EFFECT OF PUPIL ENROLMENT ON QUALITY OF EDUCATION IN PUBLIC PRIMARY SCHOOLS IN KENYA: A CASE STUDY OF WESTERN DIVISION OF NAKURU COUNTY, KENYA

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E55/OL/13341/04

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION (EDUCATIONAL ADMINISTRATION) IN THE SCHOOL OF EDUCATION, KENYATTA UNIVERSITY

NOVEMBER 2012

DECLARATION

This research is my original work and has not been previously presented for the award of any Diploma or Degree in any other university.

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DEDICATION

This project is dedicated to my beloved father, Mr. Samson Yugi Otoo who taught me the virtue of hard work for sustained excellence.

ACKNOWLEDGEMENT

First I thank the Lord Almighty for granting me strength to undertake this research. I sincerely want to thank and appreciate the professional support, guidance and encouragement of my Supervisors, Dr./Sr. Wilfrida Itolondo and Dr. Festus Muchira.

I wish to express my gratitude to all my lecturers in the Open and Distance Learning Programme at Kenyatta University.

Much thanks to Mr. John Njoya who helped to type-set and design this report. My work was made possible through the support given by my family members who were very understanding throughout this period.

I must appreciate the support of all my colleagues at the Municipal Education Office, Nakuru, as well as all the head teachers from Nakuru who assisted me in data collection.

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LIST OF ACRONYMS AND ABBREVIATIONS

AGM	Annual General Meeting
DEB	District Education Board
EFA	Education for All
FPE	Free Primary Education
GOK	Government of Kenya
MDG	Millennium Development Goals
MoE	Ministry of Education
MoEST	Ministry of Education, Science and Technology
SMC	School Management Committee
UNESCO	United Nations Educational, Scientific and Cultural Organizations
PTA	Parents and Teachers Associations
PTR	Pupil Textbook Ratio
SPSS	Statistical Package for Social Sciences
TPR	Teacher Pupil Ratio

ABSTRACT

The Kenyan government policy of Free Primary Education (FPE) has led to increased enrolment in public primary schools, yet the corresponding learning infrastructure to support the policy has been wanting, with negative effect on quality of education. To this end, the purpose of this study was to investigate the effect of enrolment in public primary schools on quality of education in Nakuru Municipality. It traces the roots of FPE in Kenya to the immediate post-colonial era to the eventual full implementation of the policy initiative in 2003 when the Net Enrolment Ratio (NER) saw a 23% increase nationally, while in Nakuru it increased by 18% from 36,443 in 2002 to 43,199 in 2003. By 2011, Nakuru enrolment had reached 63,075. While examining the problems that have been associated with the increased enrolment in public schools in Nakuru, the study was limited to Western Division of the Municipality. It involved sampled teachers and pupils in all the public schools in the division. This study adopted a cross sectional survey design with study units being drawn from representative public primary school teachers and pupils in Nakuru Municipality. A sample of 96 teachers and 2400 pupils was randomly selected from 24 public schools in Western Division of Nakuru Municipality. This survey design enabled the researcher to gain understanding of the relationship between enrolment rate in public primary schools and learning facilities and how they impact on quality. Purposive sampling was used on the category of teachers to enable the researcher to include both male and female teachers in the study, since 72% of teachers in the division were female. Structured questionnaires were used to collect primary data on teachers, pupils and school characteristics. Secondary data was collected from academic journals, textbooks unpublished theses, the internet and records at the Municipal Education Office (MEO). Data collected was analyzed using descriptive statistics including frequency tables, measures of central tendencies (mean) and dispersion (standard deviation), cross tabulation to describe, analyse and present the study findings. Findings from the study revealed that the FPE programme had led to increased enrolment in most of the sampled schools, with huge class sizes whereas the teaching load for most teachers was big, and available school facilities were inadequate. Furthermore, the current staffing level was the strongest impediment in realization of the objectives of FPE thereby affecting Performance in examination as the workload for the teacher has continued to pile. Based on these findings, it is recommended that the Government should put more effort to define clearly what role the parents need to play in partnership with other stakeholders in the provision of education within the public primary schools in Kenya. The Human Capital theory was referred to as a basis for this study where education is viewed as a necessary investment for the benefit of society at large.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Education is recognized as the most important form of human resource development. The Universal Declaration of Human Rights has emphasized the importance of education as a fundamental human right and as a necessary element for development (United Nations, 1948). Broadly speaking, education refers to any act or physical experience that has a formative effect on an individual's mind, character or physical ability. In its technical sense, education is the formal process by which society, through schools, colleges, universities and other institutions deliberately transmits its cultural heritage and its accumulated knowledge, values and skills to the next generation (Aventrup and Liang, 2005). The instrumental roles of schooling i.e. helping individuals achieve their own economic, social and cultural objectives and helping society to be better protected, better served by its leaders and more equitable in important ways will be strengthened if education is of higher quality. Guzman et al, (2008) state that how pupils are taught and how they learn has an impact on how long they stay in school and how regularly they attend the same schools. Furthermore, whether parents send their children to school at all is likely to depend on the judgments they make about quality of teaching and learning provided – upon which attending school is worth the time and cost for their children and for themselves. Enrolment in learning institutions is largely determined by demand for that education and affordability of the same. The Millennium Development Goals (MDG) targets providing Universal Primary Education (UPE) by 2015, forming a blueprint agreed by all the world's countries and leading institutions (United Nations, 2000). The World Education Forum (26-18 April 2000, Dakar) adopted the Dakar framework for action, Education for all (EFA) where nations committed the world to achieving education "for

every citizen in every society" – an initiative with greater focus on quality than those set out in the MDGs. Attaining Education for All (EFA) is part of the key goals of the Ministry of Education (MOE) in Kenya. It is this spirit that influenced the government to come up with Free Primary Education (FPE) in Kenya from as early as 1963. Enrolment trends in the primary schools have since then created a big challenge in regard to the resources required to ensure quality. Quality primary education has not kept abreast with the expansion in enrolment. The idea of free primary education was revisited in 2003. During the 2002 general elections, the National Rainbow Coalition (NARC) political Party made provision of FPE part of its election manifesto. Following its victory on January 6, 2003, the Minister for Education Science and Technology (MOEST) launched the FPE to fulfil NARC's election pledge. Fees and levies for primary education were abolished. Before the introduction of free primary education in Kenya in 2003, it was estimated that the Net Enrolment Ratio (NER) was around 6,314,726. This increased to 7,614,326 by the end of the year, representing a 22.3% increase nationally. In 2004, the global primary school (NER) was at 86%. This means that world wide almost 9 out of 10 children of primary school age were enrolled in primary school. However, in Sub-Saharan Africa many countries continue to lag behind countries in other regions. In the developed countries, the primary NER has been close to 100% for more than three decades. In East Asia, the enrolment ratios were similarly high since 1970 with insignificant fluctuations on the numbers. In South East Asia, the primary NER has been above 90% since early 1980s. In Latin America and the Caribbean, the enrolment rates have increased steadily to an average NER of 94% in 2004. South Asia, North Africa and Western Asia stand out as regions where education of girls has seen dramatic improvements. Sub-Saharan Africa stagnated below 60% throughout the 1980s and 1990s. Since 2000 there has been an improvement in primary school enrolment rates due to renewed efforts to bring all

children to school. seven countries, (all in Africa or the Middle East) have less than half of all primary age going children enrolled in primary school, i.e. Djibouti 32%, Niger 39%, Burkina Faso 41%, the then Sudan 43%, Huebler (2006). Sub-Sahara Africa faces the greatest challenge on the path to reaching the MDG of UPE. Despite the increase in primary NER in 2004 following the introduction of FPE in Kenya, it was also estimated that another 3 million children were not enrolled in school in 2004. Despite the various logistical problems that seem to be hampering a successful implementation of the Free Primary Education (FPE), the policy sounds commendable as it has meant cushioning children from poor socio-economic backgrounds, especially girls from failing to participate in primary education or dropping out of school due to lack of fees and other school levies. Overall, the policy intervention could prove determinative in the efforts to achieve Universal Primary Education and Education for All (Republic of Kenya, 2001).

Table 1: Kenya Total Net Enrolment Ratio in primary education (boys and girls)

Year	Value (%)
1999	63
2000	65.5
2002	61.7
2003	74
2004	73.3
2005	75.3
2006	75.3
2007	86.4
2008	82.3
2009	83.3

Source: United Nations Statistics Division

With increased enrolment, the issue of the quality of education offered especially in public schools has been the concern of the Ministry of Education and the citizens in Kenya. Education quality cannot however be measured by only one factor. It is a combination of various factors which may include the class size, the pupil – teacher ratio, the infrastructure in the school and the teaching learning resources available like text books. Educators argue that smaller classes especially at the younger grades – result in more effective teaching and learning, increased individual instruction time and improved test scores (STAR Project, 1985). Arguments held by Hopkins (2006) show the benefits of smaller classes where teachers can cover more topics, teach at a faster pace, give more attention to students having trouble and identify those who need specialized education sooner. As student numbers rise, so does class sizes and burdens imposed on teachers.

Another measure of education quality is the Teacher-pupil ratio (TPR). Children who attend schools with a lower teacher-pupil ratio and better educated teaching staffs tend to perform better than those who attend poorer schools with higher TPR (Molner et al, 1999). The results of overcrowding caused by high enrolment are lower academic achievement and increased dropout rate. According to Chamliss and Calfee (1998), text books are the heart of educational enterprise as they offer students a rich array of new and potentially interesting facts, and open the door to a world of fantastic experience. In the same vein, Oaks and Sanders (2004) reveal that the three way relationship between learner, teacher and materials lies at the heart of education quality. Access and availability of textbooks is a particularly significant factor in academic achievement. Rapid expansions of enrolment in many countries lead to high Pupil Textbook Ratio (PTR), thereby lowering motivation of the learners and quality of education.

