective candidates / employees are judged by the grades on their certificates (Okumbe, 2001). These grades are meant to place them into equivalent suitable job opportunities depending on their achievement. The main goal of primary education is to provide the initial step of education to all the school age going children on equitable basis with an aim of equipping them with knowledge and skills, Ministry of Education Science and Technology (MOEST, 2003). The initial capture on a child's mind which is *tabula rasa* (meaning empty plate in child

psychology) is permanently written for future referencing. A good foundation is therefore important in a child's life.

Education facilities and human resource are also among the school based factors linked to quality education. Nanyonjo (2007) in her study on factors influencing Learners' achievement in grade six in Uganda found out that pupils age, language frequently used, size of the class, time spend on any given one subject, text books and pupil/ desk ratio, significantly influenced academic performance of a child. Kabala (2001) concurs with Nanyonjo (2007) on the fact that adequate availability of school facilities contribute a great deal to a conducive environment in which a learner needs to perform well in assessment tests and examinations. Facilities offer the necessary comfort needed by a learner to concentrate more on learning.

Heynemann and Loxley (1983) agree on the fact that institutional factors are among the determinants of learners' achievement. Smith (2002) too, points out that availability of resources such as textbooks, desks and blackboards has been found to have an impact on pupils' achievement as they provide easy access during teaching and learning processes. He adds that; in some schools in Zimbabwe's Southern Province there were teachers who did not prepare lessons, had no schemes of work, and left pupils' assignments unmarked. This, he attributed to head teacher's instructional supervision failure. Just as in the Zimbabwe case, it clearly indicates that teachers' competence and preparedness to

adequately handle their subjects as well as manage their time effectively, could lead to high chances of improvement in academic achievement in examinations thereof including that of KCPE in Makadara District. This could only be achieved through effective leadership and supervision of head teachers.

Education is one of the most promising banks for individuals to invest in. It is a primary drive of national economic development. In his speech to the nation during the release of the 2012 KCPE, the Education Minister Hon Mutula Kilonzo in his speech said that provision of quality education to the Kenyan child is a must, and this is the very reason why the government of Kenya has continued to invest heavily in education and why the education Sector alone accounts for 14.5 percent of the national budget. This is a huge investment, in an effort to realize the promise of quality education as well as to achieve the education-related Millennium Development Goals (MDGs) and Vision 2030.

Kenya Certificate of Primary Examination is the first national standardized examination offered by Kenya National Examination Council (KNEC). It marks the end of primary education and the beginning of secondary education. In Kenya, primary education lasts for eight calendar years and caters for children aged between six and fourteen years. On completion of primary education a child is expected to transit to secondary school, depending on achievement in KCPE examination, for further education (Kabuchi, 2010).

Despite all these efforts, achievement in KCPE has however been marred by various challenges which include; lack of enough teachers/understaffing, inadequate textbooks, frequent transfers of teachers, insufficient supervision of teachers by the head teachers, all of which could result into lack of motivation, low morale and incompetent achievement in national examinations.

Teachers complain of increased pupil enrolments while their number remains the same. This has seen majority of public schools fall short of providing for the learning needs of their learners, leading to poor academic achievement (Republic of Kenya, 1998). Performance in Makadara district is no exceptional of these challenges, though they may vary from one school to another depending on the most prevalent factors in one given school. Some schools perform relatively well above average while others constantly remain lagging below average level. Obvious observable disparity in performance among schools within the same district, raises concern indicating that there could be underlying school based factors that are influencing achievement either negatively or positively in any given school. Learning and performing well is the main purpose of schooling and if learners did not perform well in their final examination, then their school is not perceived as effective and efficient (Eshiwani, 1983).

According to Eshiwani, the education system in Kenya being examination oriented its quality should therefore be evaluated in terms of pupils achievement through national examinations carried out by KNEC. The achievement can be

determined to be good or bad depending on quality of curriculum implementation, methods of teaching and contact hours which have a great impact on personality, confidence input and output of a child and this quality measured through achievement in national examinations (Ongiri & Abdi, 2004). The quality of inputs can also be observed through the child's way of interaction with his out of school environment /society.

In spite of all the effort, the pressure under which pupils in primary schools work is immeasurable. In Kenya school hours start as early as 7 a.m. until 5 or 6 p.m., short school holidays, and even during these holidays, pupils undergo holiday tuition after which they are sent home loaded with homework. All these workloads have reduced pupil's play time, affecting their enthusiasm for learning (Sifuna, 1997). The consequences are that the quality of education has been compromised and deteriorated in the process "work without play makes Jack a dull boy", resulting in some of the learners giving up on learning.

Makadara district consists of two zones Buruburu and Viwanda which have their catchment areas differing from each other. Whereas Buruburu zone has most of its children come from middle class families, Viwanda zone has most of the pupils/enrolment come from the slum dwellers that mainly are the OVC or very needy cases. Parents from the slums are either not working or small scale business men or women. Learners in the surrounding may be affected not only by school

based factors, but also other external factors brought about by socio-economic background.

While parents continue to rely heavily on the government for provision of quality education, Children from poor families are driven into child labour to substitute for their unemployed parents. They spend the better part of their time out of school without realizing they are compromising their performance.

Whereas poor performance is a general outcry in many countries including Kenya, evident dismal results in KCPE performance in Makadara district, Viwanda zone, have been recorded over years. Studies on results on achievement in schools in Viwanda zone, has shown that out of a total number of 13 schools only 5 on average manage to score above 250 only a small percentage of candidates secure admission into national or provincial schools. Makadara district has 26 public schools and as a result of poor academic achievement, pupils are either moved to private schools, boarding or better performing schools, within or without the district. Blames have heatedly been shifted where parents and DQASOs blame teachers while on the other hand teachers blame parents. However in their arguments there has been no clear proof, which led to the need to research and identifies to help analyze objectively the school based factors that influence academic achievement in KCPE in Makadara district.

1.2 Statement of the problem

Over the years, the government has made developments in education policy aimed at improving the quality of education which is measured in KCPE examination achievement (Asigo, 2000). Examination results in Makadara have shown disparity in achievement. Many researches on academic in Kenya primary schools have been carried out by (Mutea 2002, Waweru 1982, Eshiwani 1993, Kabui 1995 and Ayoo 2002) however none of them have focused on school based factors influencing academic achievement in Makadara district, in Nairobi County, despite these disparities in achievement amongst the school. This raises questions that need answers. With this in mind, the study investigated the possible factors that could be influencing academic achievement in Makadara district, Nairobi County.

**Table 1.1: Summary of the best performing schools in Makadara District
From 2009 to 2012**

| Schools | 2009 | 2010 | 2011 | 2012 |
|----------------|-------------|-------------|-------------|-------------|
| Bidii | 332.41 | 316.96 | 339.73 | 331.65 |
| Plains view | 299.37 | 296.25 | 312.66 | 328.99 |
| OLM | 300.56 | 299.91 | 321.23 | 321.37 |
| Baraka | 306.76 | 289.65 | 312.44 | 313.63 |

SOURCE: (DEO's Office Makadara District, 2013)

The researcher has included the above table of best performing schools to show that while still investigating low achievement in the district, there are those schools that achieve above average. This is evident through the mean score as indicated. This study seeks to establish the reason as to why some schools perform better than others yet are in the same district, the extent to which the schools that perform below average are affected by the school based factors which include; pupils-book ratio, teacher-pupil ratio, time allocation for syllabus coverage and frequency of head teachers' instructional leadership.

Table 1.2: Summary of the poor performing schools in Makadara District from 2009 to 2012

| | 2009 | 2010 | 2011 | 2012 |
|---------------|-------------|-------------|-------------|-------------|
| St. Johns | 225.56 | 225.84 | 212.86 | 135.96 |
| Star of hope | 200.61 | 200.61 | 212.85 | 215.54 |
| St. Elizabeth | 202.90 | 202.90 | 1198.18 | 202.90 |
| St. Pauls | 200.80 | 200.80 | 187.07 | 200.80 |

SOURCE: (DEO's Office Makadara District, 2013)

The comparison in the two tables above shows disparity in performance in the two zones of the district. While some schools score above others remain below the possible average mark of 250 out of possible 500 of the total marks awarded

in KCPE. The mostly affected are those in Viwanda zone. They compromise the overall mean score for the whole district. This disparity in achievement of schools within the same district raises eyebrows leading to the need to seek answers through research to establish the possible school based factors influencing academic achievement in Makadara district, Nairobi County.

1.3 Purpose of the study

The purpose of this study was to investigate the possible school based factors influencing pupils' academic achievement in Kenya Certificate of Primary Education in Makadara district, Nairobi County.

1.4 Objectives of the study

- i. To determine the influence of pupil-book ratio on pupils' academic achievement in Kenya Certificate of Primary Education in Makadara district.
- ii. To establish the influence of teacher-pupil ratio on pupils' academic achievement in Kenya Certificate of Primary Education in Makadara district.

- iii. To determine how the rate of syllabus coverage influences pupils' achievement in Kenya Certificate of Primary Education in Makadara district.
- iv. To establish the influence of head teachers' instructional leadership on pupils' achievement in Kenya Certificate of Primary Education in Makadara district.

1.5 Research questions

- i. To what extent does pupil-book ratio influence academic achievement in Kenya Certificate of Primary Education in Makadara district?
- ii. To what extent does the teacher-pupil ratio influence academic achievement in Kenya Certificate of Primary Education in Makadara district?
- iii. To what extent does the rate of syllabus coverage influence academic achievement in Kenya Certificate of Primary Education in Makadara district?
- iv. To what extent does the frequency of head teachers' Instructional leadership influence on pupils' academic achievement in Kenya Certificate of Primary Education in Makadara district?

