

**INFLUENCE OF GOVERNMENT FUNDING ON THE
INTERNAL EFFICIENCY IN PROVISION OF EDUCATION IN
PUBLIC SECONDARY SCHOOLS IN NYANDARUA WEST
DISTRICT, KENYA**

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Catherine Wamucii Wanjohi ✓

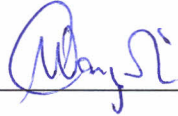
**A Research Project Submitted for Examination in Partial Fulfilment for the
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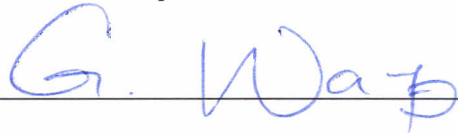
DECLARATION

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



Catherine Wamucii Wanjohi

This project has been submitted for examination with our approval as University
Supervisors

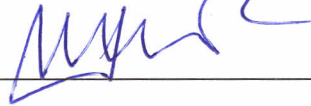


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DEDICATION

This study is dedicated to my sons David Wanjohi and Dennis Kariuki for their encouragement.

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The completion of this research project would have been impossible without the material and moral support from various people. It is my obligation therefore to extend my gratitude to them. First of all I thank the almighty God for giving me good health, and guiding me through the entire course.

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LIST OF ABBREVIATIONS AND ACRONYMS

DEO	District Education Office
EFA	Education for All
FDSE	Free Day Secondary Education
FSE	Free Secondary Education
GDP	Gross Domestic Product
IMF	International Monetary Fund
KCPE	Kenya Certificate of Primary Education
KCSE	Kenya Certificate of Secondary Education
KESSP	Kenya Education Sector Support Programme
MDGs	Millennium Development Goals
MoE	Ministry of Education
MoEST	Ministry of Education Science and Technology
RoK	Republic of Kenya
SAPs	Structural Adjustment Programmes
SSE	Subsidized Secondary Education

TSC	Teachers Service Commission
UNDHR	United Nations Declaration of Human Rights
UNESCO	United Nations Educational Scientific and Cultural Organization
UNICEF	United Nations Children Education Fund

ABSTRACT

The purpose of this study was to assess the influence of government funding on internal efficiency in provision of education in public secondary schools in Nyandarua West district, Kenya with a view of finding out the adequacy of educational resources. The study was guided by four research objectives which were: to determine how the provision of instructional materials and infrastructure through government funding has affected internal efficiency in public secondary schools in Nyandarua West district; to assess how remuneration of teachers by the government has influenced internal efficiency in the district and to examine the challenges faced by the head teachers in the utilization of the government funds in public secondary schools in Nyandarua West district.

The study used descriptive survey design. The target population was all the students, teachers and head teachers in the 12 public secondary schools in Nyandarua West district. The study targeted 5009 students, 154 teachers and 12 head teachers from whom 10 head teachers and 40 teachers and 500 (10% of 5000) students were sampled for the main study. This study used questionnaires to collect data from head teachers, students and teachers. The data was analysed using descriptive statistics for analysis.

The study established that majority (80%) of the sampled schools experienced absenteeism of students mainly due to lack of levies, an indication of inadequate funding from the government to ensure availability of enough teaching and learning resources. The study also found out that majority of the sampled schools

had a challenge of instructional materials. It also found out that most schools had improved on provision of adequate infrastructure through the government funding.

The research further found out that majority of the teachers was dissatisfied with the remuneration from the government. The study established some challenges that the head teachers faced in the utilization of the government funds which included among others, delay in the funds disbursement and inadequate funding. From the study findings, the study concludes that provision of instructional materials through government funding affected performance in the schools. The provision of school infrastructure through government funding affected participation of students and that remuneration of teachers by the government affected the teaching and learning and therefore performance. The study therefore recommends that the government through the Ministry of education allocate more funds for infrastructure to curb the problem of inadequate infrastructure and instructional materials. More studies are done on the influence of government funding on internal efficiency in public institutions at District, Provincial and National level.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The United Nations Declaration of Human Rights (UNDHR,1948), the Jomtein Declaration of Education For All (EFA) of 1990, the Dakar Declaration of 2000 on Education for All by 2015 and Millennium Development Goals (MDGs), all state that every child is entitled to basic rights, among which education is key (World Bank, 2008). A 2007 United Nations Educational Scientific and Cultural Organisation (UNESCO) and United Nations Children's Education Fund (UNICEF) report addressed three interrelated rights that must be addressed in order to provide EFA. These rights include right to access education, quality of education and respect within the learning environment (World Bank, 2008).