The critical role of the physical environment of schools and student success cannot be overstated. Adequate and equitable funding of school infrastructure is key to strengthening the way in which learners are taught, enhancing teaching effectiveness as well as improving student learning outcomes. Cuyvers et al, (2011) conclude that there is a stark contrast in satisfaction levels between students attending schools with good quality infrastructure and those with poor infrastructure. High levels of wellbeing were recorded among those attending schools which had good quality infrastructure.

1.2 Statement of the problem

In Kenya, the decision to introduce FPE in 2003 resulted in increased enrolments. Although quality tends to be an abstract concept, there are parameters for assessing it within an education system. These parameters include the number of teachers and the level of their training; the number of learners and their background; the available teaching and learning equipment and materials; and school governance. There is a tendency for school development efforts to be focused on one single problem in a school where a holistic approach would bring about desired gains in performance, for example constructing classrooms without providing latrines, furniture, teaching and learning resources and teachers does little to alleviate problems in teaching and learning processes. Most of the efforts are mere stop gap measures which address one problem while other problems still exist. Thus it is not known which schools characteristics or combination of schools characteristics have an impact on the quality of education in general and on achievement in particular in different locations in Kenya. Despite the rationale for attaining universal quality primary education, the poor learner achievement in primary school education among both rural and urban school communities are not well understood and as such the problem of poor performance and low transition rates will persist with its adverse consequences in Nakuru. In the last eight years, massive pupil enrolment and subsequent

dismal national examination performance induced by lack of support of learning infrastructure such as sufficient classrooms, and adequate teachers and other learning materials are variables of this study. The hypothesis is that any negative effects on quality were a direct trade-off to the successful expansion of educational access: if scholastic performance deteriorated, it was due to an influx of new students from poorer backgrounds, many of whom had low grades. An analysis of the performance of public schools in the Kenya Certificate of Primary Education (KCPE) in Nakuru for the last ten years was done through information got at the Municipal Education office in Nakuru. The finding was that the public schools performed better (above average) in the period before FPE and gradually drifted to below average performance after 2003. Out of the possible 500 marks that should be attained, the public schools could hardly attain half the mark in the KCPE examination as can be seen in Table 2 below.

Table 2: Performance in KCPE by public schools in Western Division from 2001 – 2010

Year	Mean Standard Score	Deviation
2001	256.91	
2002	252.37	-4.54
2003	245.95	-6.42
2004	244.79	-1.16
2005	241.03	-3.76
2006	236.96	-4.07
2007	229.48	-7.48
2008	220.31	-9.17
2009	216.49	-3.82
2010	220.85	4.36
2011	221.50	0.65

Source: Municipal Education Office, Nakuru

1.3 Purpose of the study

Based on the problem stated, the purpose of this study is to investigate the effect of pupil enrolment on the quality of education in selected urban public primary schools in Nakuru, Kenya.

1.4 Specific Objectives of the Study

The specific objectives for the study were outlined as follows;

a) To find out the average class size and its effect on quality of education in Western Division of Nakuru municipality

b) To establish the teacher-pupil ratios in public primary schools in Western Division of Nakuru Municipality

c) To investigate the availability of classrooms, furniture and other related physical facilities in public primary schools in Western Division of Nakuru Municipality

d) To identify the availability and adequacy of textbooks and other learning resources in public schools in Western Division of Nakuru Municipality.

1.5 Research Questions

The following research questions were raised by the researcher so as to give direction and focus of this current study.

a) How does class size impact on the learning processes in Schools within Western Division of Nakuru Municipality?

b) What are the implications of the current teacher – pupil ratio in public primary schools on pupil achievement in Western Division of Nakuru Municipality?

c) To what extent do the classroom conditions and other learning infrastructure affect learning in public primary schools in Western Division of Nakuru Municipality?

d) How do textbooks and other learning resources in Western Division of Nakuru Municipality support effective learning in schools?

1.6 Assumptions of the Study

The study was based on the following assumptions: -

(i) That Sponsors, local communities and NGOs characteristics have insignificant contribution to the provision of physical facilities in public primary schools in Nakuru municipality.

(ii) That those respondents sampled for the study would provide honest and truthful responses.

(iii) That instruments used for data collection would aid in revealing effect of huge enrolment levels in public primary schools in Nakuru Municipality.

1.7 Scope and Limitation of the Study

This study was limited to Western Division of Nakuru Municipality and involved all the public primary schools in the division. This is because it would have been time consuming and very expensive to involve the whole Municipality. The study examined the number of teachers in the division in relation to the pupil population to determine the ratios in comparison with the acceptable ratios nationally and internationally. Other key thematic areas relevant to basic education in Kenya were therefore not covered by the scope of this study. The limitation that Head teachers, teachers and pupils sampled for the study may not reveal all the relevant information and records due to suspicion was also put into perspective.

1.8 Significance of the study

The results of this study will benefit various stakeholders. It will assist policy makers to identify the gaps in the current learning facilities in public primary schools through doing more of strategic planning aimed at increasing the infrastructural capacity that can enable the free primary education policy succeed in implementation. The study hopes to recommend ways of fostering a robust basic education system in Kenya. A new paradigm in the management of basic education in Kenya shall imply creation and recreation of systems and this cannot happen in the absence of sound strategic plans. It is further hoped that this study will trigger policy makers to be engaged on a long term basis with what has appeared to be and has become an overwhelming problem as relates to matters of higher enrolment rates that cannot be sustained by the current learning facilities in public primary schools.

It is hoped that the findings of this study will make valuable additions to the currently available literature in the field of Basic Education, and give fresh impetus to further interest in this area of study.

1.9 Theoretical Framework

Theory is an essential feature of sociological inquiry and any empirical study should be grounded on theory (Singleton *et al*, 1988). Theory helps us to understand and explain our social experience and it also helps us to determine ways in which to resolve the problems we encounter. The purpose of this section is to attempt to link theory with the proposed study. The Human Capital theory will be a useful basis for this current study.

1.9.1 Human capital theory

Since its inception in the early 1960s, human capital theory has provided a framework for the analysis of the demand for education, based on the social and private rate of return. Education has been re-theorized under Human Capital Theory as proposed by Schultz (1971), Sakamota and Powers (1995), Psacharopoulos and Woodhall (1997) as primarily an economic device. It is the most influential economic theory of Western education setting the framework of government policies, Fitzsimons (1999). It is seen increasingly as a key determinant of economic performance. It has stressed the significance of education and training as the key to participation in the new global economy. It is a primary motivator for free primary education. This theory defines a persons potential productivity in terms of his skills, knowledge and work habits. Under this theory, which most Western educational systems assume universal education is viewed as a necessary investment for the benefit of society at large. Human capital theory predicts that free primary education can help alleviate poverty and economic inequality in populations by developing and skills sets of those could not otherwise afford formal schooling. With increased knowledge and skills come increased opportunities for employment and social mobility. This belief is a direct correlation between education and prosperity, and is borne out empirically, understood and accepted by both rich and poor in developing regions. While developing nations strongly support and promote FPE, implementing it has been challenging. Existing public schools have found themselves overwhelmed by large numbers of new students and finding appropriate facilities and enough qualified teachers has also caused difficulties. Such problems have been examined and analyzed under the system theory of organization as proposed by Berk, (1993). He views the person as operating within a complex system of relationships affected by both the immediate settings, such as family, school, and broader cultural values and programmes. He identifies four levels of interactions, namely micro-

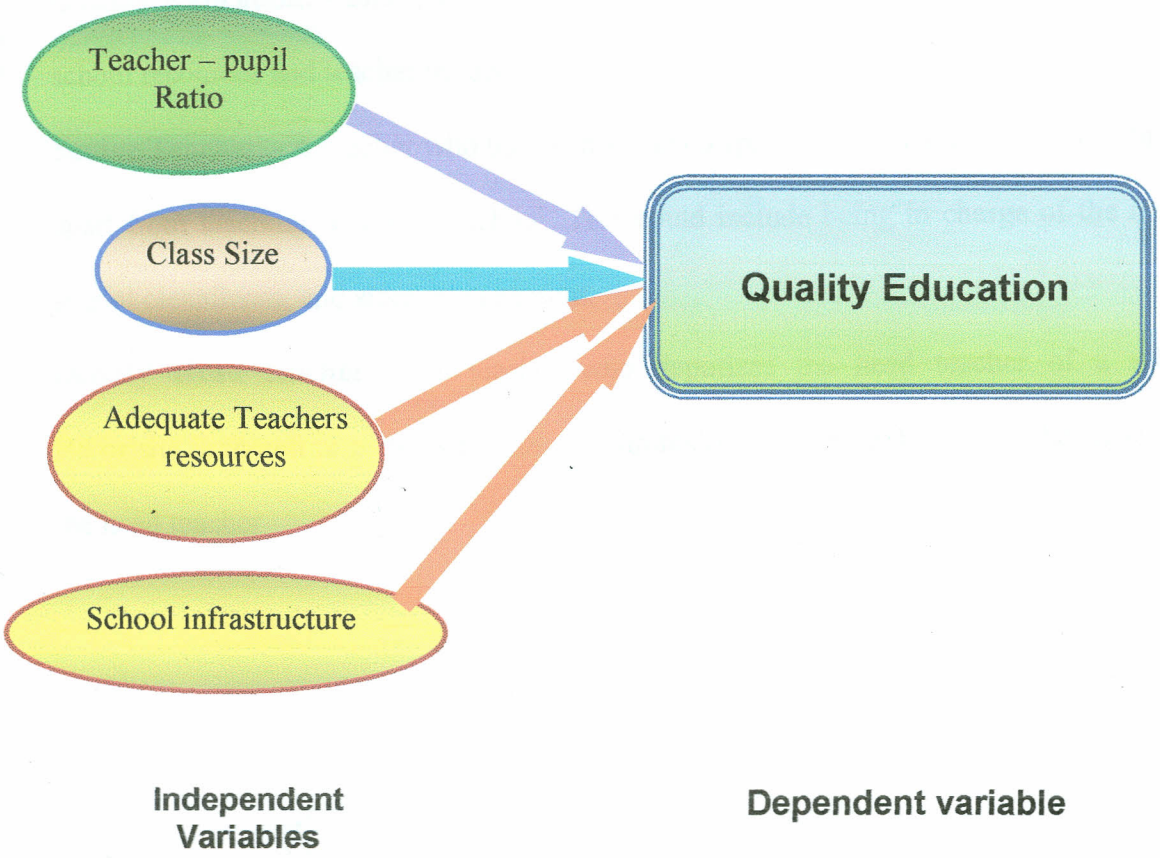
system, meso-system, exo-system and macro-system. For example in a school situation, the teacher is the central focus and is therefore at the centre of the system or circle also known as micro-system. The circle encompasses the activities and interactions in the teacher's immediate surroundings, keeping in mind that all relationships are bidirectional and reciprocal. At the meso-system level are the micro-systems that connect with each other such as other teachers and students families. The exo-system refers to settings that do not necessarily contain teachers, but that have an effect upon teachers' lives and work such as professional and community organizations. At the outer level are the laws and customs that operate in society as a whole (Berk 1993). This theory views organizations not as single units, but systems of interacting individual people, entities and facilities. Effective management of a complex organization such as a school system requires those in charge to consider not just the desired behavior of the organization as a whole, but the ways in which all its components interact and affect one another (Lewin, 2007). For this study, this theory is very relevant such that, changes in social values relating to education at the macro-level may lead to changes in budget allocations at the exo-level and to a teacher's workload at the micro-level. In reverse, a teacher's voice at the micro-level may lead to changes in school policy at the meso-level, to representations to government and community at the exo-level, and to change in values at the macro-level.