1.6 Significance of the study

This study will provide insight to stake holders on ways of improving academic achievement in KCPE in Makadara District. The administrators and teachers may use the findings of this study to establish the school based factors hindering pupils' academic achievement.

Other beneficiaries may include Ministry of Education (MOE) through Teachers Service Commission (TSC) staffing department in improving on balancing in posting of teachers or employ more teachers in mostly affected schools. Findings are to enable head teachers to re-examine and improve on their supervisory skills. It paves way for future researchers to carry out further investigations that will enrich knowledge in factors influencing academic achievement in KCPE in Makadara District.

1.7 Limitations of the study

Mugenda and Mugenda (2003) define limitations as some aspects of the study the researcher knows may impact negatively on the research but have no control over. In this study some of the limitations were those respondents unwilling to volunteer information freely and honestly thinking that the study would expose their individual opinions since it is based on their perception. Lack of proper records and data to be used as reference in this field of study. The researcher overcame respondents' fear by talking to and assuring them that the findings were

to be used for academic purposes only. Booking appointments made it more convenient for the respondents out of their busy schedules.

1.8 Delimitations of the study

Mugenda and Mugenda (1999) define delimitation as setting boundaries of study or limiting the scope of study to make it manageable. The research was restricted to only school based factors influencing academic achievement in only public schools in the two zones of Makadara District. Data was obtained from head teachers, teachers and pupils of only class 7 and 8 from a few selected schools.

1.9 Basic assumptions of the study

The basic assumptions of this study were that:

- i). National examination was a valid measurement for academic achievement.
- ii). All the teachers in the district were highly competent to handle candidates for their examination.
- iii). All schools under study kept track records from which the pupil's prior achievement can be referred to.

1.10 Definition of significant terms

Academic achievement refers to meeting the average performance in tests or examination scores as designed by a set cut off points.

Institutional factors refer to school based causes which may be a hindrance to academic achievement at Kenya Certificate of Primary Education.

Public primary school refers to schools that are owned and funded by the government.

Pupil-book ratio refers to the average number of usable textbooks per Pupil per subject in a given school calendar.

Pupil-teacher ratio refers to the number of teachers in a primary school with respect to specified guidelines of a teacher for every fifty pupils.

Mwananchi – a slogan that refers to a common citizen.

1.11 Organization of the study

This study is organized in five chapters. Chapter one includes the background of the study, statement of the problem, the purpose, research objectives and questions, significance, limitations, delimitations, basic assumptions and significant terms of the study. Chapter two deals with related literature; the review is organized into sub title preview of academic achievement in examinations in primary schools, teacher-pupil ratio, school facilities, theoretical framework and conceptual framework.

Chapter three deals with research methodology, which include research design, target population, sample size and sampling procedure, research instruments,

validity and reliability of the instruments, data collection procedure and data analysis technique. Chapter four contains data collection, data analysis and interpretation. Chapter five summarizes the research findings, makes conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews relevant literature on how book ratio, teacher ratio, rate of syllabus coverage and head teachers instructional supervision as school based factors, have an impact on academic achievement in KCPE. It is based on general overview on how a child's ability to perform at national level can be affected right from the grass root level, and that achievement, good or bad is as a result of institutional factors.

2.2 School based factors and academic achievement

According to Alidou (2006) in Zanzibar 50% of learners under achieve and fail to progress beyond primary education basing on their examination performance. A further 55% of pupils in Africa drop out at the end of primary school and are labeled unsuccessful learners since they are still underage to neither venture into the job market nor proceed further in education. A recent World Bank report (2006) on study done to investigate the factors leading to school ineffectiveness and poor achievement levels in exams, put blame on second and third languages. The study revealed that these languages during instruction could be the cause of high dropout rates hence poor achievement in African schools.

Desired achievement levels may be hampered by not only school based factors, but also home factors like socio-economic backgrounds. This section reviews the related literature research findings of other scholars on school based factors influencing pupils' academic achievements. These factors include; pupil-book ratio, teacher-pupil ratio, rate of syllabus coverage and head teachers' instructional leadership. Even though institutional factors may be linked to deterioration of academic achievement, it could be difficult to generalize this because performance varies from one individual to another and one institution to another. Achievement at school level can be used to determine achievement at national level, although academic achievement at national level may not be good enough to gauge a child's ability. Study on individual institutions to evaluate possible root causes of academic achievement failure at national level should be carried out. Both formative and summative evaluation of a child's performance should be used to track performance. This study seeks to analyze possible challenging factors in their relevant areas by trying to determine their influence on academic achievement (Kabala, 2012).

In addition to instructional supervision factors (Duigna, 1986) concurs with Kabala when he identified leadership instructional factors that may influence learners' achievement as; Leadership style, decision making and teacher-learner relationship.

In Madagascar several studies revealed that leadership skills of a school principal, the degree of community participation were contributory influences on pupils' education achievement. Teaching materials used, teachers' skills and attitudes together with schools' facilities and equipment are found to be equally important. In school systems, the presence of materials and teachers are the major resources that may demand principals' management skills to maximize outcomes. With proper teaching methodologies put in place, institutional factors could be identified to analyze their impact on performance. In Botswana (Munda, 2000) linked the availability of classrooms, desks and books to significantly better performance in examinations. This was in support of the contention that, school facilities are integral to academic achievement. Similarly a study in secondary schools by Vulliamy, (1987) found out that school facilities were directly related to achievement. These findings exonerate the intentions of this study. School facilities in Malawi and in South West Education Division specifically indeed influenced performance in poor and rudimentary school systems. He summarized findings by emphasizing that more evidence is needed to strengthen the case that school facilities and home characteristics influence pupils' achievement or performance in class. In contrast, using multilevel modeling techniques (Sushila, 2004) found that prior achievement, age and socio background were among other factors that affected performance. This means that a child's base in education may also be a reflection of future performance, where a child who starts learning in pre- school may have an advantage to perform better than one who never

attended. It has a role to play in the progressive development. It is evident that a child must start school at the right age, lest he/she becomes bored too early in life and loose interest hence a drop in performance. These results are in agreement with those conducted in the USA which link performance to a learner's background.

Eshiwani (1993) identified three determinants of academic achievement in the third world countries as: class size, Textbooks, school administration, teacher's qualifications, and Teacher-pupil ratio which he quantifies as school based factors. Others include social characteristics and pupils' basic background which include kindergarten education, former school and formative evaluation.

2.3 Pupil-book ratio and academic achievement

Studies carried out in Massachusetts, in the United States of America, found a strong correlation between school libraries and students achievement. Mean Massachusetts Comprehensive Assessment System (MCAS) scores were found to be higher in schools that had school library programmes at all levels as opposed to schools that did not have such programmes. The study showed that 'the highest achieving students attend schools with good school libraries' (Baughman, p. 10.) At each level, higher MCAS scores were associated with increased use of the school library, higher per pupil book count, and longer hours of self-book exposure. This clearly indicates that an individual maximum book interaction is

associated with achievement. Having enough books for learners, encourages an individual learner to study at his/her own pace.

Ayoo (2002) in her study on factors affecting students' achievement in Kenya Certificate of Secondary Examination (KCSE) in public secondary schools in Maseno Division found out that from a total of 106 respondents, 85 percent of them indicated that inadequate availability of text books in schools that recorded poor achievement was evident. Likely in the case of Makadara District, the low achieving schools cited, indicated either loss of or torn textbooks, with most pages missing. This reduced the pupil-book ratio which is meant to be 1:1, to probable 1:5 or 1: 10. Parents and guardians who are unable to replace the lost books due to socio - economic challenges in cases where the pupil is orphaned and vulnerable children living with relatives was prominent.

Nyatuka (2002) in her research on leadership styles indicated that heads of new schools had difficulties with teaching/ learning materials and equipment. In a struggle to look for solutions this led to poor academic achievement in the initial years of trying to settle. Teachers in Makadara District may find it difficult to give homework which is not sufficiently done due to lack of these essential facilities. A child with no textbook may either do the work insufficiently or not do it at all. This makes it difficult for this child to realize his/her weakness. The learner will be unable to keep track of work covered; making it difficult to revise for examination when there is nothing to refer to.

2.4 Teacher-pupil ratio and pupils academic achievement

A study done in Ghana, states that Pupil-Teacher Ratio (PTR) is one of the key input indicators used as a proxy measure for education quality within the Education Support Programmes (ESP). It is used to correlation of access and efficiency within the education sector. In large classes with a number above 50, it was observed that individual pupil-teacher interactions were minimal. Class management and individual pupil-teacher interactions at the primary school level were observed to be more manageable in the classes with PTR close to 35:1 (Ampiah, 2008).

According to (Benbow, Mizrachi, Oliver and Said Moshiro, 2007) an ideal teacher - pupil ratio should be 1: 40. The debate on class size and pupil-teacher ratio, and their impact on learning achievement may not be conclusive, especially in Kenya with the introduction of FPE which advocates for education for all school age going children regardless of their social background (Aphard, 2008 Paper No 38). The pupil-teacher ratio in public primary schools was 1: 43 in 2005 and slightly rose to 1:50 in the year 2007 (Government of Kenya, 2008). After the FPE implementation, ratios raised to as high as 1:70 this was far much higher than the recommended. Such high ratios come with challenges like; lack of attention to learners especially slow ones, lack of provision of adequate assignments to pupils due to inability to cope with marking and teaching workload (UNESCO, 2005).