In Nepal, a country in Asia government's funding of secondary education has been there for many years. It was however realised that the government was unable to provide schools with all the resources they needed. In 1992 the country was forced to turn to cost sharing where by parents had to provide other resources such as writing materials and books to the children (Bajracharya 1997). Most of the parents have not been able to provide the resources needed and this has had an effect on running of schools as the available resources are overstretched (Ibid). The report of the World Bank (1998) urged African countries to consider the idea of cost sharing

instead of fully relying on public expenditure in financing education (World Bank, 1998). It further observed that in many African countries most of the money allocated to education is spent on teachers' salaries with little regard to equipment, maintenance of physical facilities and development (World Bank, 1998). Research done on government funding of secondary education by the staff of the Ministry of Education in Ghana in 1995 revealed that there is high proportion of expenditure on salaries and little on learning inputs hence affecting the quality of education (Agyakwa & Dappah, 1995). A case study done in Tanzania by Ishengoma (2005) on government funding and participation established that the funding of secondary education had very insignificant impact on improvement and expansion of access and participation. The secondary school enrolment ratio was low and there was less likelihood of poor families being able to place their children in secondary school (Johnston 2002).

Since independence Kenya has become well known for the scale of community involvement in education particularly in the secondary school sector (Bray, 1992). A key phenomenon since independence in 1963 has been the development and growth of "Harambee" (pulling together), in the provision of education facilities and equipment. However, cost sharing was officially introduced in 1986 on the basis of economically viable reasons (Republic of Kenya, 1988). At secondary school level, private rate of return exceeds social rate of return. Therefore, beneficiaries of this education ought to pay part of the costs of education. This was in line with Structural

Adjustment Programmes (SAPs) as it was propagated by the International Monetary Fund (IMF) and the World Bank in the 1980s (Orodho, 2002).

Psacharopoulos and Woodhall (1985) attributed the massive increase in spending in education all over the world to factors such as; rising costs of education because of inflation; the need for more sophisticated equipment such as computers; laboratory equipment; home science materials and projectors and the ever-growing demand for education. Kenyan government resources were increasingly strained and this forced the government to cut back the share of the national budget that was being taken up by education (Olembo J, & Hanold R, 1992). In an effort to reverse the worsening economic growth rate, the government together with her development partners- IMF and World Bank adopted SAPs through Sessional paper No. 1 of 1985 on economic management for renewed growth (RoK, 2001).

Internal efficiency is the capacity of the system to turn out graduates at any level of education in the best way or most efficiency which is without wastage due to stagnation or repetition (Psacharopoulos, and Woodhall, 1985). It is also seen as the ability of the education system to meet educational goals and objectives. In this study, internal efficiency was used to refer to the flow of students from the point of entry into the secondary schools (Form One) and exit points (Form Four). Internal efficiency is determined by how a school transforms its inputs into outputs (Okumbe, 1999). Government funding on the other hand refers to the effort by the government to meet the cost of providing

education. In this study, the government funding is the input in terms of funds provided for instructional materials, infrastructure and teachers' salaries. In Kenya, instructional materials are funded through the Free Secondary Education (FSE) where every student in the public schools gets 10,265 Kshs. The infrastructure is funded through the School Infrastructure Improvement Programme (SIIP) by the ministry of education. Besides, the government pays salaries for the Teachers Service Commission's (TSC) employed teachers.