1.10 Conceptual framework

Figure 1 below shows the both the independent and dependent variables of this current study. The independent variables that cause the dependent variable to vary include adequate teachers who contribute to quality education. These teachers should be trained and competent for them to influence learning achievement towards acceptable standards. Adequate physical facilities such as classrooms, learning materials among others significantly explain good quality education. Low teacher-pupil ratios affect the quality of

education positively. Smaller Class sizes, especially at the younger grades result in more effective teaching and learning, increased individual instruction time and improved test scores, hence quality education. The exogenous variables impact on the dependent variable and are determined outside the model for this current study. These are the factors that have got significant effect on the dependent variable apart from the selected independent variable for this study. These variables include; government policy, entry behavior of pupils as they join the public primary schools, home influences, and community influences.

Figure 1: Conceptual framework



1.11 Definition of Key Terms

Free Primary Education: - Education that is provided in public/government primary schools where fees and levies are abolished. Parents, however, have to provide their children with food, uniform and other necessary items.

Teacher-pupil ratio: - The number of teachers in a school with respect to the number of students who attend the institution regardless of their assignment.

Enrolment: - The numbers of pupils registered and physically attend school regularly.

Class size: - the average number of pupils per class. This is calculated by dividing the number of pupils enrolled by the number of classes.

Quality Education: - this is considered in terms of literacy rates, learning achievement, school resources and teacher inputs

Senior Teacher: - A teacher who has been assigned specific administrative responsibilities apart from teaching within the school. This could include being in charge of the overall school cleanliness, and store management.

Deputy Head teacher: - A teacher who deputizes the head teacher of a school. He or she is therefore responsible for all administrative responsibilities in the absence of the head teacher

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter looks at the introduction of free primary education in Kenya and the resultant increased enrolment as well as the empirical literature that examines studies undertaken in this area by other scholars with a view of identifying research gaps.

Introduction of FPE in Kenya

While free primary education in Kenya has increased participation, it has at the same time created considerable problems. It has exacerbated the problem of teaching and learning facilities. As a result of the high influx of new pupils, the average class sizes in many primary schools have definitely increased. The implication of this on the quality of learning in terns of individual space and attention needed from the teacher is a gap for this study. The availability of classrooms to accommodate all school children is another issue to consider. Many of the preliminary surveys seem to show that the existing facilities make a mockery of the free education program me. Many school management committees feel that they are seriously constrained to improve the state of learning facilities due to the government's ban on school levies. At the same time, conditions laid down to request for concessions to institute levies are so cumbersome that they hesitate to embark on the process (Sifuna, 2003). An assessment of school infrastructure by the Ministry of Education in 2007 revealed that many schools had inadequate classrooms. In some schools, the buildings were dilapidated and in dire need of renovation, while in others, children were learning under trees or in makeshift structures. The challenges were greater in poor districts where poor standards of construction and inadequate maintenance were identified as a major challenge, making both teaching and learning difficult as well as

lowering the quality of education (Ministry of Education, 2007). Immediately after pronouncement of the introduction of free primary in Kenya in 2003, head teachers were expected to start implementing the policy immediately without any prior preparation. As a result, classrooms were congested and the teaching force in most districts was generally constrained. Teachers complained of increased teacher-pupil ratios, many schools were understaffed and this did not augur well for the quality of education delivered (UNESCO, 2004). The national average pupil-teacher ratio is 50:1, implying that the pupils could be receiving fewer assignments because teachers have little time to mark them, thereby compromising quality. This massive surge put intense pressure on other teaching and learning resources including text books. Somerset (2007) asserts that in some cases class sizes reached the three digit numbers thereby making desks, textbooks and other essential materials in short supplies. However, the text book situation may have changed for the better, because under FPE, each pupil is allocated Ksh. 1,020 a year which is sent directly to school for the purchase of textbooks among other teaching and learning resources. According to the Ministry of Education, there were approximately nine million textbooks for the five core subjects in primary schools by the end of 2004, (MOE 2007) but the question one asks is whether this has this improved to the level of impacting positively on the quality of teaching and pupil performance.

2.2 Empirical Literature Review

2.2.1 Introduction

The Dakar Conference report of 2000 reviewed developments in achieving Universal Primary Education (UPE) in the African continent. It set as one of the Education for All (EFA) goals to eliminate gender disparities in primary and secondary education by 2005 and to achieve gender equality by 2015. This was further endorsed by the Millennium Development Goals (MDGs). Among other things, EFA set goals that children

everywhere, boys and girls alike, will be able to complete a full course of primary schooling (UN Report, 2003). The aim of the free primary education programme was to provide more school opportunities, especially for the poor communities. The argument was that the payment of school fees tended to prevent a large proportion of the children from attending school. Consequently, free primary education led to increment of enrolment. As a result of high enrolments, there was overcrowding in classes and the supply of teaching and learning materials underwent a severe strain. The free primary education programme killed community initiatives in funding schools. Communities drew back both material and financial support to public primary schools with the understanding that the government had taken over the full responsibility (Republic of Kenya, 2004). Due to a large pupil influx, schools were facing acute shortage of teachers. Most classes were too large to be handled by a single teacher. On average, the teacher student ratio was 1:50 (UNESCO, 2004).

2.2.2 School infrastructure

School facilities have a measurable impact on the achievement of children from kindergarten through high school. The environment in which students learn affects their performance and ultimately their future. This therefore means that well constructed and maintained facilities are critical to the well-being and success of the children (Schneider, 2002). Studies consistently show that lighting impacts the health, behaviour and achievement of students in an indoor environment. Research that analysed standardized math and reading scores among pupils exposed to different lighting conditions found a 21% increase in performance from students exposed to the most daylight compared to those exposed to the least (Henschong, 1999). Air quality is equally very essential for young children who are uniquely susceptible to indoor air quality. Their bodies require more oxygen than those of adults, and they inhale a proportionally greater volume of air

(Adams 1994). This therefore means that children need more personal space both at home and in school for them to remain healthy and become achievers in school. When classrooms are congested, this can hardly be the case, thereby denying the pupils the much needed oxygen and free movement that are crucial for their education.

2.2.3 Class size

Schools and teachers are often judged by the performance of their students in public examinations (NCTM, 2000). Papalia (1999) concurs that students' achievements depends on the quality of schools they attended. He noted that schools with traditions for good academic performance had pupils with high academic self concept. Such schools placed greater emphasis on academics and closely monitored pupils' performance. However school administrators, teachers and parents have for long thought that the number of children in a classroom affects learning positively when it is small and negatively when large. However it has proved difficult to pinpoint the precise effects of class size on student achievement (Brewer, 2001). Other researchers like Glass and Smith (1978) concluded that reductions in class size resulted in increases in academic achievement. The assertions made by Glass and Smith were supported by other studies like that of Robinson and Wittebols who found that smaller classes produced gains in student achievement mostly for the early primary grades. They concluded that the effects of smaller classes decreased from grade 1-3, to 4-8 and were almost nonexistent for grades 9-12 (Robinson and Wittebols, 1986). A study by Barr and Dreeben, (1983) noted that achievement would rise if teachers would teach differently in classes by making changes that would be beneficial to students. They noted that the direct cause of increase in achievement would be instructional improvement while class size would be the indirect cause; Willms (2000) on the same noted that factors such as school resources, family resources, school

community characteristics and neighbourhood or community features should also be correlated with class size to determine their effect on achievement.

Other researchers like (Glass and Smith (1979); Hedges and Stock (1983); Lucasand Spouse (1997); Maged (1997); Jin and Cortazzi (1998) have observed that large classes constrain teaching and learning and therefore contribute to low student achievement. They contend that among other factors, large classes limit regular and in-depth discussions with students, timely and frequent feedback from students and active problem solving. Baker and Westrup (2000) concur that large classes of over 40 pupils tend to be anonymous, (that is, children are in most cases attended to as a group and not as individuals), and attention to individual pupils needs is usually difficult.

Similar studies made by Achilles, et al. (1994) and Kiser- Kling (1995) on getting the right class size, indicated that student engagement and conditions that facilitate engagement are affected positively in a small class setting. Achilles (2000) concur that students in smaller classes achieve better in many areas such as mathematics, behaviour, citizenship, participation, and development. In the developed countries, British classes are considered to be the biggest with an average of 26 Pupils per lesson. Only eight other developed nations of Brazil, China, Indonesia, Korea, Japan, Chile and Turkey has larger state primary classes with an average of 21 pupils per class. In poorer countries, UPE is compromising educational quality as the governments raise enrolment without providing more resources. In Uganda, a report in 2006 indicated the class size stood at 70 students while in much of Africa, lower primary grade classes are considerably larger than upper primary classes. In Kenya, the recommended class size was 40 until 2009 when it was increased to 50 to accommodate the increase in enrolment following the introduction of FPE.