This meant that either the number of teachers was declining or the number of pupils was growing at an alarming rate as compared to that of teachers. The recommended pupil-teacher ratio for public primary schools in Kenya is 1: 50 (Teachers Service Commission, 2005).

Abagi (1997) stated that pupil-teacher ratio was one of the main reasons for poor quality, low efficiency and poor examination performance in Africa. Efficiency of primary education in Kenya justifies that very high pupil-teacher ratio could lead to poor achievement. Achievement in public schools is hampered by the big numbers that encourage minimal interactions between teachers and learners. While researchers and teachers believe that small classes are ideal for effective teaching and academic achievement, however large schools which are well established on the other hand attracted better head teachers with good administrative skills, who created conducive learning atmosphere and teaching environment resulting in high academic achievement. These schools received prompt attention and action in supply of resources and facilities. This could be the reason as to why there is disparity in achievement amongst the schools in Makadara district. Some schools are large and well established and located prosperous suburbs of Buruburu. These are the schools that have continued to perform better in Makadara as compared to their counterparts.

2.5 Time of syllabus coverage and academic achievement

Time allocated to teaching/learning can be a factor influencing achievement. A learner's achievement is a product of the amount of exposure to the content of the assessment. In the process-product research, it is argued that what matters is not the amount of time assigned to learning a particular subject or the time learners are actively engaged in instruction during class time, but how teachers utilize it (Rowan, Correnti and Miller, 2002).

If only more hours were allocated for instructions in a subject, higher achievement would be expected. According to report on performance by KNEC, (Mutea, 2002) is quoted as having cited lack of adequate revision time as a factor influencing KCPE achievement and this seemed to be the reason why most public primary schools, Makadara inclusive performed poorly. Eshiwani (1983) noted that most schools lost many teaching/learning hours at the beginning and end of every term. When more time is wasted trying to settle after a school holiday, it may be difficult to make up for this could possibly influence achievement at KCPE level as the saying goes 'time wasted can never be recovered'

In cases where a lot of pupils' learning time is wasted in primary schools, this leads to non coverage of syllabus within the stipulated time before exams. Sometimes time allocated on the Block Timetable is not adhered to especially during co- curricular activities, long assemblies and over testing leading to drilling of pupil to pass examinations rather than teaching to acquire knowledge.

Lack of proper syllabus coverage limits a learner's scope of thorough revision and preparation to tackle an examination adequately. According to Mbithi (2002) most learners were given surprise assessment of which they are not well prepared for; this could create anxiety, hence poor examination performance. It does not also reflect their ability to achieve. Most head teachers in top performing schools if asked how they do it, may give reasons like; proper use of time, high discipline in both teachers and learners, extra time to study on their own, teachers early completion and coverage of syllabus and topical evaluation/periodical tests.

For specific objectives and goals to be achieved, head teachers' duty is to ensure that time is well managed.

2.6 Head teacher instructional leadership and academic achievement

Head teachers are responsible for planning, organizing and controlling the staff during teaching process. This exercise is carried out through frequent inspection of schemes of work, lesson plans, lesson notes records of work done, pupils exercise books as well as teachers' instructional supervision. The above should be done administratively and professionally. According to (UNESCO, 1991) a mounting evidence show that head teachers expectations and their leadership styles, could lead to changes in teachers' behavior. Gray (1990) asserts that an effective head teacher encourages his teachers, learner and parents to identify and celebrate moments of excellence. Ministry of Education together with Human Resource Department (1999) outlines the importance of head teachers in

supervision of curriculum implementation. It stresses on the fact that head teachers should be effective advisers on programmes that improve teaching /learning skills. The Ministry of Education empowers head teachers to be the key instructional supervisors based at school level, identifying specific curriculum needs and prepare strategic plans that would promote teacher-pupil achievement. This means that the head teacher is in-charge of ensuring the syllabus is covered, discipline in both staff and learners is maintained, and quality education is achieved. Their supervision should keep performance on the right track.

It is the duty of the head teacher to guide other teachers. This should be done through frequent checks on schemes of work for syllabus coverage, lesson plan for effective teaching and record of work for performance. This is to be carried out through administrative process of planning, organization, coordinating, influencing in order to maintain good public relation and effective supervisory leadership skills (Okumbe, 1998).

Academic achievement is influenced by the extent to which head teachers perform supervisory duties. Kamindo (1998) in her study in Ngong division sought to find out how head teachers performed their duties and found out that those in private schools were more regular than in public and therefore had things under control. Frequency in supervision keeps teachers alert and therefore make them to work harder. The quality of work is evaluated in pupils' academic

achievement. Head teachers are key instructional supervisors and therefore must ensure time is well managed.

2.7 Summary of literature review

The literature and the review focuses on what other scholars of education have said about how school based factors influence achievement. The review highlights details of the variables that could influence achievement in schools. However achievement at national level may not measure a learner's ability to achieve academically. Academic achievement should be measured at different levels. This includes; institutional, zonal, divisional, district, county, then national level. While teachers and researchers believe in small numbers for high academic achievement, Ndiritu (1999) in his view disagrees on the fact that smaller numbers of children achieve better saying that larger schools which have many children, due to availability of facilities, enough number of teachers and being well established, attract quality teachers, competent head teachers and always receive adequate supply of resources and facilities, this therefore improves performance. This affirms that small numbers of children in a school do not determine positive results. These confirm that besides numbers there are other factors that hinder good results. The proposed studies therefore intend to assess and establish these possible school based factors that influence academic achievement.

2.8 Theoretical framework

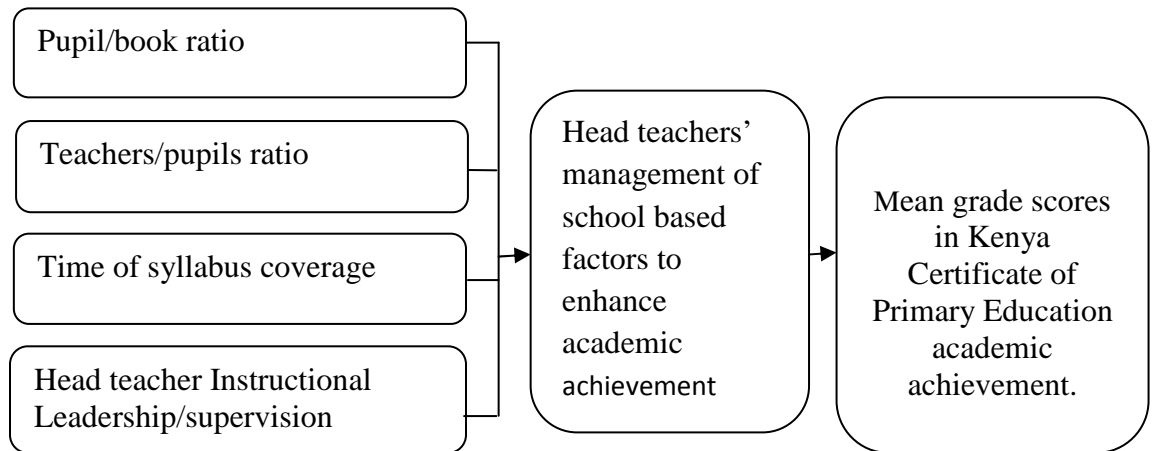
This study was based on input-output theory which has its roots in the work of a Russian production economist (Wassily Leon Tief, 1906-1999). The theory states that the product/output depends on the input. So long as the required raw materials are available, at the production process level, then the desired product is realized. This input theory is related to academic achievement in education in that where there is sufficient and adequate allocation of human and fiscal resources in an education system; the desired outcome will be realized. The teachers inputs in form of efforts, hard work, skill level, enthusiasm during curriculum implementation, together with the head teachers' instructional supervision, will affect the outcome/academic achievement. The theory directly relate to this study, of all the required educational inputs such as: syllabus coverage, equal distribution of teachers and learning resources, proper instructional supervision put in place, then the desired outcome which is pupils academic achievement in KCPE in Makadara district, Nairobi County will be realized.

2.9 Conceptual framework

School based factors like inadequacy of teaching and learning materials, large class room sizes, increased workloads, poor lesson preparation, shallow syllabus coverage, incompetent and authoritative school administration, and poor time management may result to low academic achievement in KCPE examination.

Figure 2.1 Conceptual framework

Relationship between school based factors and pupils academic achievement in KCPE



The conceptual framework for this study as depicted in figure 2.1 was based on four independent variables: pupil-book ratio, teacher-pupil ratio, rate of syllabus coverage and frequency of head teacher instructional leadership. Each of these independent variables has an effect on the dependent variable which is pupils' academic achievement in KCPE in public primary schools. The study acknowledges that there are other institutional factors that affect achievement of pupils in KCPE but due to the limited scope of this study, the researcher concentrated on institutional factors as captured by the variable.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter deals with the research methodology that was used in carrying out the study. The section describes the research design, justification of the area of study, target population sample size and sampling procedure, sample size and sampling techniques, the description of the instruments used, data collection procedures and also data analysis procedures.

3.2 Research design

Sheunda (2007) concurs with Orodho (2003) who views research design as a plan, structure and strategy of investigation conceived so as to obtain answers to a research question which provides a framework for planning and conducting a study. This study used descriptive survey design where variables were investigated without any manipulation or alteration. The survey was done through questionnaires and focus group discussion to collect required data to answer questions under study.