In Nyandarua west district, the policy of the Subsidized Secondary Education (SSE), or FDSE was embraced with a lot of appreciation. Many of the pupils who left class 8 were able to proceed to secondary schools after doing the Kenya Certificate of Primary Education (KCPE). This was evident from the enrolment of the year 2008 that rose from 3342 students in the year 2007 to 4392 students an increase of 31.4%. This however brought pressure to the existing facilities as the infrastructure was not adequate for the additional students. The parents had to bear the cost of the provision of the needed resources. The textbook student ratio reduced from 1:3 to 1:5 meaning that it is not adequate. Like other districts in the country, Nyandarua West district has experienced challenges in teacher shortage with the teacher student ratios reducing to 1:50 from 1:40 (M.o.E, 2008). This has forced some secondary schools to hire B.O.G teachers with the parents bearing this extra cost. The high enrolment has had its own effect on internal efficiency in some secondary schools as the available resources are overstretched and the necessary

infrastructure like science laboratories are lacking. Many secondary schools lack adequate classrooms with the classroom student ratios standing at 1:55 instead of the recommended ratio of 1:45 (RoK, 2010). This has created congestion in the classrooms hindering effective teaching and learning process and also affecting individual teacher student attention.

Where government has not been able to adequately provide the necessary resources in terms of funding in provision of secondary education, wastage has resulted. Educational wastage consists of dropout of a certain class in a given year and repeaters of the same class in the following year in a given educational system or school. Data collected from four districts in the Nyandarua County to find out the students who had dropped out revealed the following,

Table 1.1: Wastage in Some Districts in Nyandarua County

District	2006	2007	2008	2009	2010
Wastage					
Nyandarua North	18.7	18.1	17.6	16.9	15.9
Mirangine	19.2	18.8	18.5	17.6	16.7
Nyandarua Central	22.9	21.6	18.2	17.3	16.4
Nyandarua West	23.3	22.8	18.8	18.6	17.9

Source: DEO Nyandarua West District, (2011)

From Table 1.1 it is evident that Nyandarua west district has had a higher percentage (%) of repeaters and dropouts than other districts in the

Nyandarua County in the last five years signifying high wastage. Among reasons for repetition and dropout, include absenteeism as a result of non-payment of the funds for the school development projects and other programmes. Seetharam (1995) argued that dropouts and repeaters raise the costs associated with producing a graduate of the secondary education system. High repetition rates hinder the school's ability to accommodate new students and its effectiveness. They tend to produce overcrowded classrooms and reduce the number of educational materials per student. The other challenge of Nyandarua West district of the decline in number of candidates who register for KCSE which has been as follows compared to those who had enrolled at form one; Year 2008 had 1780 registered out of 2430, 2009 had 1549 out of 2495 enrolled and in the year 2010 there were 1163 registered for KCSE out of 2379 enrolled (DEO's office Nyandarua West District, 2010). This trend shows that the students who were admitted at form one; a number of them did not complete form four indicating educational wastage. If the rate of progression from the entry point to the point of departure is low mainly due to repetition, the system is said to be internally inefficient since the affected students are disproportionately using the resources allocated to the sector, Psacharopoulos and Woodland (1985).

Despite the Kenya government's effort of fulfilling its commitments in achievement of EFA, through the subsidy in secondary education by allocating 10,265 Kshs per student, the data in Table 1.1 indicates that the schools in the district have not achieved high efficiency as outlined in the Sessional

Paper No.1 of 2005. Secondary schools in the district are likely to portray the same characteristics an indication of being internally inefficient with a number of students dropping out of schools and others repeating classes. The Kenya Governments role of providing the necessary resources through the FSE has resulted into improvement of school infrastructure and enrolment in many public schools. This enrolment however, has not kept pace with the required teaching and learning resource. This means that the many facilities lacking in the schools could have been as a result inadequate funding from the government to the schools and the reason why many students have not been able to complete school. There is need therefore to establish the influence of government funding on the internal inefficiency in the provision of education in secondary schools in Nyandarua West district.

1.2 Statement of the Problem

According to RoK (2009) Kenya's Gross enrolment rate was at 109.8% in 2009 the highest among the developing countries. Despite this, the country still experiences low completion rates (79.5 percent). The Kenyan government however has made a significant effort to address the participation, quality, access, finance and efficiency in secondary education through the FSE or FDSE. Despite these efforts by the government, the problem of wastage is still evident in Nyandarua West district. The district has a high number of dropouts and repeaters compared to other districts in Nyandarua County. The teacher student ratio, the textbook students' ratio and the classroom students' ratio are

all low. The resources are inadequate in most of the secondary schools.