2.2.4 Teacher: Pupil Ratios (TPR)

Teacher – pupil ratio is the number of teachers in a school with respect to the number of students who attend the institution regardless of their assignment. Children who attend schools with a lower TPR and better educated teaching staff tend to perform better than children who attend poorer schools with higher TPR, (Molne, et al. (1999) A study done in 2005 indicated the Teacher Pupil Ratio (TPR) for all countries and comparatively, the ratio is lower in the developed countries in Europe and America at an average of 1:10. In Afghanistan, it stood at 1:88 and this was the highest. African countries like Congo, Central African Republic, Ethiopia, Sierra Leone, Mozambique, Malawi, Chad and Rwanda had very high TPR of between 82 – 62. Kenya was reported at 46.54 in the year 2008. A comparison of TPR in Kenya from 1976 to 2008 shows that the TPR is on an upward trend as follows:

Table 3: Trends of Teacher/Pupil Ratio in Kenya

Year	Teacher: Pupil Ratio
January 1976	33.46
January 1984	35.69
January 2000	34.44
January 2008	46.54

Source: World Development Indicators Database

2.2.5 Teaching and learning resources

The success of any educational system depends to a large extent on availability, adequacy and quality of teaching and learning resources (KIE 1990). Teaching aids are an essential requirement for successful teaching (Bennaars, Otiende, and Bpisvert, 1994). Teaching materials can support student learning and increase student success. Learning materials are

equally important because they can significantly increase student achievement by supporting student learning. Eshiwani (1983) identified teaching resources such as textbooks and visual aids as facilities that accounted for differences in academic performance. A teacher is nothing without something to teach. This teaching matter comes from resources that create a bulk of understanding surrounding the particular subject. Therefore a teacher is helped greatly by the resources that back them up. Without resources the whole teaching process could be very boring, and there would be no information that backs up the topic that the teacher would be working on. The very basic purpose of a teacher is to convey information from one medium, whether it is a book, a syllabus or themselves, to the student through a relatable manner. This relatable matter can come from many sources, but mainly from the teacher support that is provided through the school curriculum.

2.2.6 Teacher Quality

Most education officials claim that teachers need special qualifications in order to be effective. As a result, public education organizations often promote legislation or an interpretation of the law which would require a teacher to have certain basic minimum academic and professional qualification before they are licensed to teach in a public school. In Kenya, the requirement is that a primary school teacher must undergo a two-year training and acquire a Primary Teacher (P1) Certificate from a recognized Teacher Training College. Research on teacher effectiveness has progressed through three distinct stages reflecting data availability and emerging empirical approaches. Initial studies relied on cross section data aggregated at the level of schools or even districts (Hanushek, 1986). This approach related average school test scores to aggregate measures of teacher proficiency. Hanushek (1986) showed that most explicit measures of teacher qualifications like experience and education had little effect on student achievement. In contrast, implicit

measures of teacher quality (i.e. the average performance of individual teachers) differed significantly across teachers. A new round of studies focused on year-to-year improvements in student achievement. These studies provided some evidence for differences in teacher qualifications affecting achievement gains. For example, Ferguson (1991) found that scores on the teacher licensing in Texas accounted for 20-25% of the variation across districts in student average test scores, controlling for teachers experience, student-teacher ratio, and percentage of teachers with masters degrees. A few studies that examined pedagogical knowledge tests found that higher teacher scores were also related to higher student test performance although many of these were dated 1979 or earlier. However, Klicka (2003) argues that teacher qualifications do not make better students and that there is no positive correlation between the educational performance of the students and the teacher's educational background and that some of the worst teachers are highly certified in the public schools. He goes on to give an example of New York where home scholars and private schools were required to have certain qualifications in the past but this has since changed as home school parents are "competent" as long as they file a notice of intent, quarterly reports of progress and test results every other year beginning in third grade.

2.2.7 Teacher Salaries

Hanushek (2000) says that research confirms that the teacher is the key ingredient to quality schooling. A quality teacher is more important than a small class size. Nobody doubts that increasing teacher salaries will increase the number of people interested in teaching, thus improving quality and dealing with shortages would seem directly related to improvements in salaries. Unfortunately the argument on salaries does not hold because the validity rests on a number of unstated and unproven assumptions. First, when teachers discuss salaries, they regularly have in mind raising everybody's salary. In Kenya,

teachers' salaries are negotiated through the Kenya National Union of Teachers. This includes the salary of all current teachers, regardless of quality, specialization or anything else. Secondly, poor teachers almost certainly value improved salaries at least as much as good teachers. Third, quality is not a determinant of salaries. Teachers salaries are determined by experience, degree level and coaching abilities but not on their impact on student learning. The combination of these factors implies that there is virtually no relationship between teacher salaries and student achievement.

2.2.8 Pupil/Textbook ratios

Research demonstrates that there is always a quantity-quality trade-off when enrolments in education increase. Across a number of countries, the quality of schooling measured in terms of textbook per pupil ratios has been found to deteriorate following increases in enrolment. In Nigeria, following fee abolition, classroom resources were scarce including materials, textbooks and supplies (Asagwara, 1997). According to Malawi Ministry of Education in 1997, the pupil /textbook ratio was 24:1. However in Kenya and Uganda, there are reports of increased resource disbursement and improved classroom conditions. Although many classrooms were severely crowded and had limited lighting, there were cases in which disbursements were being used to improve the conditions of the schools in Kenya. Prior to UPE in Uganda (in 1997), a 1995 survey found that science textbooks were at a ratio of 40:1, 55:1 for math books, 49:1 for English books and 44:1 for social studies books. After the government made substantial efforts to improve production and disbursement, the average pupil/textbook ratio fell to 6:1 as of 1999 (Grogan, 2006)

2.3 Research gap to be filled by this current study

From the above reviewed literature, it is has emerged that the free primary education policy need to be reviewed and re – formulated if it is to realize the objectives it was meant for at inception. The current study in a greater departure from the reviewed literature above will focus in investigating the effect of huge enrolment in public primary schools on the quality of education.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the research design that was used by the study is explained. The population of study, sampling and sample size for the study are also explored fully. The chapter closes with data collection methods, primary data collection, secondary data collection, and data analysis procedures.

3.2 Research design

Design is central to the growth, development and validation of knowledge-based research output. Polit and Hungler, (1991) and (1995) point out that research design aims at maximizing the quality of data. This chapter therefore, describes the strategies and the methodology that will guide this current study. The choice of the design and methodology was based on the framework that enrolment rate of pupils in public primary schools will have a significant effect on the learning facilities that are currently overstretched.

This study adopted a cross sectional survey design. This research design means that that, it is exploratory in nature where several respondents will be interviewed at a one point in time study (Emory and Cooper, 1995). Cross sectional survey research design was used because this is an academic research and has to be done within a specified time frame. Macmillan and Sally (2001) contends that descriptive survey techniques are considered the most appropriate educational research approaches as they seek to find out factors associated with certain occurrences, outcomes and conditions of behaviours. This survey design enabled the researcher to gain understanding of the relationship between enrolment rate in public primary schools and learning facilities and how they impact on quality. The design is used to collect systematically factual numerical information from a large

population of pupils and teachers in the study area with the intention of describing the nature of the existing situation in Western Division of Nakuru Municipality.

3.3 Target population

The population of this study comprised all the public primary schools in Western Division of Nakuru municipality. The Division is divided into two zones, namely: Western Zone with 11 schools and Southern Zone with 13 schools. The total number of schools targeted was 24. The Division has a total of 511 teachers and 22274 pupils. The teachers and pupils were targeted because the quality of education depends on the quality of teaching and therefore any learning within the school has a direct relationship with what teachers and pupils do. The population was targeted according to gender since achievement of gender equity and equality in education is a core development issue and therefore gender concerns in education such as disparities in enrolment and learning environments that are not conducive to the needs of both girls and boys need to be addressed. .Below is a list of schools in the Division and the population of teachers and pupils:

Table 4: Statistics of Public primary schools in Western Division of Nakuru as at July 2009

Zone	No. of Schools	Male teachers	Female teachers	Total number of teachers	Boys (Pupils)	Girls (Pupils)	Total number of pupils
Southern	13	72	253	**325**	5186	5064	**10250**
Western	11	54	132	**186**	6136	5888	**12024**
Totals	24	126	385	**511**	11322	10952	**22274**

Source: Municipal Education Office Statistics

3.4 Sampling and sample size

This current study covered all the 24 public primary schools in Western Division of Nakuru Municipality. Purposive sampling was used on the category of teachers to enable the researcher to include both male and female teachers in the study. Female teachers in the division form 72% of the total teacher population. Kathuri (1993) argues that purposive sampling design is used on the basis of the researcher's judgment that the key respondents are relevant for the study. In the category of pupils, random sampling was used to select 2400 pupils from the schools. The researcher was fully aware that the public primary schools in western division of Nakuru municipality are information rich for this kind of study. The researcher then randomly selected respondents from these schools drawn mainly from school teachers and pupils.

All the teachers in the Division were targeted. Four teachers and one hundred pupils in every school were involved in the study, giving a total of 96 teachers and 2400 pupils. Gender balancing was considered among the respondents. The following sample structure and size had been proposed by this current study:

Table 5: Sample structure for the study

Respondents	**Sample population**	**Total Population**
Teachers	96	511
Pupils	2400	22274
Total	**2496**	**22785**

3.5 Research Instruments

Data for this study was collected from public primary schools in western division of Nakuru Municipality. Both male and female teachers were targeted. Out of the ninety six teachers involved in the study, half were female/male of various ages ranging from 25-55 years. The education levels for the teachers were equally varied, with majority being of P1 level while very few had degrees. The pupils on the other hand were drawn from the twenty four public schools of the Division. In each school, fifty boys and fifty girls of between 12-16yers were involved in the study, giving a total of 2400 pupils. Data was collected from the teachers and pupils through questionnaires. The teacher questionnaire sought to get information on the teacher profile, class enrolment, adequacy of teaching and learning materials, the teachers' workload, effect of enrolment on curriculum delivery and any challenges faced. The pupil questionnaire sought to get information on the profile of the pupil, the condition of facilities available in terms of adequacy and suitability, the priority needs of the pupils in school. The information gathered was to help the researcher to examine the adequacy and experience of the teachers, as well as adequacy of classrooms and other learning materials in the public primary schools in Western Division of Nakuru Municipality. The research was conducted in the months of September 2011.