Descriptive survey was used to study phenomena both quantitatively and qualitatively. It was not restricted to fact findings only, but may also result into formulation of principles of knowledge and solutions to problems, (Kerlinger,

2000). This design was mainly aimed at formulating principles of knowledge and strategies that may form basis for addressing institutional factors influencing pupils' academic achievement in KCPE examination in Makadara district.

3.3 Target population

Mugenda and Mugenda (1999) define a target population as a group of individuals, events or objects which a researcher needs to generalize the results of a study. They define a population as an entire group of individuals' events of objects having a common observable characteristic. The study targeted 26 head teachers, 96 teachers, 348 class 7 and 8 pupils in 26 public primary schools in Makadara district that have been in operation for more than four years and offering candidates for Kenya Certificate of Primary Education (K.C.P.E).

3.4 Sample size and sampling procedure

Sampling procedure is a research technique used to select a small percentage of the total number of subjects as representatives of the target population (Paton, 2002). This study used all the 26 head teachers 30% of the targeted schools, teachers and pupils to get a sample size. Census sampling was used to involve all the 26 head teachers and 29 teachers. A 30% of the class 7 and 8 pupils were sampled randomly to involve 104 pupils from the schools. A 30% was perceived an adequate representation of the descriptive survey research. This gives a total sample size of 159 respondents.

Table 3.1 Sample size

| Respondents | Target population | Sample size |
|--------------------|--------------------------|--------------------|
| Head teachers | 26 | 26 |
| Teachers | 96 | 29 |
| Pupils | 348 | 104 |
| Total | 470 | 159 |

3.5 Research instruments

The study used questionnaire as the only tool for data collection. The tool was considered appropriate because all the respondents are literate enough to answer the questions on their own. The items on the questionnaire was made simple in order to be effective as instrument for data collection. The questionnaires gather straight forward information and are less time consuming for respondents (Jwan, 2010).

The questionnaire was designed in line with the objectives of the study. To enhance quality of data to be obtained, Likert type of questions were included whereby respondents indicated the extent to which the variables are practiced on a five point Likert scale (Garner, 2010). The structured questions were used in an

effort to conserve time and money as well as to facilitate easier analysis as they are in immediate usable form; while the unstructured questions will be used so as to encourage the respondent to give an in-depth and felt response without feeling held back in revealing of any information (Mugenda and Mugenda, 2003).

Mugenda and Mugenda (1999) states that a researcher needs to develop instruments with which to collect the necessary information. The validation and reliability assurance of the research instruments and the data collection procedure that were adopted in this study included questionnaires for head teachers and teachers, and focus group discussion for pupils. Document analysis was also employed to supplement the sources of information.

3.6 Validity of instruments

Borg and Gall (1996) describes validity as the degree to which the instruments measures what it is intended by the researcher. In this context, to ascertain whether the instruments to be used in carrying out the research were validity, the researcher used two ways to determine. First the researcher discussed the items in the instruments with the supervisors from the Department to confirm their eligibility. In addition, the researcher looked at other researchers' findings and recommendations in comparison with current findings. Suggestions, clarifications and similarities of ideas helped in determining the validity of the research instruments. These suggestions played a great role in making the necessary changes and conclusions.

3.7 Reliability of instruments

Reliability is the degree to which a particular measuring procedure gives a similar result over a number of repeated/several trials of test (Orodho 2003). Reliability is the degree to which a test consistently measures what it purports to measure. According to Gall (1996) the more reliable a test- retest result is the more confirmation that the scores obtained from the administration of the test would be the same scores obtained even if the tests were to be re-admitted. The questionnaire for the head teachers, teachers and focus group discussion for pupils were used in the pilot study and then correlated to test their reliability. These tests were carried out and repeated after two weeks to ensure the results remain consistent. This included the consistency in responses obtained from the respondents.

The scores from both tests were correlated to get the coefficient of reliability using pearson's product moment formulae as follow:

$$r = \frac{\sum xy - \frac{\sum x \sum y}{N}}{\sqrt{\left(\sum x^2 - \frac{\sum x^2}{N}\right)\left(\sum y^2 - \frac{\sum y^2}{N}\right)}}$$

Where;

N = No of respondents

x = scores for term one

y = scores for term two

Reliability to efficient (r) of the head teachers questionnaire was found to be 0.890 and the teachers to be 0.722. According to Gay, (1992) any research with a correlation coefficient between 0.7 and 1.0 is acceptable as reliable enough. Therefore, the researcher found the instruments (questionnaires) reliable enough to be used.

3.8 Data collection procedure

Data collection procedure was conducted through obtaining a research permit from the National Commission for Science, Technology and Innovations (NACOSTI), a request letter for approval from the school of education at the university to proceed on with the research study, a permit letter to carry out the research in Makadara district from the District Education Officer (DEO) Makadara District. The questionnaires were then administered personally by the researcher to facilitate data collection within the stipulated time.

3.9 Data analysis techniques

According to Borg and Gall (1996) data analysis includes sorting, editing, coding, cleaning and processing of data. It involves breaking down of data into constituent parts to obtain answers to the research questions. Quantitative data was collected using descriptive survey and analyzed through content analysis basing on respondents general information on pupils academic achievement. Qualitative data was analyzed and presented in frequency tables. Major concepts and themes were identified and discussed (Jwan, 2010). The themes were

explained in line with the previous study findings. Qualitatively data was presented thematically in line with the study objectives and research questions. In this study, it was done by tallying up responses, computing percentages of variables in response as well as describing and interpreting data collected in line with the study objectives and research questions through the use of Statistical Package for Social Sciences (SPSS) software.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter deals with the questionnaire return rate, demographic characteristics, data analysis and interpretation which were generated by the study. The data presented includes: To determine the influence of pupil-book ratio, teacher-pupil ratio, rate of syllabus coverage and the frequency of head teachers' instructional leadership on pupils achievement in Kenya Certificate of Primary Education in Makadara district.

4.2 Questionnaire return rate

There were 55 questionnaires administered to the head teachers and teachers. Focus group discussion was conducted on 104 pupils. The filled questionnaires were 55; 26 from head teachers and 29 from teachers. This represented 100% response rate, which is a very good response to make conclusions for the study. This high response rate is attributed to the data collection procedures, where the researcher personally administered questionnaires and waited for the respondents to fill and collected the filled questionnaires.

4.3 Demographic characteristics

In order to achieve the main aim of the study the researcher sought to establish the demographic information of the respondents. The results were as shown in Table 4.1.

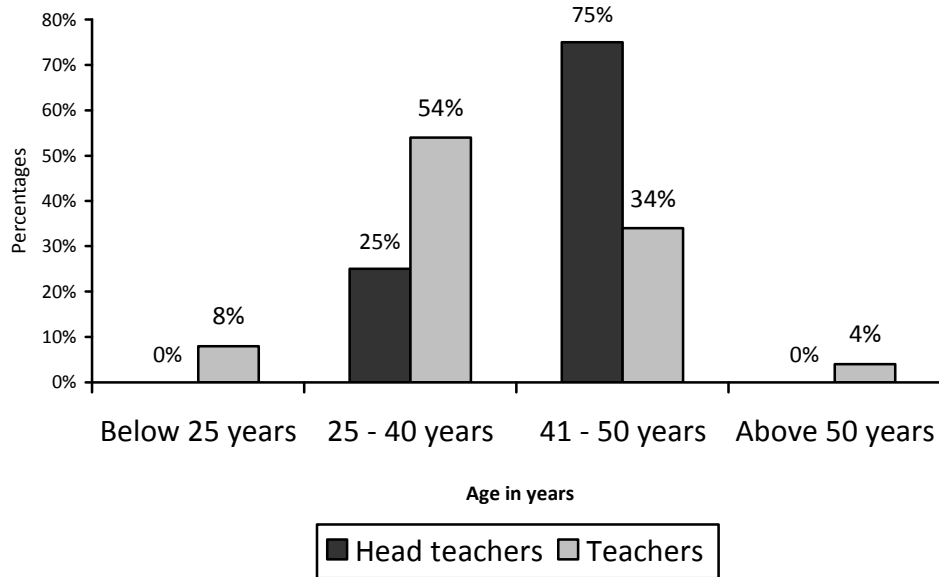
Table 4.1 Respondents' gender

| Demographic Information | Head teachers | | Teachers | |
|--------------------------------|----------------------|----------------|------------------|----------------|
| | Frequency | Percent | Frequency | Percent |
| Gender | | | | |
| Female | 16 | 62% | 19 | 66% |
| Male | 10 | 38% | 10 | 34% |
| Total | 26 | 100% | 29 | 100% |

In this study the researcher chose to use gender to have a balance and remove biasness of respondents in regard to sex.

Majority of the head teachers 16 (62%) are females and 10 (38%) of the teachers were males. This implies that there are more female head teachers than the male counterparts who made up the sample of the respondents.

Figure 4.1 Respondents' age.