Despite the government's effort in the funding of secondary education in terms of providing the required instructional materials, infrastructure and remuneration of teachers, some students are still in and out of school with so many cases of absenteeism. This is depicted by the changing enrolment trends in the various secondary schools in Nyandarua West district. Some of the students that have dropped out from schools have been forced to repeat classes affecting completion rates. Other students have dropped out of school in the name of lack of the required resources increasing educational wastage an aspect of internal inefficiency. United Nations Educational Scientific and Cultural Organization UNESCO (2008), reports that while policies adopted since Dakar meeting in EFA have brought progress in access to schooling, school survival is not guaranteed making achievement of UPE with respect to enrolments and completions difficult. This indicates inefficiency despite government funding of primary education. The same scenario is likely to be observed in secondary education and especially in the public secondary schools in Nyandarua West district the void the study intended to address by establishing the influence of government funding on the internal efficiency in public secondary schools in Nyandarua West district, Kenya.

1.3 Purpose of the Study

The purpose of this study was to assess the influence of government funding on internal efficiency in provision of education in public secondary schools in Nyandarua West district, Kenya.

1.4 Objectives of the Study

The study was guided by the following research objectives:

- i. To determine how provision of instructional materials through government funding affects flow of students in public secondary schools in Nyandarua West district;
- ii. To establish how provision of school infrastructure through government funding affects the quality of education in public secondary schools in Nyandarua West district;
- iii. To assess how remuneration of teachers by the government influences quality of education in Nyandarua West district;
- iv. To examine challenges faced by the head teachers in the utilization of the government funds in public secondary schools in Nyandarua West district;

1.5 Research Questions

The research tried to answer the following questions;

- i. How has the provision of instructional materials through government

funding affected flow of students in public secondary schools in Nyandarua West district?

- ii. To what extent has acquisition of school infrastructure through government funding affected flow of students in public secondary schools in Nyandarua West district?
- iii. In what ways has remuneration of teachers by the government influenced quality of education in Nyandarua west district?
- iv. What challenges do head teachers face in the utilization of the government funds in public secondary schools in Nyandarua West district?

1.6 Significance of the Study

The study findings can be important to education policy makers in establishing how costs in education can be used to improve internal efficiency and hence formulate policies aimed at its improvement. The findings can also be of importance to the head teachers, teachers, administrators and other stakeholders in the district in establishing what factors related to government funding in education influence internal efficiency hence, seek ways of addressing them. The findings can also be important to education managers in the contribution of information applicable to effective implementation of government funding in financing education in Kenya. The findings of the study have added a body of knowledge to the area of educational planning by

its contribution of literature on government funding of secondary education.

1.7 Limitations of the Study

The study was limited by failure of some head teachers to disclose critical information on how government funding is used by the schools to improve internal efficiency. To mitigate against, the respondents were assured that the information disclosed would only be used for academic purposes. The study also experienced low response rate given that the questionnaires were administered when the respondents were at work and they seemed to be too busy to pay attention to the questionnaires. To address this, the study made subsequent visits to the sampled schools to remind the respondents to fill in the questionnaires. The study was further affected by the high level of insecurity in some areas of the Nyandarua West district which hindered the smooth flow of the data collection. The study sought the assistance from the provincial administration for the provision of security mitigated the problem. In addition, the study could not control the respondents' attitude which could have affected the quality of information given. To cope with this, the researcher took some time to explain the importance of the study to the respondents.

1.8 Delimitations of the Study

The study covered all the 12 public secondary schools in Nyandarua West district. The study focused on the school administrators mainly the headteachers, teachers and students as the main respondents. The parents

who are also stakeholders in the provision of other educational resources were not involved in the study due to logistics of getting them.