3.5.1 Primary Data

Primary data is that which is obtained by conducting primary research to get a more contemporary and current picture of the area of study. It is original data that is directly obtained through actual interview, questionnaires, focused discussion or even telephone conversation. It is therefore up to date, specific and unbiased or unchanged because it is got at the source of the study area. The following data was collected at the schools, hence form the primary data: Numbers of classes, pupils, teachers, classrooms, desks, toilets, textbooks, reference material, enrolment by class, pass rates in national examinations,

additional inputs such as infrastructure, teaching and learning resources, in-service training, community participation, school feeding and others. Primary data was collected using two different questionnaires with structured and unstructured questions. One type of questionnaire targeted teachers and the second questionnaire targeted pupils. The questionnaires were delivered to all the 24 schools where the target teachers and pupils were given time to fill them before the researcher picked the duly filled forms back for analysis. In two schools, namely Kaptembwo and Heshima Primary schools, the researcher took time to interview teachers and pupils orally to get their response regarding the situation in the schools.

3.5.2 Secondary Data

Secondary data is that which gives a past analysis of the concern that is being researched. The study utilized available secondary data especially in the area of literature review. Secondary data was collected from academic journals, textbooks, unpublished theses, newspapers, and internet. The study extensively utilized the internet especially in getting current information during literature review. The other major source of secondary data was the Municipal Education office which handles all the records on the schools. The purpose of secondary data was to enable the researcher to grasp the key thematic areas of other studies done in this area so as to identify the research gap to be filled by this current study.

3.6 Data collection procedures

Based on the principle of informed consent, the selected respondents from each sampled category was given a questionnaire to fill and prior arrangements made with the researcher as to when to collect the duly filled questionnaires. The questionnaire relating to the pupils was administered by the researcher and her assistants. The school head teachers were

instrumental in ensuring that the questionnaires were distributed randomly, filled by all the targeted respondents and collected by the researcher.

3.7 Data analysis

Duly filled and completed questionnaires formed the basis of quantitative analysis. Data collected from the field was edited for completeness and accuracy to ensure that minimum data quality standards had been achieved. Data analysis employed descriptive statistics including frequency tables, measures of central tendencies (mean) and dispersion (standard deviation), cross tabulation to describe, analyze and present the study findings.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents results and discussions on the study seeking to investigate the effects of pupil over - enrolment on quality of education in public primary schools in western division of Nakuru municipality. Data was purposively and randomly selected from a sample of teachers and pupils from Western zone within Nakuru Municipality. This chapter presents discussions on the research findings. The study objectives which guided the study were as follows:

a) To find out the average class size and its effect on quality of education in Western Division of Nakuru municipality

b) To establish the teacher-pupil ratios in public primary schools in Western Division of Nakuru Municipality

c) To investigate the availability of classrooms, furniture and other related physical facilities in public primary schools in Western Division of Nakuru Municipality

d) To identify the availability and adequacy of textbooks and other learning resources in public schools in Western Division of Nakuru Municipality.

4.2 Level of enrolment in schools after introduction of FPE

An investigation into the level of enrolment in school after introduction of FPE was sought by the researcher revealing an overwhelming response of 95.8 % indicating to increased levels of enrolment in most of the sampled schools in western zone since the introduction of the Free Primary Education Programme by the Government in 2003. An interview of the teachers of Heshima Primary for example indicated that the school population stood at 1101pupils as at 2003from where it quickly increased to 1264, 1322, 1426, and 1524 in

the subsequent years to 2007. The population dropped to 1300 in 2008 following the post election violence experienced in the region after the general election, but quickly went up to 1470, 1547, 1642 and 1651 in 2009, 2010, 2011 and 2012 respectively. This was an indicator that the FPE policy had registered high levels of success in terms of ensuring access to basic Education for majority of Kenyan Children. Respondents that indicated a decrease in enrolment accounted for a minimal 1% while those that indicated that the enrolment remained the same represented 3.1% of the study sample as shown in figure 8.

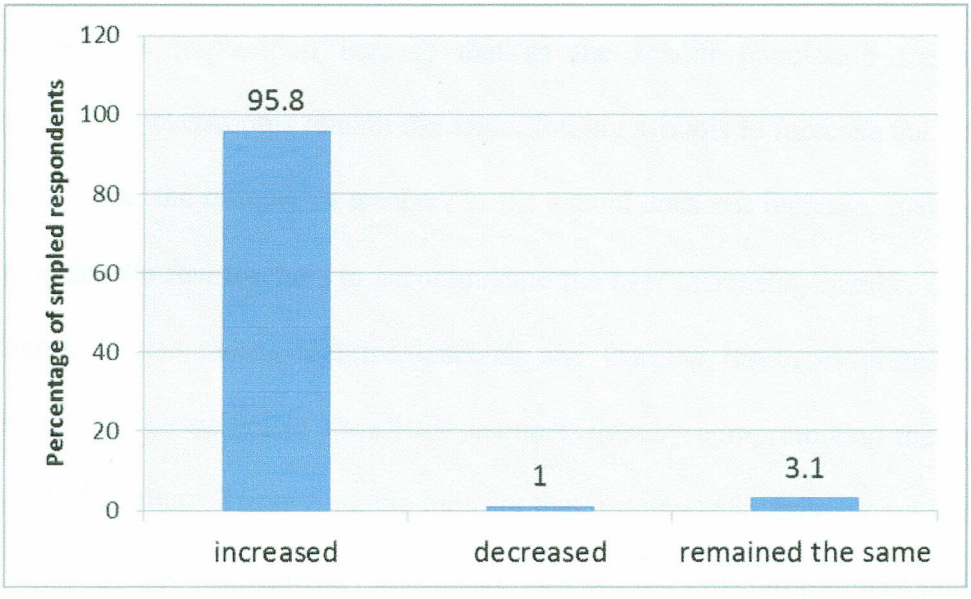


Figure 2: Level of enrolment in primary schools in Western zone after introduction of FPE

4.3 Effect of enrolment on class size and teachers' workload

The study further sought to establish the average level of enrolment in the classes taught by the sampled teachers in western zone in Nakuru Municipality. The study findings revealed that an overwhelming proportion of the teachers indicated that they handled 50 to 60 pupils per class. This represented 52.1 % of the sample. A further 20 % of the teachers indicated to handling classes with over 66 students accounting for 20.8 % of the sample. In Heshima primary school for example, the class sizes in lower and upper primary were at an average of 80 and 70 pupils respectively. The teachers interviewed lamented that this

was way above the average of 45 pupils per class that they handled in the year 2003, making the work of marking composition and "insha" very challenging. Asked how they were coping, some teachers indicated that they reduced the amount of work given to the pupils that required marking. The respondents' with classes of between 46 to 50 students accounted for 7.3% of the sample with a further 9.4 % handling classes with between 36 to 45 pupils. The classes with the least number of pupils were those with less than 35 students that were handled by a proportion of 10.4% of the teachers' sample as presented in figure 9. The implication here is that as the school population increases, the infrastructure like classrooms remain the same, forcing schools to increase the class sizes. At the same time, the number of teachers in the school does not increase, making it very challenging for the few teachers to accommodate the ever increasing number of pupils in their classes. It also means that the teaching and learning resources prepared by the teachers may not be sufficient for all the learners, thereby compromising the quality of teaching and learning. These findings indicate that enrolment in primary schools within Nakuru Municipality was relatively high resulting from the FPE programmes put in place since 2003 by the Kenyan Government. It was expected that schools with higher enrolments received more funding under the FPE programme therefore better placed to put in place the required facilities and infrastructures. This was however not the case. Although FPE has been instrumental in cushioning children from poor socio-economic backgrounds from failing to participate in education or dropping out of school, problems faced in its implementation has witnessed costs rising beyond the current education budget allocation, posing serious doubts on the viability of the current FPE programme. With the high levels of enrolment, teachers have had to deal with unprecedented levels of indiscipline, with some of the newcomers to school being hard-core juvenile delinquents KIPRA (2006).

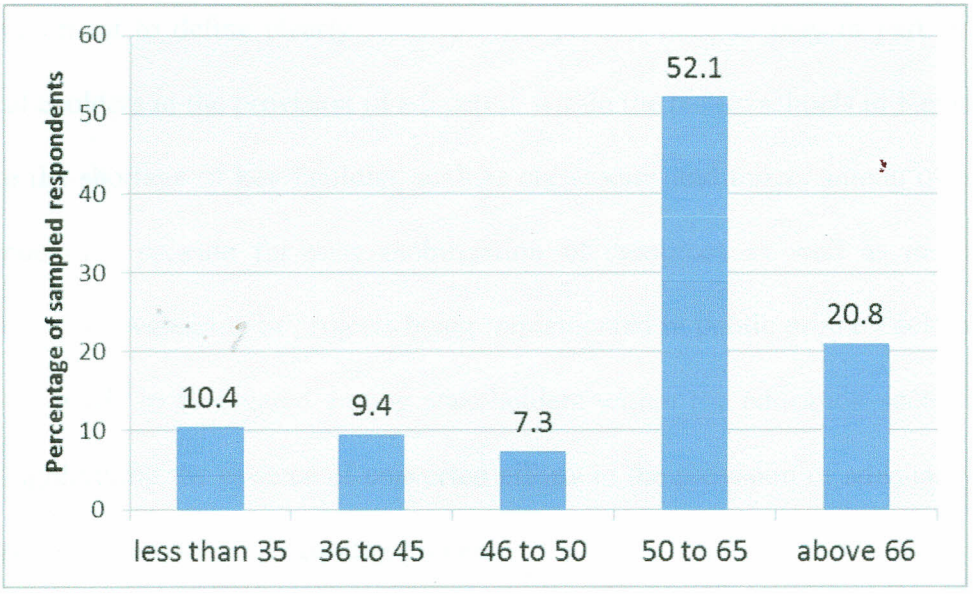


Figure 3: Average number of pupils handled by teachers in Primary schools in western Division of Nakuru Municipality