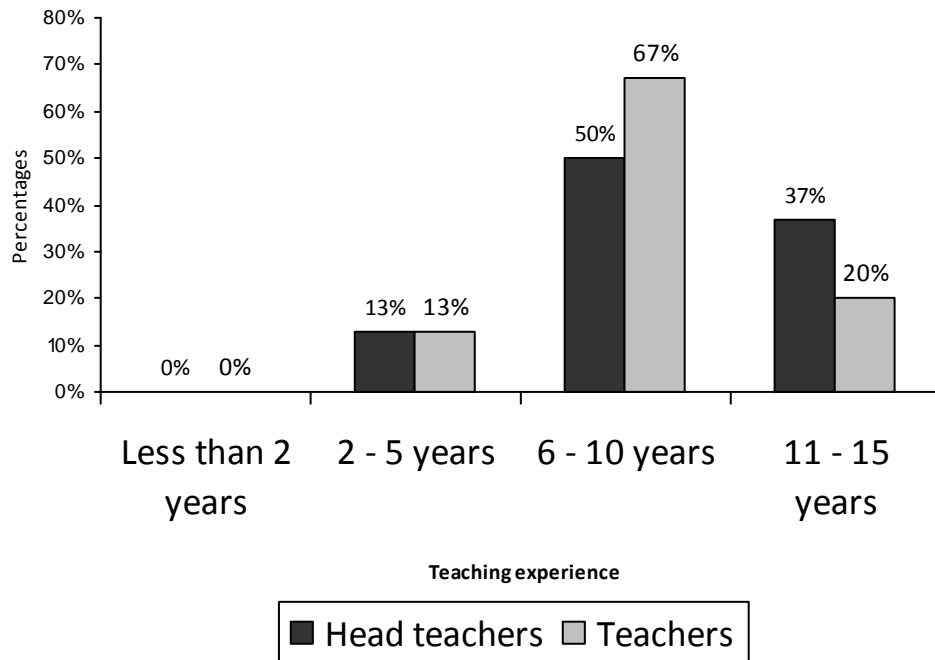
The researcher used age of the respondents to determine at what age is one eligible to become a head teacher and that to be a head teacher, one must have teaching experience. Majority of the head teachers 6 (75%) had age of between 41 - 50 years while a majority of teachers 13 (54%) had ages between 25 – 40 years. This implies that the sampled respondents had enough teaching experience and were mature enough to handle and carry out the assigned duties effectively. They too can be able to understand better the school based factors that could influence academic achievement in Kenya Certificate of Primary Education.

Table 4.2 Respondents' level of education

| Demographic Information | Head teachers | | Teachers | |
|--------------------------------|----------------------|----------------|------------------|----------------|
| | Frequency | Percent | Frequency | Percent |
| Level of Education | | | | |
| ATS 1V & Diploma | 3 | 12% | 1 | 4% |
| BED | 13 | 50% | 23 | 79% |
| Masters | 10 | 38% | 5 | 17% |
| Total | 26 | 100% | 29 | 100% |

. In this case teachers' education is regarded as a driving force behind development in any field that is why the researcher wanted to establish the level of education of the majority of the teachers in relation to the study. Most of the head teachers 10 (38%) and 13 (50%) of the teachers had bachelors of education degree as their highest level of education. This implies that the head teachers and teachers in the schools in Makadara division are qualified enough to handle their candidates satisfactorily and understand the school based factors influencing academic achievement in Kenya Certificate of Primary Education. The findings revealed that highly skilled personnel enhance production of high quality outcomes and effective quality improvement in an enterprise as they act and stand in as role models in the respective fields.

Figure 4.2 Respondents' teaching experience.



In order to achieve the main aim of the study the researcher sought teaching experience of the head teachers and teachers' respondents. Experience is the key to competitiveness and that the longer the experience the more effective the teacher becomes. Majority of the head teachers 4 (50%) and 16 (67%) of the teachers had worked for 6 – 10 years. This implies that the study respondents had experience long enough to know the school based factors that influenced academic achievement in Kenya Certificate of Primary Education.

4.4 Pupil-book ratio and academic achievement in Kenya Certificate of Primary Education in Makadara district

The researcher probed the influence of pupil-book ratio on academic achievement by studying the adequacy of books for the pupils in schools, adequacy of reference materials for the teacher and pupils – book ratio.

The Study explored the influence of pupil-book ratio on academic achievement. The head teachers and teachers were asked if there are enough books for every pupil in school. The results are presented in Table 4.3.

Table 4.3: Availability of text books in school

| Response | Head teachers | | Teachers | |
|-------------------|---------------|-------------|-----------|-------------|
| | Frequency | Percentage | Frequency | Percentage |
| Agree | 4 | 13% | 7 | 24% |
| Disagree | 21 | 74% | 14 | 48% |
| Strongly disagree | 4 | 13% | 8 | 28% |
| Total | 26 | 100% | 29 | 100% |

Table 4.3 shows that majority 21 (74%) of the head teachers respondents disagreed that there are enough books for every pupil in school. Majority 14 (48%) of the teachers also disagreed that the pupils have enough books.

This shows that most of the pupils do not get enough books in schools for revision and this might be affecting their performance. These findings are reflected in (Fletcher, 2004) studies carried out in Massachusetts, found a strong correlation between school libraries and students achievement. Mean Massachusetts Comprehensive Assessment System (MCAS) scores were found to be higher in schools that had school library programmes at all levels as opposed to schools that did not have such programmes. The study showed that ‘the highest achieving students attend schools with good school libraries’.

The study assessed if there are enough reference materials for teachers to use for their preparation, the results are presented in Table 4.4.

Table 4.4: Reference materials for teachers

| Teachers | | |
|-------------------|------------------|-------------------|
| Response | Frequency | Percentage |
| Strongly agree | 4 | 13% |
| Agree | 5 | 17% |
| Undecided | 2 | 8% |
| Disagree | 10 | 36% |
| Strongly disagree | 8 | 26% |
| Total | 29 | 100% |

Table 4.4 shows that most of the teachers respondents 10 (36%) strongly disagreed that there are enough reference materials for teachers to use during their lesson preparation. This might be affecting their teaching and consequently the pupils' academic performance. This finding is emphasized by (Baughman, p. 10.) who asserts that at each level, higher MCAS scores were associated with increased use of the school library, higher per pupil book count, and longer hours of self book exposure. This clearly indicates that an individual maximum book interaction was associated with achievement.

The head teachers and teachers were asked if the pupil-book ratio influenced the pupils' academic achievement. The results are presented in Table 4.5.

Table 4.5: Pupil-book ratio and pupils' academic achievement

| Teachers | | |
|-----------------|------------------|-------------------|
| Response | Frequency | Percentage |
| Strongly agree | 24 | 83% |
| Agree | 17 | 17% |
| Total | 29 | 100% |

The researcher was to establish the availability and distribution of textbooks in relation to academic achievement. Findings were that most of the textbooks were either torn or lost and not replaced. This had reduced the number of books and

raised the pupil-book ratio. The pupils were inconveniently sharing the available ones.

Table 4.5 shows that 24 (83%) of the teachers respondents who linked achievement to availability of adequate resources, agreed that pupil-book ratio influenced the pupils' academic performance. This is reinforced by Ayoo (2002) who carried out a study on factors affecting students' achievement in Kenya Certificate of Secondary Examination in public secondary schools in Maseno Division and found out that from a total of 106 respondents, 85 percent of them indicated that inadequate availability of text books in schools that recorded poor achievement was evident. In Makadara some of the schools that performed better had a 1:1 book ratio and some had supplementary books bought by the parents. This is clear indication that for a learner to study effectively, he/she must access learning resources.

The pupils were asked if the pupil-book ratio influenced their academic achievement. The results are presented in Table 4.6.

Table 4.6: Pupil-book ratio and academic achievement

| Pupils | | |
|-----------------|------------------|-------------------|
| Response | Frequency | Percentage |
| Strongly agree | 99 | 95% |
| Agree | 5 | 5% |
| Total | 104 | 100% |

Table 4.6 shows that the majority 99 (95%) of the pupils strongly agreed that pupil-book ratio influences the pupils' academic performance. This is reflected by (Dunkin, 1993) who asserts that at each level, higher scores were associated with increased use of the school library, higher per pupil book count, and longer hours of self-book exposure.

4.5 Teacher-pupil ratio and academic achievement in Kenya Certificate of Primary Education in Makadara district

Teachers are viewed as the most important resources to an institution asserts (Okumbe, 1998) There has been a notable turnover of teachers to other sectors due to low pay. Consequently these turnovers have led to shortage of teachers (Njue, 2003). As a result, programmes are greatly affected leading to poor academic performance. The researcher then sought to investigate the influence of teacher-pupil ratio on academic achievement in KCPE. The researcher started by probing the head teachers and teacher's on the adequacy of teachers to effectively handle the pupils in their schools. The results are shown in Table 4.7.

Table 4.7: Teacher-pupil ratio and pupils' academic achievement

| Teachers | | |
|-----------------|------------------|-------------------|
| Response | Frequency | Percentage |
| Strongly agree | 20 | 75% |
| Agree | 9 | 25% |
| Total | 29 | 100% |

Table 4.7 shows that the majority 20 (75%) of the teachers respondents indicated that teacher-pupil ratio influences the pupils academic achievement. Most teachers complained of over enrolment and lack of support from the parents. The teachers complained of inability to give a lot of homework for fear of the workload of marking. They cited parents' laxity to assist due to their level of education. Most of the children were orphaned and vulnerable. This finding is confirmed in a study done in Ghana, states that Pupil-Teacher Ratio (PTR) is one of the key input indicators used as a proxy measure for education quality within the Education Support Programmes (ESP). It is also used to reflect access and efficiency within the education sector. In large classes with a number above 50, it was observed that individual pupil-teacher interactions were minimal. Class management and individual pupil-teacher interactions at the primary school level were observed to be more manageable in the classes with PTR close to 35:1 (Ampiah, 2008).

The researcher then investigated if the school replaces the teachers who transfer in time. The results are shown in Table 4.8.