4.4 Effect of enrolment on infrastructure

The findings from the study further indicated strong affirmations from the sampled respondents' that most of their schools did not have adequate facilities to handle the increased enrolment of pupils representing 87.5 %. The proportion that indicated to having in place facilities capable of handling the increased enrolment accounted for 12.5%. as shown in figure 11. At Kaptembwo primary school, teachers were concerned that the pupil toilet ratio was very high at 80:1 for girls and 68:1 for boys (because they had urinals). This they said waste a lot of time for the pupils who ended up lining up to use the facilities. The teachers further decried the condition of those pit latrines which were almost filled up and therefore very filthy. On the condition of desks in the classrooms, teachers complained that a standard desk that should ordinarily hold three pupils was used by 5-6 pupils, and that there were too many desks in the classroom thereby inhibiting movement for both the teacher and pupils. Since most classrooms did not have ceiling boards, teachers and pupils alike complained of very hot temperatures especially in the

afternoon, forcing some classes to be held under trees. There is a need for more effort by the Government to define clearly what role the parents need to play in partnering with other stakeholders in the provision of education within the public schools in Kenya to help alleviate the shortage of key facilities such as classrooms and toilets among others. Such an avenue may provide for easy mobilization of resources as well as in the better monitoring and evaluation of projects being implemented in public primary schools. More awareness needs to be created among stakeholders within the education sector with the aim of highlighting the essence of concerted efforts in the provision of adequate facilities to realize better results in the learning process.

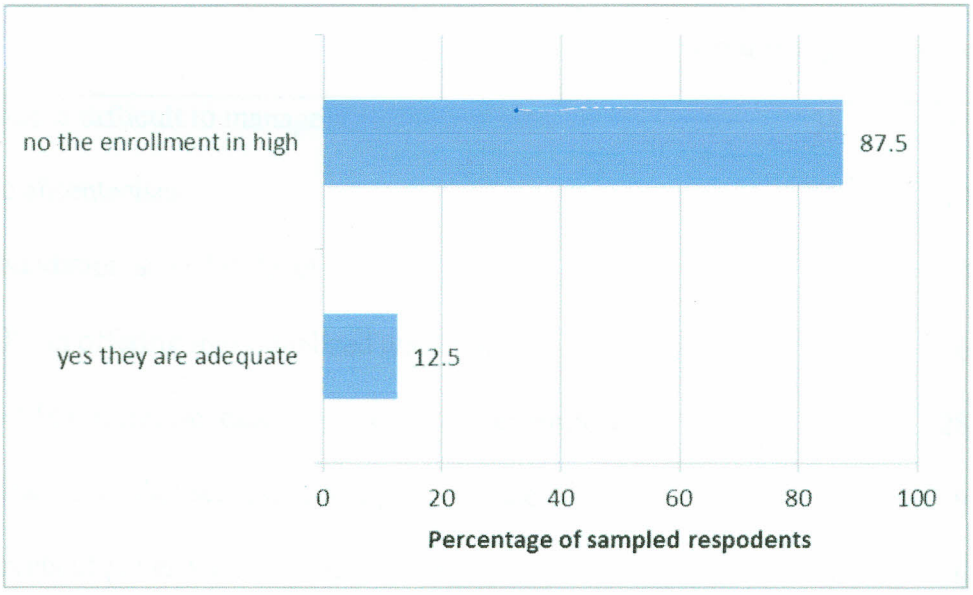


Figure 4: Responses by sampled teachers on school facilities being able to support the current pupil enrolment

4.5 Effect of enrolment on performance

An assessment of Teachers' perceptions on how the upsurge of pupil enrollment in their schools had affected examination performance was done. The findings brought to light a wide range of concerns which in their opinion had negative effects; the largest proportion of respondents (35.4 %) indicated that there had been a lowered performance. A further

proportion indicated to lacking enough time to prepare representing 26% while 20.8 % indicated that the increased enrolment had brought about the lack of competition. The respondents indicate to that individualized attention had been compromised by the high enrolments accounting for 16.7 % of the study sample. A minute proportion accounting for 1% indicated that in spite of the increased enrolment, high performance had been registered. Table 6 presents the findings.

Table 6: Responses on how pupil enrolment affects teaching and learning in School

Effect	Frequency	Percent
workload is difficult to manage	34	35.4
chronic absenteeism	10	10.4
poor foundation at ECDE level	4	4.2
difficulty in offering individualized attention	6	6.3
facilities like furniture, classrooms etc are over stretched	27	28.1
discipline issues that seem to affect performance	9	9.4
High levels of poverty among the parents	6	6.3
Total	**96**	**100**

An investigation of the sampled teachers' perceptions' towards the effects of pupil enrolment on pupil performance was sought. This was based on an assessment of a set of five questions seeking their responses on the effects of pupil enrolment in their respective schools. A large proportion of the sampled teaches affirmed that the current staffing level was the strongest impediment in realization of the objectives of free primary education. This accounted for 94.8 % of the sampled proportion. Other strong views held by the

sampled teachers in regard to negative effects comprised of the increased enrolment levels over the years (76 %) and the lack of adequate facilities to cater for the large number of pupils (70.2 %). The study further sought the opinion of the respondents on whether their schools had in place adequate learning materials. This reported an overwhelming "No" response accounting for 75% while those that affirmed to having adequate facilities represented 25% of the sample. The findings are presented in table 7 below.

Table 7: Teachers' responses on various factors affecting learning

	Yes		No		
	F	%	F	%	TOTAL
would you say that your school has adequate learning materials	24	(25.0)	72	(75.0)	96 (100)
would you say that lack of other physical facilities in your school has led to poor performance	77	(70.2)	19	(19.8)	96 (100) 100 (67)
would you say that lack of adequate classrooms is a major problem in your school	52	(54.2)	44	(45.8)	96 (100)
would you say that lack of adequate teachers led to poor performance by pupils	91	(94.8)	5	(5.2)	96 (100)
would you say that increased pupil enrolment in your school has led to poor national examination performance	73	(76.0)	23	(24.0)	96 (100)

An examination of the students' responses on the same aspect of physical facilities agreed to large extent with those posted by their teachers in the survey. A significant proportion of the pupils indicted to not having enough desk and chairs in their respective classrooms accounting for 62.5 % while those that indicated to having adequate furniture formed

small proportion accounting for 37.5 % of the pupils' sample. The findings further revealed that over half of the pupil sample indicated to not being comfortable in the way they sit in class representing 53.3 % while those that indicated to being comfortable accounted for 46.7 % as shown in table 8. For the overriding discussions it is evident that schools management committees need to solicit funds from parents among other donors to subsidize the shortage of these key teaching and learning materials and facilities, and also correct the misconception that public primary education is completely free and that the Government should solely provide everything including text books, facilities and examination fees.

Table 8: Pupils' responses on factors affecting learning

	Yes	No	
	F %	F %	TOTAL
do you have enough desks and chairs in your class	90 (37.5)	150 (62.5)	240 (100)
do you feel comfortable in the way you sit in class	112 (46.7)	128 (53.3)	240(100)

The study sought to establish what the sampled teachers thought the management committees of their schools should do in order to improve on the quality of education. This was done to help establish the priorities in line with the most urgent requirement that would in the teachers perceptions help improve on the quality of education. The findings revealed the need for management committees to sensitize parents on the need to supplement government efforts on the funding of the free primary education programme. This was on the realization that parents and guardians form an important pillar in the

successful realization of progress in primary schools and that forums such as parents meetings form an important avenue of enlightening them on policy guidelines by the Government and the Ministry of Education. It can therefore be inferred from the ratings on this aspect that the effectiveness of school Parent and Teachers Association (PTA) meetings was still wanting based on earlier observations made that indicated that parental involvement is low in the provision of vital facilities in primary schools in Nakuru Municipality.

4.6 The role of school management committees towards provision of school infrastructure

The findings further revealed the need for school management committees to implement proposed development programmes in the respective schools as this received a rating of 30.2 %. One teacher remarked that "school management committee members should be strong enough to convince their fellow parents to contribute towards school development projects. For example parents agreed to contribute Kshs 350 each towards the completion of a classroom two years ago, and to date most of them have not paid." This was an indicator that many teachers' perceived the input of management committees input in managing and running school affairs as not adequate.. This therefore necessitates the need for more concerted efforts in realization of projects such as construction of more classrooms among other concerns. A further 24 % of the sampled teachers proportion cited the urgent need by management committees to solicit from well-wishers to aid in the construction and improvement of key facilities like classrooms and furniture while 1.4 % called on the need for the school committees to recruit temporary teaching staff to help alleviate the current heavy workload among the teachers, which in their opinion had lowered their efficiency and effectiveness in imparting knowledge to pupils. The study also cited a need by 2.1% of the sampled proportion to provide teachers with incentives to

aid in boosting their productivity and motivation to deliver better results. The above findings are presented in figure 5.

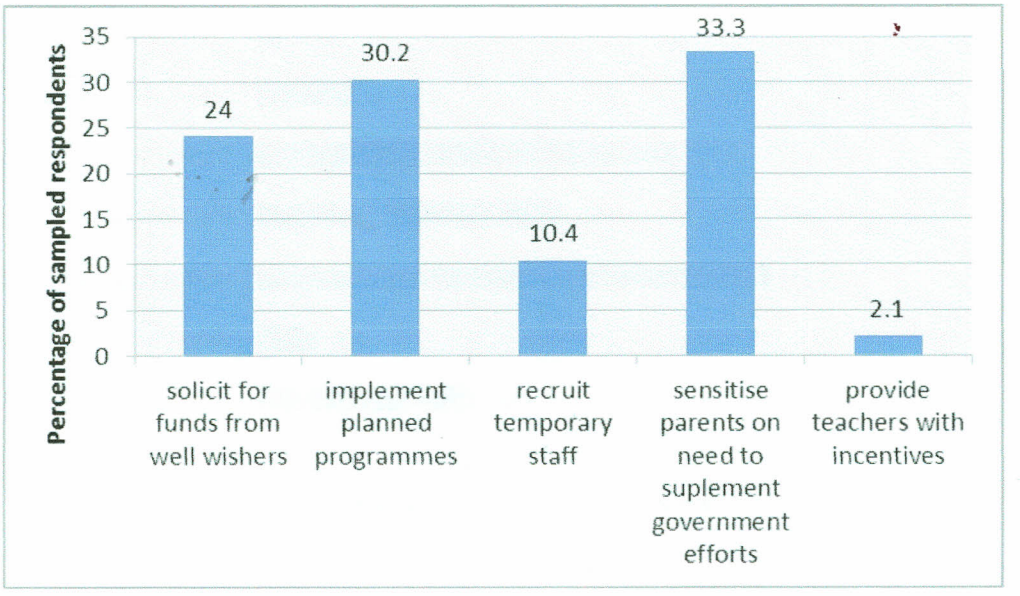


Figure 5: Teachers' responses on what management committees in schools should do to improve on the quality of education offered

An investigation of the pupils' views on the areas or facilities they would recommend to their school management committee's was done. Being the beneficiaries of the FPE programme the study deemed it fit to seek the opinions of pupils to get a feel on the most urgent priorities that required attention. The findings revealed a strong need to address the concern for adequate toilet facilities which received a significant number of responses accounting for 72.5% while a further 59.2 % of the sampled pupil proportion indicated for the need to address concern of furniture which included desks and chairs. The findings also brought to light concerns over the school fields which were viewed as inadequate since they failed to address the rising numbers of pupils in the schools sampled which represented 42.9 %. Other areas that were highlighted by the pupils included the lack of enough classrooms (30.4 %) clean drinking water (17.5%), the large number of enrolment

and the lack of a school gate (3.3 %) in the various schools. These findings are presented in figure 6.

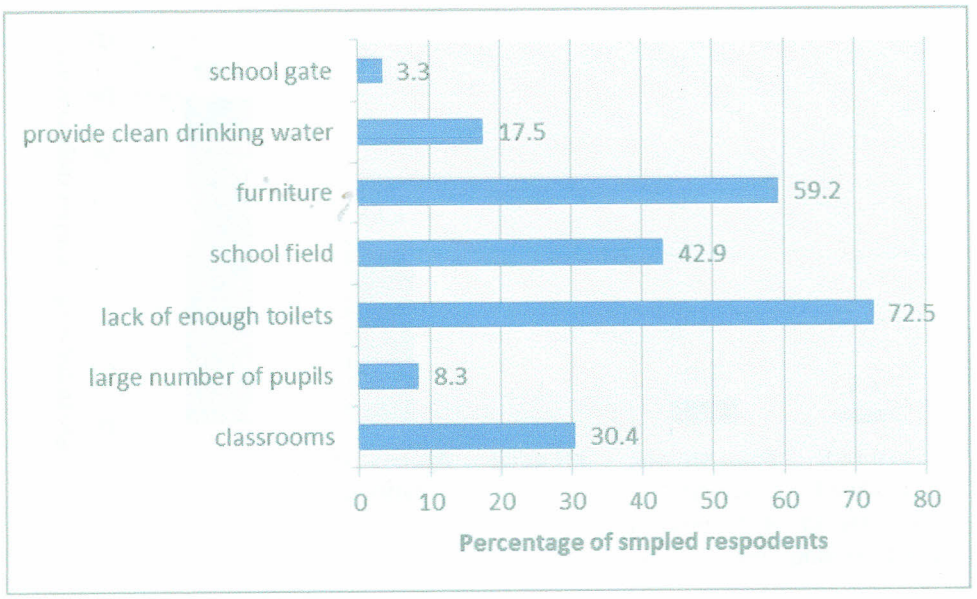


Figure 6: Pupils' views on what management committees in schools should do to improve on the quality of education offered

An assessment of the teachers' perceptions on what the government should do to improve on the quality of education was done. This was to provide insights on the efforts the Government had put in place from the perceptive of the implementers of the curriculum who in this case were the classroom teachers. 59.4% of the respondent teachers indicated a strong need to recruit more teachers into the primary school subsector. This took into consideration the heavy work load that the teachers had reported to be dealing with since high enrolments that had been reported with the inception of the FPE programme in 2003. The teachers (33.3% of them) further indicated the need to offer more facilities; especially more classrooms to accommodate the rising number of pupils within the primary schools. 4.2% of the respondent teachers further indicated the need to allocate more funds for the provision of lunch programmes. The respondents gave the lowest ratings for the need to

start boarding facilities and the scrapping of the FPE programmes that accounted for 2.1 % and 1 % respectively better results. Findings are presented in figure 7.

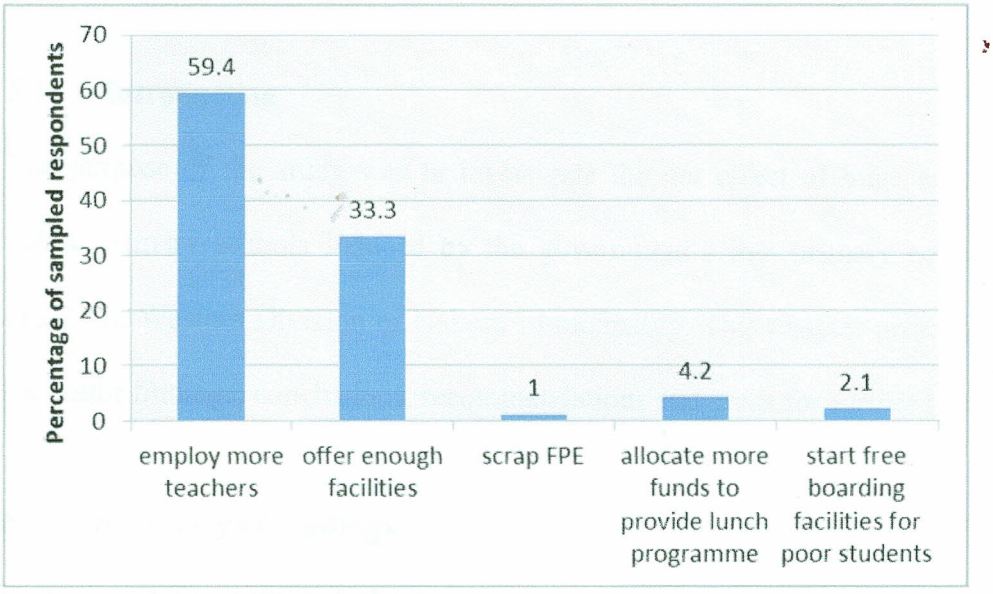


Figure 7 : Sampled teachers' views on what the Government should do to improve on the quality of education

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The purpose of the study was to investigate the net effect of huge enrolment levels in public primary schools induced by the government's free primary education policy on quality in Western Division of Nakuru Municipality. This chapter presents a summary of the major findings, conclusions, recommendations and areas for further research.

5.2 Summary of Findings

From the study conducted, the assumptions posed at the beginning of the study, and the research questions asked, this research came up with various findings related to the effect of huge enrolment levels in public primary schools on quality of education.

The study sample purposively selected a total of 96 teachers for the first proportion of the sample that comprised males and females. Similar distributions were observed for the pupils that formed the second proportion of the sample with male and female pupils. A significant proportion of the sampled teachers were in the position of Assistant teacher with few Senior teachers and Deputy Head teachers. Analysis on the sampled pupils' ages revealed that the sample was drawn from pupils predominantly within the ages of between 13 to 16 years. An assessment of the marital status revealed an overwhelming proportion having been married. The findings revealed that a large proportion of teachers had attained college level education. An insight into the sampled teachers' remuneration revealed that a large proportion of the teachers' received salaries ranging from between 10,000 to 40,000 Kshs

Average class size

An overwhelming response indicated that there were increased levels of enrolment in most of the sampled schools in western zone since the introduction of the Free Primary Education Programme by the Government in 2003. This is an indicator that the FPE policy had registered high levels of success in terms of ensuring access to basic Education for majority of Kenyan Children. Respondents that indicated a decrease in enrolment were minimal. This was attributed mainly to continued poor performance by few schools and insecurity, mainly associated with the general elections in parts of the division every five years. Those that indicated that the enrolment remained the same represented an insignificant portion of the study. The study findings revealed that an overwhelming proportion of the teachers indicated that they handled 50 to 60 pupils per class. A quarter of the respondent teachers indicated to handling classes with over 66 students. The implication here is that access has been widened. The respondents' with classes of between 46 to 50 students were few while those handling classes with between 36 to 45 pupils were very few. The classes with the least number of pupils were those with less than 35 students. Such classes were very few if we look at the responses given by the teachers. Teachers with the highest teaching loads indicated that they handled an average of 36 to 40 lessons per week, while a minority handled a load of between 31 to 35 lessons per week. There were few respondents with a load of less than 30 lessons.

School facilities/ infrastructure

Most of the sampled schools did not have adequate facilities to handle the increased enrolment of pupils. The proportion that indicated to having in place facilities capable of handling the increased enrolment accounted for a very small percentage. Students' responses on the same aspect of physical facilities agreed to large extent with those posted by their teachers in the survey. High proportion of the pupils indicted to not having

enough desk and chairs in their respective classrooms, while those that indicated to having adequate furniture formed small proportion of the pupils' sample. The findings revealed a strong need to address the concern for adequate toilet facilities which received a significant number of responses, while a further half of the sampled pupil proportion indicated the need to address concern of furniture namely desks and chairs. The findings also brought to light concerns over the school fields which were viewed as inadequate and failed to address the rising numbers of pupils in the schools sampled. Other areas that were highlighted by the pupils included the lack of enough classrooms, clean drinking water, large enrolment and the lack of a school gate for each school.