Table 4.8: The PTA replacement of transferred teachers

| Head teachers | | |
|----------------------|------------------|-------------------|
| Response | Frequency | Percentage |
| Strongly agree | 3 | 25% |
| Agree | 16 | 62% |
| Disagree | 7 | 13% |
| Total | 26 | 100% |

Table 4.8 shows that majority 16 (62%) of the head teachers respondents agreed that their schools replaces the teachers who are transferred on time. According to (Benbow, Mizrachi, Oliver and Said Moshiro, 2007) put it that, an ideal teacher - pupil ratio should be 1: 40. The debate on class size and pupil-teacher ratio, and their impact on learning achievement may not be conclusive, especially in Kenya with the introduction of FPE which advocates that all children to be absorbed in school regardless of the social background (Aphard, 2008 Paper No 38). This gives liberty to enroll as many pupils as they are willing to learn regardless of whether the school has enough teachers to handle the learners. The motto remains ‘admit as many as you can’

The study investigated if the Board of Management employs more teachers to cover for the less number. The results are shown in Table 4.9.

Table 4.9: PTA’s employs more teachers to assist.

| Teachers | | |
|-------------------|------------------|-------------------|
| Response | Frequency | Percentage |
| Strongly agree | 2 | 4% |
| Agree | 7 | 25% |
| Undecided | 3 | 12% |
| Disagree | 7 | 25% |
| Strongly disagree | 10 | 34% |
| Total | 29 | 100% |

Table 4.9 shows that the most 10 (34%) of the teachers responses strongly disagreed that the PTA employed more teachers to cover for the less numbers. Reasons as to why indicated that most of the parents were poor and could not afford to pay for teachers. Kenya the pupil-teacher ratio in public primary schools was 1: 43 in 2005 and slightly rose to 1:50 in the year 2007 (Government of Kenya, 2008). This meant that either the number of teachers was declining or the number of pupils was growing at an alarming rate as compared to that of teachers. The recommended pupil-teacher ratio for public primary schools in Kenya is 1: 50 (Teachers Service Commission, 2005).

The study investigated if the pupils find that the teachers-pupil ratio influence their academic performance. The results are shown in Table 4.10.

Table 4.10: Teachers – pupil ratio and academic performance

| Response | Pupils | |
|----------------|------------|-------------|
| | Frequency | Percentage |
| Strongly agree | 96 | 92% |
| Agree | 3 | 3% |
| Disagree | 5 | 5% |
| Total | 104 | 100% |

Table 4.10 shows that the majority 96 (92%) of the pupils responses indicated that teacher – pupil ratio influenced their academic performance. This is supported by Abagi (1997) who stated that pupil-teacher ratio was one of the main reasons for poor quality, low efficiency and poor examination performance in Africa. He further argued that efficiency of primary education in Kenya justifies that very high pupil-teacher ratio could lead to poor achievement and inefficiency. Most of the pupils argued that whenever one of the teachers was absent, they either did not have another teacher readily available to take over or whoever stands in for, supervises whatever work their subject teacher has left and once they finish they study on their own. Sometimes the stand in teacher may be of the adjacent class

who monitors everything from outside class. This made it difficult for it leaves no room for consultation.

4.6 Rate of syllabus coverage and pupils' achievement in Kenya Certificate of Primary Education in Makadara district

The researcher investigated the rate of syllabus coverage on pupils achievement in Kenya Certificate of Primary Education.

The researcher probed the covering of the syllabus by teachers on time. The results are presented in Table 4.11.

Table 4.11: Teachers' syllabus coverage on time

| Teachers | | |
|-----------------|------------------|-------------------|
| Response | Frequency | Percentage |
| Strongly agree | 20 | 69% |
| Agree | 11 | 28% |
| Disagree | 1 | 3% |
| Total | 29 | 100% |

Table 4.11 shows that a majority 20 (69%) of the teachers strongly agreed that the teachers cover the syllabus on time. These findings as explained by (Rowan, Correnti and Miller, 2002) who asserts that time allocated to teaching/learning can be a factor influencing achievement. A learner's achievement is a product of the amount of exposure to the content of the assessment. In the process-product

research, it is argued that what matters is not the amount of time assigned to learning a particular subject or the time learners are actively engaged in instruction during class time, but how teachers utilize it.

The study investigated there is allocation of time for pupils to revise. The findings are presented in Table 4.12.

Table 4.12: Pupils time allocation for revision

| Teachers | | |
|-----------------|------------------|-------------------|
| Response | Frequency | Percentage |
| Strongly agree | 19 | 66% |
| Agree | 12 | 31% |
| Disagree | 1 | 3% |
| Total | 29 | 100% |

Table 4.12 shows that according to the most 16 (54%) of the teachers also strongly agreed that pupils are allocated time for revising. According to report on performance by KNEC, (Mutea, 2002) is quoted as having indicated lack of adequate revision time to be a major factor influencing KCPE achievement. This could have been due to socio-economic background of some of the children leading to child labour where some of them are forced to work in order to earn to substitute their parents income. Child labour compromises greatly a child's study time.

The researcher probed if the panel heads ensure that all content is covered by teachers. The results are presented in Table 4.13.

Table 4.13: Subject panel heads supervision of work coverage.

| Teachers | | |
|-------------------|------------------|-------------------|
| Response | Frequency | Percentage |
| Strongly agree | 6 | 16% |
| Agree | 8 | 30% |
| Undecided | 2 | 8% |
| Disagree | 11 | 38% |
| Strongly disagree | 2 | 8% |
| Total | 29 | 100% |

Table 4.13 Most of the teachers 11 (38%) disagreed that the subject panel heads ensured total coverage of the content. Although (Abagi,1997) noted that there was a lot of wastage of pupils' learning time in some primary schools, this he said led to non coverage of syllabus within the stipulated time just before the national examinations. Lack of proper syllabus coverage limits a learner's scope of thorough revision and preparation to tackle an examination adequately. Eshiwani,(1983) noted that most schools lose many teaching/learning hours at the beginning and end of every term. This could be a possible factor influencing

achievement at KCPE level where the saying goes ‘time wasted can never be recovered’.

The researcher probed if the pupils find that the teachers cover the syllabus on time. The results are presented in Table 4.14.

Table 4.14: Teachers’ views on rate of syllabus coverage.

| Response | Pupils | |
|-------------------|------------------|-------------------|
| | Frequency | Percentage |
| Strongly agree | 77 | 74% |
| Agree | 13 | 13% |
| Disagree | 2 | 1% |
| Strongly disagree | 12 | 12% |
| Total | 104 | 100% |

Table 4.14 shows that a majority 77 (74%) of the pupils respondents agreed that the rate at which teachers cover the syllabus was commendable. The findings show that time management, work coverage and discipline, all depended on the class teacher and the pupils. A good teacher should be able to control and manage the class for effective learning to take place. Lack of proper syllabus coverage limits a learner’s scope of thorough revision and preparation to tackle an examination adequately.

4.7 Head teachers' frequency in instructional supervision and pupils' achievement in Kenya Certificate of Primary Education in Makadara district

Generally it is agreed that effective leadership is essential for the success of any organization. Schools need to be managed and led. Herlinger(1995) observes that the head teacher is the most influential individual in the education sector who can either raise or bring down the standards of the institution and therefore is held responsible. The head teacher's task becomes challenging when all stakeholders look up to him for high production. A head teacher's way of combining efforts together with his tactics is closely related to both the teacher and pupil's morale and performance. Culture, organization, success and failure are all influenced by the head teacher's effectiveness. His authoritative skills and level of professionalism enhance job satisfaction to teachers and upward trend of academic achievement to pupils. The researcher then sought to investigate the Influence of the frequency of head teachers' instructional leadership on pupils' achievement. The study probed if the head teacher encourages teachers in performing their duties well. The findings are presented in the table 4.15.

Table 4.15: Head teachers encourage teachers to perform

| Teachers | | |
|-------------------|------------------|-------------------|
| Response | Frequency | Percentage |
| Strongly agree | 5 | 16% |
| Agree | 2 | 8% |
| Undecided | 2 | 8% |
| Disagree | 11 | 38% |
| Strongly disagree | 9 | 30% |
| Total | 26 | 100% |

Table 4.15 shows that most 11 (38%) of the teachers disagreed that the head teachers encouraged them to perform their duties well, instead harassed them through fault finding. Gray (1990) asserts that an effective head teacher encourages his teachers, learner and parents to identify and celebrate moments of excellence. Ministry of Education (MoED) and Human Resource Department (HRD), (1999) outlines the importance of head teachers in efficient supervision of curriculum implementation. The head teacher delegates duties and responsibilities to other members of staff and ensures they are carried out as per the instructions. Motivation for achievement is important in academic performance because quality education requires this drive for success (Okumbe, (1998).The head teachers should be effective advisers on programmes that improve teaching /learning skills. It empowers the head teachers to be the key instructional

supervisors based at school level, identifying specific curriculum needs and preparing strategic plans that would promote teacher-pupil achievement.

The study investigated if the head teachers properly delegated duties. The findings are presented in the table 4.16.

Table 4.16: Head teachers' delegation of duties to teachers

| Teachers | | |
|-------------------|------------------|-------------------|
| Response | Frequency | Percentage |
| Strongly agree | 2 | 7% |
| Agree | 4 | 14% |
| Disagree | 2 | 7% |
| Strongly disagree | 24 | 72% |
| Total | 29 | 100% |

Table 4.16 shows that majority 24 (72%) of the teachers disagreed with head teachers' properly delegation of duties in their respective schools. In their responses to this, the teachers argued that some head teachers forced a few individuals to take up subjects or responsibilities they are not competent in. In some cases there is lack of proper consultation and head teachers are too busy to check records of work. In such situations, the result is failure or non performance.