Examination performance

Teachers' response on how the upsurge of pupil enrolment in their schools had affected examination performance s brought to light a wide range of concerns which in their opinion had negative effects; the largest proportion of respondents indicated that there had been a lowered performance. A further proportion indicated that they lacked enough time to prepare for their classes, while others indicated that the increased enrolment had brought about the lack of competition among pupils. The majority of respondents indicated that individualized attention had been compromised by the high enrollments. An insignificant proportion indicated that in spite of the increased enrolment, high performance had been registered.

Teacher Pupil ratio

A large proportion of the sampled teaches affirmed that the current staffing level was the strongest impediment in realization of the objectives of free primary education. Other strong views held by the sampled teachers in regard to negative effects comprised of the increased enrolment levels over the years and the lack of adequate facilities to cater for the

large number of pupils. The findings revealed a strong need to recruit more teachers into the primary school subsector. This was out of the heavy work load that the teachers had reported to dealing with especially high enrolments that had been reported with the inception of the FPE programme in 2003. The teachers further indicated the need to offer more facilities especially more classrooms to accommodate the rising number of pupils within the primary schools. The study also cited a need by a small proportion of sampled teachers to provide teachers with incentives to aid in boosting their productivity and motivation to deliver better results

Textbooks and other teaching and learning materials

The study brought to light opinion of majority of the pupil and teacher respondents that their schools did not have in place adequate learning materials which. Those that affirmed to having adequate facilities represented a minority of the sample. The findings revealed the need for management committees to sensitize parents on the need to supplement government efforts in the funding of the free primary education programme. This was on the realization that parents and guardians form an important pillar in the successful realization of progress in primary schools and that forums such as parents meetings form an important avenue of enlightening them on policy guidelines by the Government and the Ministry of Education.

The findings further revealed the need for school management committees to implement proposed development programmes in the respective schools.

5.3 Conclusion

The FPE programme put in place by the Kenyan government in 2003 has no doubt been successful in realizing phenomenal growth over the years. This has however been faced by a number of myriad challenges that threaten to erode the successes made to date.

Performance in examination has no doubt been affected by the increased numbers in schools coupled with teacher shortages as the workload for the teacher has continued to rise. It is evidently clear that these concerns need to be urgently addressed to make more strides under the FPE programme. These challenges need to be addressed by key stake holders namely parents, school management committees, teachers who are the implementers of the curriculum and the government through the Ministry of Education

5.4 Recommendations

(i) There is need for schools with higher enrolments to receive more funding under the FPE programme to be in a better position to deal with the large numbers as opposed to the current situation.

(ii) There is need for more effort by the Government to define clearly what role the parents need to play in partnering with other stakeholders in the provision of education within the public schools in Kenya to help alleviate the shortage of key facilities such as classrooms and toilets among others.

(iii) There is need for Schools Management Committees to actively solicit funds from parents among other donors to subsidize on key teaching and learning materials and facilities and also correct the misconception among parents that public primary education is completely free since the Government should solely provide everything including text books, facilities and examination fees.

(iv) There is need for School Management Committees to implement proposed development programmes in respective schools through more concerted efforts in realization of projects such as construction of more classrooms among other concerns.

(v) There is need to urgently address the concern for adequate toilet facilities, classrooms and dilapidated furniture in most primary schools to help realize the benefits of the FPE programme.

(vi) There is need to recruit more teachers into primary schools owing to the heavy work load that the teachers had reported to dealing with especially high enrolment that had been reported with the inception of the FPE programme in 2003.

(vii) There may be need to mobilize more support among stakeholders within the primary school sector including, - parents ,NGOs and sponsors so as to promote the provision of better facilities and resources in realizing better learning conditions. The MOE should provide clear guidelines here to avoid other key stakeholders failing to take up their responsibility.

(viii) The study also cited a need to provide teachers with incentives to aid in boosting their productivity and motivation in order to deliver better results

5.5 Recommendations for Further Research

(i) There is need to further investigation on the net effect of huge enrolment levels in public primary schools introduced by the government's free primary education policy on quality using a larger sample and in a different Municipality or District. This would lead to comparison of the findings and generate information that would allow for wider discussions and generalization.

(ii) There is need for more studies on the role of school management committees (SMCs) in financial management of public primary schools.

(iii) There is need to further investigate the impact of Government funding in public primary education in Kenya.

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APPENDICES

APPENDIX I: Questionnaire for Teachers in public schools in Western Division of Nakuru Municipality

SECTION A: DEMOGRAPHIC PROFILE

Age 18 – 25 years

26 – 30 years

31 – 35 years

36 – 40 years

41 – 45 years

46 – 50 years

Above 51 years

Gender

Male [ ]

Female [ ]

Marital Status

Married

Single

Divorced

Widowed

Other (Specify).....

Indicate highest Education Level attained

Primary School [ ]

Secondary School [ ]

College [ ]

University [ ]

Other Specify.....

Indicate your gross income level in (Kshs)

10,000 – 20,000 [ ]

21,000 – 40,000 [ ]

41,000 – 60,000 [ ]

61,000 – 80,000 [ ]

81,000 – 100,000 [ ]

Above 100,000 [ ]

SECTION B: SCHOOL DATA

Tick as appropriate {√}

1. Name of the school .....
2. What is your position in the school?.....
3. Please tick one of the following statements that best describe your school's national examination performance

   Excellent [ ]

   Good [ ]

   Fair [ ]

   Poor [ ]

   Very poor [ ]

SECTION C: ENROLMENT OF PUPILS

1. How many lessons do you teach in a week?.....
2. What is the average number of pupil per class that you handle?.....
3. Comment about the level of pupil enrolment in this school after introduction of free primary education policy.....
   .....
   .....
4. Comment about the level of pupil enrolment before free primary education was launched .....
   .....
   .....
5. Are the school's facilities able to support the current pupil enrolment in this school, comment .....
   .....
   .....
6. What are the common problems you often experience in this school due to pupil enrolment level, comment .....
   .....
   .....
7. How does pupil enrolment affect examination performance in this school.....
   .....
   .....
   .....

SECTION D: EFFECT OF PUPIL ENROLMENT ON PUPIL PERFORMANCE

1. Would you say that your school has got adequate learning materials

   Yes [ ] No [ ]

2. Would you say that lack of other physical facilities in your school has led to poor performance?

   Yes [ ] No [ ]

3. Would you say that lack of adequate classrooms is a major problem in your school?

   Yes [ ] No [ ]

4. Would you say that lack of adequate teachers leads to poor performance by pupils?

   Yes [ ] No [ ]

5. Would you say that increased pupil enrolment in your school has led to poor national examination performance?

   Yes [ ] No [ ]

SECTION F: RECOMMENDATIONS

1. What do you think the management committee of your school should do to improve on the quality of education offered in the context of free primary education?.....

   .....

   .....

2. What do you think the government should do to improve the quality of education in your school in the context of free primary education policy?.....

   .....

   .....

APPENDIX II: Questionnaire for pupils in Public Schools in Western Division of Nakuru Municipality

Tick (√) as appropriate:

SECTION A: PROFILE

Name.....

Age.....

Class.....

Boy ( ) Girl ( )

SECTION B: FACILITIES AVAILABLE FOR PUPILS

1. Do you have enough desks and chairs in your class? (Yes) or (No)
2. Do you feel comfortable in the way you sit in class? (Yes) or (No)
3. List the three major challenges/problems you face in your school in relation to the facilities available like classrooms, desks, chairs, toilets, school field, etc

   i. .....

   ii. .....

   iii. .....

4. Which facility/area would you recommend to the School Management Committee of your school to address first? .....

   .....

LETTER OF INTRODUCTION

Millicent A. Yugi

P. O. Box 124

NAKURU

Email – mayayugi@yahoo.com

23 September, 2011

Dear Respondent,

REF: REQUEST FOR RESEARCH DATA

I am a postgraduate student at Kenyatta University, pursuing a course leading to a Masters Degree in Education. In partial fulfilment of the requirements of the stated degree course, I am conducting a Research Project entitled, **THE EFFECT OF PUPIL ENROLMENT ON QUALITY OF EDUCATION IN PUBLIC PRIMARY SCHOOLS IN KENYA (A CASE STUDY OF WESTERN DIVISION OF NAKURU MUNICIPALITY)**

To achieve this, your school is one of those selected for the study. I kindly request you to fill in the attached questionnaire to generate data required for this study. This information will be used purely for academic purposes and your name will not be mentioned in the report. Findings of the study, shall upon request, be availed to you.

Your assistance and cooperation will be highly appreciated.

Yours faithfully,

M. A. Yugi

POSTGRADUATE STUDENT – Kenyatta University

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams:"SCIENCETECH", Nairobi
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254-020-310571, 2213123.
Fax: 254-020-2213215, 318245, 318249
When replying please quote

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: NCST/RRI/12/1/SS-011/1412/4

Date: 12th October, 2011

Millicent Anyango Yugi
Kenyatta University
P. O. Box 43844
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "***The effect of pupil over-enrollment on quality of education in public primary schools in Kenya: A case study of Western division of Nakuru municipality***" I am pleased to inform you that you have been authorized to undertake research **in Western Division of Nakuru District** for a period ending ***30th December 2011.***

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

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

P. N. NYAKUNDI
FOR: SECRETARY/CEO

Copy to:
The District Commissioner
Nakuru District

The District Education Officer
Nakuru District

PAGE 2

PAGE 3

Research Permit No. *NCST/RRI/12/1/SS011/1412*

S IS TO CERTIFY THAT:

Date of issue *12th October,2011*

f./Dr./Mr./Mrs./Miss/Institution

Fee received *kshs. 1000*

icent A. Yugi

Address) *Kenyatta University*

BOX 43844, Nairobi

been permitted to conduct research in

	Location
Nakuru	District
Rift Valley	Province

he topic; *The effect of pupil over-enrolment*
quality of education in public primary schools
Kenya (A case study of Western Division of Nakuru
nicipality)

Applicant's Signature

Secretary National Council for Science and Technology

a period ending 30th *December*2011