According to (Okumbe, 1998) it is the duty of the head teacher to guide other teachers. This should be done through frequent checks on schemes of work for syllabus coverage, lesson plan for effective teaching and record of work for performance. This is to be carried out through administrative process of planning, organizing, coordinating, directing and reporting in order to maintain good relation and effective supervisory leadership skills.

The school belongs to the community which is the general public. A school head teacher has the duty to act as a mediator between the school and the community in which the school belongs. Clear communication and should be enhanced to avoid conflicts. The study investigated on school community's comfort ability with the head teacher's leadership. The findings are presented in the table 4.17 below.

Table 4.17: Teachers' views on head teachers' leadership

| Teachers | | |
|-------------------|------------------|-------------------|
| Response | Frequency | Percentage |
| Strongly agree | 2 | 7% |
| Disagree | 2 | 7% |
| Strongly disagree | 25 | 86% |
| Total | 29 | 100% |

Table 4.17 shows that Majority 25 (86%) of the teachers disagreed over their comfort ability with the head teachers' leadership. Discipline issues were left to the teachers to decide on what action to take. This was an indication that head teachers being in charge of the school, their failure to respond to their duties meant weakness and shift of blame to teachers.

The study investigated if the head teachers' instructional leadership impact on the pupils' performance. The findings are presented in the table 4.18 below.

Table 4.18: Head teachers' instructional leadership and pupils' performance

| Response | Head teachers | | Teachers | |
|----------------|---------------|-------------|-----------|-------------|
| | Frequency | Percentage | Frequency | Percentage |
| Strongly agree | 23 | 88% | 8 | 29% |
| Agree | 3 | 12% | 11 | 71% |
| Total | 26 | 100% | 29 | 100% |

Table 4.18 shows that all the 26 (100%) of the head teachers and 11 (71%) of the teachers agreed that the head teachers' instructional leadership impacted greatly on the pupils' performance. Academic achievement is influenced by the extent to which head teachers perform supervisory duties. The respondents agreed that their schools had open days to discuss pupils' performance twice a term. Teachers and

parents hold come together to discuss both the child and school's general performance. In these meetings individual targets are set.

Kamindo (1998) in her study in Ngong division sought to find out how head teachers performed their duties and found out that those in private schools were more regular than in public and therefore had things under control. Frequency in supervision keeps teachers alert and therefore make them to work harder. The quality of work is evaluated in pupils' academic achievement. Head teachers are key instructional supervisors and therefore must ensure time is well managed.

The study investigated to find out if the pupils' views regarding the head teachers' instructional leadership influenced their performance. The findings are presented in the table 4.19 below.

Table 4.19: Pupils views on Head teachers' instructional leadership and their performance

| Response | Pupils | |
|-----------------|------------------|-------------------|
| | Frequency | Percentage |
| Strongly agree | 67 | 64% |
| Agree | 23 | 22% |
| Undecided | 12 | 12% |
| Disagree | 2 | 2% |
| Total | 104 | 100% |

Table 4.19 shows that majority of the pupils 67 (64%) agreed that the head teachers' instructional leadership influenced their performance. Academic achievement is influenced by the extent to which head teachers perform supervisory duties. In this the pupils agreed that on several occasions they had seen their head teacher calling for staff meetings. Some of the respondents cited occasions where the teachers were called to explain reasons for issues, and in some instances the headteacher is seen going round schools to see what is going on rather than depending on the prefects and teachers on duty.

Through the questionnaires the researcher compared the pupil-book ratios from well performing schools and poor performing schools from the same district and findings showed that there was a disparity of 1:1 (satisfactory ratio) as compared to 1:5 (unsatisfactory ratio). The mean scores in satisfactory ratios were averagely above 300marks (ref Table 1.1) while in the unsatisfactory ratios the mean scores remained below the cut off mark of 250. The researcher established that the pupil-book ratio influenced pupils academic achievement

The same schools had enough teachers with ratios of 1:40 the one teacher-pupil ratio recommended by MOEST (2010) and also deemed satisfactory ratio which allows interaction of teachers with learner hence close attention. The poor performing schools had high ratios of 1:70. These high teacher-pupil ratios had an influence on academic achievement.

The well performing schools proved to have their head teachers perform their supervisory duties frequently. They had the schemes of work ready on time, lesson notes regularly checked which assisted them to work at the set pace, by so doing the syllabus was well covered by the month of May and revision starts. The researcher therefore established that the schools where the head teacher had hands on effective instructional leadership had their syllabus covered on time. Time of syllabus overage and instructional leadership have a great impact on pupils academic achievement. The findings agree with Kamindo (1998) who indicated in his study that the frequency in supervision kept teachers alert and therefore made them to work harder. The quality of work is evaluated in pupils' academic achievement. Head teachers are key instructional supervisors and therefore must ensure time is well managed. This means that the head teachers' instructional leadership influences academic performance of the pupils.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the study findings and makes conclusions based on the result findings. The implications from the study findings and areas for further research are also presented.

5.2 Summary findings of the study

The study aimed at finding out the influence of school based factors on academic achievement in Kenya Certificate of Primary Education in Makadara District, Nairobi County. The researcher singled out four school based factors she deemed were the most prevalent ones influencing pupils' academic achievement in Kenya Certificate of Primary Education. They included; pupil-book ratio, teacher-pupil ratio, time of syllabus coverage and head teacher instructional leadership.

The researcher sought to probe the influence of pupil-book ratio on academic achievement and established that most of the head teachers and all the teachers' respondents agreed that pupil-book ratio adversely influenced the pupils' academic performance. They disagreed that there are enough reference materials for teachers' use during lesson preparation. Head teachers and teachers respondents disagreed that there were enough books for every pupil in school.

This shows that most of the pupils do not get enough books in schools for revision and this affected their performance.

The study on teacher / pupil ratio indicated that all the head teachers and most of the teachers indicated that the head teachers through Parent Teachers Association employed more teachers on time to substitute for the less numbers. However the teachers disagreed that the PTA employs more teachers to substitute for the less numbers. They indicated that the number of children a teacher handled had an effect on pupils' academic achievement. These high ratios mostly affected schools that faced acute shortages of teachers and parents were in no position to pay for teachers to substitute for those transferred or on leave. The large numbers were ineffectively taught, assignments rarely or not given, faced minimal interaction leading to lack of quality education hence poor academic results.

The study further investigated the influence of head teachers' instructional leadership on pupils achievement, and established that all the head teachers and teachers agreed that the head teachers' instructional leadership had an impact on the pupils' performance. The head teachers agreed that the school community is comfortable with the head teachers' leadership contrary to the teachers who disagreed that the school community is comfortable with the head teachers' leadership. They disagreed that the head teachers delegated duties properly in the school. Majority of the teachers disagreed that the head teachers encourage them to perform their duties well. Instructional leadership includes coordinating,

organizing, directing school activities to run smoothly. This is to be done through frequent check of teachers' records, proper delegation of duties and maintenance of proper pupils' records of work. Ineffective leadership affected pupils' academic performance.

5.3 Conclusions

The study leads to a conclusion that

- i) Inadequacy of books for the pupils and minimal exposure to text books makes pupils unable to study effectively and therefore lack of individual revision compromise pupils' academic achievement in Kenya Certificate of Primary Education in Makadara district. Lack of provision of learning/teaching resources such as textbooks where the number of pupils sharing one book is 1:5 contrary to the expected ratio of 1:1 has greatly influenced academic achievement in KCPE.
- ii) Established schools were overstaffed hence reduced the teacher/pupil ratio where as their counterparts experienced shortages of teachers which has a serious effect on achievement. High teacher/pupil ratio has a negative influence on academic achievement. Teacher-pupil ratio which in some schools is as high as 1:70 lead to minimal interactions between teachers and learners, especially slow learners.

Teachers workloads in some schools is enormous, this adversely influence academic achievement in Kenya Certificate of Primary Education in Makadara district.

- iii) Inadequate syllabus coverage limits the learners' area of scope to study and revise from. This limitation is a barrier and a hindrance to the pupils' academic achievement in Kenya Certificate of Primary Education in Makadara district.
- iv) Head teachers' instructional supervision is questionable. Inconsistency in most head teachers' instructional follow up becomes an element of concern. Supervision is either rarely or never done. Lack of efficient instructional supervision practices by the head teachers influence on academic achievement in KCPE.
- v) Finally the study concluded that besides the school based factors there maybe external, individual and home based factors influencing pupils' academic achievement in Makadara district, Nairobi County.

5.4 Recommendations

The researcher recommended that;

- i) TSC in collaboration with Ministry of Education in public to employ more teachers in public schools. This will enable the staffing officer to balance the deployment of teachers as all schools will have enough teachers to attend to all learners adequately.

- ii) The head teachers should sensitize parents through the PTAs on the importance of having enough teachers in their schools to enhance effective teaching. At the same time head teachers should also encourage parents to replace worn out, torn and lost books for the pupils to be able to have enough books for individual study.
- iii) The researcher recommended that head teachers should carry out frequent instructional supervisions and advise their teachers accordingly where necessary. This exercise is to encourage and advise the teachers and not to look for faults.
- iv) Refresher courses were necessary for teachers from both performing and non performing schools on effective syllabus coverage. Workshops and interactive talks to be used to reinforce this. This will enable teachers to interact and share ideas.
- v) The DEO to identify individual weaknesses of schools at institutional level. By so doing will be able to assist individual schools rather than looking at school in Makadara district in general. In addition. She should also frequently visit schools to intervene and advice on performance at an early stage.
- vi) Performance at school and division level should be used to evaluate a child's ability to perform instead of trying to do it at a national level. This implies that academic achievement should be tracked both formatively and summatively throughout a child's continuous performance during the entire learning period.

- vii) Finally proper maintenance of performance records should be encouraged. This can assist in tracking performance of an individual child where necessary. These records can be used to promote a child into secondary school who after not having attained the required pass marks good enough to secure a place in secondary school due health condition while sitting for the national exams. Passing or failing at national level maybe determined by a learner's state of mind and health at the time of sitting for his/her end of year examination.

5.5 Suggestions for Further Research

The researcher recommends the following areas for further research;

- i. Influence of school based factors on the pupils' academic achievement in private schools in Makadara district.
- ii. Influence of school based factors on public schools in other districts of Nairobi County.

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APPENDIX A: INTRODUCTORY LETTER TO RESPONDENTS

Dear Sir/Madam,

RE: PERMISSION TO CARRY OUT RESEARCH IN YOUR SCHOOL

I am a post graduate student at University of Nairobi, currently carrying out a research on 'School based factors influencing academic achievement in Kenya Certificate of Primary Education in Makadara district, Nairobi County'. Your school has been selected to participate in the research. I am humbly requesting for permission to interview you, your teachers and pupils on this. Kindly assist to fill the attached questionnaire which is meant for research only. The responses will be treated with utmost confidentiality

Your assistance and support will be highly appreciated. Thank you in advance.

Yours faithfully,

Onacha Ruth Kendi.

APPENDIX B: QUESTIONNAIRE FOR HEAD TEACHERS

INTRODUCTION

The information in this questionnaires for academic purpose only and will be treated in confidence. DO NOT INDICATE YOUR NAME. PLEASE ANSWER THE QUESTIONNAIRE AS HONESTY AS POSSIBLE.

SECTION A: DEMOGRAPHIC INFORMATION

1. What is your age?

Below 25 years () 25- 40 years ()

41- 50 years () Over 50 years ()

2. What is your sex?

Male ()

Female ()

3. Indicate by means of a tick your present academic qualifications

P1 () ATS 111 & Dip ()

B.Ed () Masters ()

Any other specify.....

4. How long have you been teaching?

Less than 2 years ()

2-5 years ()

6-10 years ()

11-15 years ()

16-20 years ()

More than 20 years ()

SECTION B: INFLUENCE OF PUPILS-BOOK RATIO ON PUPILS

ACHIEVEMENT

5. Please indicate the extent of agreement or disagreement to the following statements. TICK appropriately.

(1) Strongly agree

(4) Disagree

(2) Agree

(5) Strongly disagree

(3) Undecided

| Statements | 1 | 2 | 3 | 4 | 5 |
|--|----------|----------|----------|----------|----------|
| There are enough books for every pupil in school | | | | | |
| The school has the latest revised textbooks. | | | | | |
| There are enough reference materials for teachers to use for their preparation | | | | | |
| The pupil-book ration influences the pupils achievement | | | | | |

6. What do you do to think can be done to achieve the required pupil-book ratio in your school?

.....

SECTION C: INFLUENCE OF TEACHER-PUPILS RATIO ON PUPILS ACHIEVEMENT

7. Please indicate the extent to which you agree with the following statements.

TICK appropriately.

(1) Strongly agree

(4) Disagree

(2) Agree

(5) Strongly disagree

(3) Undecided

| Statements | 1 | 2 | 3 | 4 | 5 |
|---|----------|----------|----------|----------|----------|
| The school has enough teachers to handle the pupils. | | | | | |
| The teachers-pupils ratio influences the pupils achievement in KCPE | | | | | |
| The school replaces the teachers who transfer in time | | | | | |
| The BOM employs more teachers to cover for the less number | | | | | |

SECTION D: INFLUENCE OF TIME OF SYLLABUS COVERAGE ON PUPILS ACHIEVEMENT

8. Please indicate the extent of agreement or disagreement to the following statements. TICK appropriately.

- (1) Strongly agree
- (2) Agree
- (3) Undecided
- (4) Disagree
- (5) Strongly disagree

| Statements | 1 | 2 | 3 | 4 | 5 |
|---|----------|----------|----------|----------|----------|
| The teachers cover the syllabus on time | | | | | |
| The pupils are allocated time for revision | | | | | |
| There is remedial classes for the weak pupils | | | | | |
| Panel heads ensures that all content is covered by teachers | | | | | |

9. How often does the panel head check teachers' syllabus coverage progress?

End of every week () End of the month () End of term ()

APPENDIX C: QUESTIONNAIRE FOR TEACHERS

INTRODUCTION

The information in this questionnaires for academic purpose only and will be treated in confidence. DO NOT INDICATE YOUR NAME. PLEASE ANSWER THE QUESTIONNAIRE AS HONESTY AS POSSIBLE.

SECTION A: DEMOGRAPHIC INFORMATION

1. What is your age?

Below 25 years () 25- 40 years ()

41- 50 years () Over 50 years ()

2. What is your sex?

Male ()

Female ()

3. Indicate by means of a tick your present academic qualifications

P1 () ATS 111 & Dip ()

B.Ed () Masters ()

Any other specify.....

4. How long have you been teaching

2-5 years () 11-20 years ()

6-10 years () More than 20 years ()

SECTION B: INFLUENCE OF PUPILS-BOOK RATIO ON PUPILS

ACHIEVEMENT

5. Please indicate the extent of agreement or disagreement to the following statements. TICK appropriately.

(4) Strongly agree

(7) Disagree

(5) Agree

(8) Strongly disagree

(6) Undecided

| Statements | 1 | 2 | 3 | 4 | 5 |
|--|----------|----------|----------|----------|----------|
| There are enough books for every pupil in school | | | | | |
| The school has the latest revised textbooks. | | | | | |
| There are enough reference materials for teachers to use for their preparation | | | | | |
| The pupil-book ration influences the pupils achievement | | | | | |

6. What do you do to think can be done to achieve the required pupil-book ratio in your school?

.....

SECTION C: INFLUENCE OF TEACHERS INSTRUCTIONAL LEADERSHIP ON PUPILS ACHIEVEMENT

7. Please indicate the extent of agreement or disagreement to the following statements. TICK appropriately.

(1) Strongly agree

(4) Disagree

(2) Agree

(5) Strongly disagree

(3) Undecided

| Statements | 1 | 2 | 3 | 4 | 5 |
|--|----------|----------|----------|----------|----------|
| The head teacher encourages teachers and pupil in performing their duties | | | | | |
| Head teacher properly delegates duties to the teachers | | | | | |
| The school community is comfortable with the head teachers leadership | | | | | |
| The head teachers instructional leadership influences the pupils achievement | | | | | |
| The pupils achievement is affected by the head teachers instructional leadership | | | | | |

8. In your view what can be done to improve the head teachers' instructional leadership that influences pupils' achievement?

.....

APPENDIX D: FOCUS GROUP DISCUSSION FOR PUPILS

i. How do books help you to revise for any examination, test and especially end of year examination?

.....

ii. Does your school have enough books for each one of you, and how many children share one book?

.....

iii. Do you have enough teachers and what happens when one of your teachers is absent from school?

.....

iv. Does your head teacher go round the classes to see and inspect your notes to see what you have covered, how often does he do this?

.....

v. What do your teachers do to ensure you have covered all the class seven and eight work before sitting for your end of year examinations?

.....

vi. How many children are there in each of standard seven and eight?

.....

APPENDIX E: OBSERVATION CHECKLISTS.

**OBSERVATION SCHEDULE TO CHECK AVAILABLE
RESOURCES**

9. Number of pupils per class -----
10. Number of usable Textbooks in school-----
11. Number of pupils sharing one Textbook-----
12. Number of teachers per school-----
13. Number of hours allocated to each examinable subject-----
14. Number of times the head teacher inspects pupils' books-----
15. Workable block Time-table-----
16. Time allocation for co-curricular activities-----
17. Time allocation for individual study and class discussions-----
18. Time allocation for remedial work-----

APPENDIX F: LIST OF SCHOOLS IN MAKADARA DISTRICT

BURUBURU ZONE

1. Bidii primary
2. Baraka primary.
3. Harambee primary.
4. Rabai road primary.
- 5 St. Michael primary.
6. Ofafa Jericho primary.
7. St. Anne's primary.
8. Dr. Krapf primary.
9. Martin Luther primary.
10. Canon Apolo primary.
11. Jogoo road primary.
12. St. Paul primary.
13. St. Patrick primary.

VIWANDA ZONE

1. St. John primary.
2. Joseph Apudo primary.
3. Mukuru primary.
4. St. Catherine's primary.
5. ST. Elizabeth primary.
6. Star of Hope primary.
7. Our Lady of Mercy primary.
8. Nairobi South primary.
9. Kaloleni primary.
10. Mariakani primary.
11. Makongeni primary.
12. St. Bakhita primary.
13. Plains view primary.

APPENDIX G: PERMIT LETTER FROM DEO MAKADARA.

APPENDIX H: PERMIT LETTER FROM (NCST)

APPENDIX I: PERMIT FORM FROM (NCST)