1.9 Assumptions of the Study

The following assumptions were made in this study:

- i. That the government funding enhances internal efficiency in the schools.
- ii. That government funding has a direct influence on the internal efficiency in the secondary schools

1.10 Definition of Significant Terms

Government funding refers to effort by the government to meet the cost of providing education.

Drop out: Refers to a person who leaves school before completing the designated four years secondary school cycle.

Efficiency This is achieving the greatest amount of output from a given set of input or achieving a specified amount of output while utilizing a minimum quantity of input.

Internal efficiency: This is the capacity of the system to turn out graduates at any level of education in the most efficient way which is without wastage, stagnation and repetition.

Public secondary school: Refers to a secondary school maintained or assisted out of public funds.

Repetition: This refers to ratio of students that spend more than one year in a given level of education.

1.11 Organization of the Study

This project is organized into five chapters. Chapter one presents the background of the study, statement of the problem, purpose of the study, research questions of the study, significance of the study, limitations of the study, delimitations of the study, basic assumptions of the study, definition of significant terms and the organization of the study. Chapter two reviewed the literature related to the influence of government funding on internal efficiency in secondary schools which was organized into sub-themes also showed a conceptual framework of the study. Chapter three presents the research methodology. This describes the research design, the target population, sampling techniques and sample size, research instruments, instruments' validity, data collection procedure and data analysis techniques. Chapter four presents' data obtained from the field, its analysis and interpretations and Chapter five contains the summary of findings, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section presents the Literature Review. It focuses on government funding of education, efficiency in education, factors influencing internal efficiency in education, influence of government funding on internal efficiency, influence of government funding on student-teacher ratio, influence of government funding on student enrolment and drop out, influence of government funding on instructional materials, theoretical basis of the study and the conceptual framework.

2.2 Concept of Government Funding of Education

An All-African states conference in Addis Ababa 1961 came up with the following resolutions with regard to education; to provide free, universal and compulsory education by 1980; to provide secondary education to 30% of students who completed primary education; to provide higher education to 20% of students who completed secondary education and lastly to improve the quality of African schools (Eshiwani, 1993). To achieve the above goals the government was forced to spend more on education. At independence, the Kenyan government spent 14.6% of its recurrent expenditure on education. The emphasis was to produce manpower to fill vacancies left by the departing expatriates. This led to more schools being opened and in places where the

government was slow in providing secondary education; communities built schools to be taken over by the government later on. This increased government expenditure to 30% of the national budget in 1970/71 fiscal year and to 34.9% in 1974/75 fiscal year. The government funding meets the cost of key non-salary inputs like infrastructure, tuition, and instructional materials.

2.3 Efficiency in the Provision of Education

Education is a major industry throughout the world accounting for 1/5 to 1/3 of the countries G.N.P, which is the total value of goods and services produced in a year. Therefore, the efficiency with which education is produced is very important to the overall economic performance of a country and its development. Psacharopoulos (1980) pointed out that the term efficiency has at least two different meanings when used in education. One meaning refers to the internal efficiency of an educational institution to educate the students and turn out its graduates. The other meaning refers to the external efficiency of the educational institution, for example how its graduates fit in the social setting after they leave school in comparison with the resources used while in schools. Rogers and Ruchlin (1971) defined efficiency as either achieving the greatest amount of output from a given set of input or achieving a specified amount of output while utilizing a minimum quantity of input

School participation may be influenced by school environment in which the students learn. This environment may be as a result of poor curriculum delivery, understaffing, infrastructure, bad policies and forced repetition

which may influence school participation negatively affecting schools' internal efficiency. On the other hand, suitable and sufficient infrastructure, a high teacher: student ratio and a high textbook: student ratio all influence students participation positively improving internal efficiency in the schools reports Kiarie (2010).

2.4 Internal Efficiency in Education

Internal efficiency is viewed as the capacity of the educational system to turn out graduates at any level in the most efficient or best way, which is without wastage, stagnation and repetition. It is also seen as the ability of the educational system to meet educational goals and objectives. Internal efficiency deals with the relationship between input and outputs within the education system or within individual institution. Output in this case is measured in relation to internal institutional goals rather than the wider objectives of the society. Internal and external efficiency of educational institutions are closely linked because the skills and attitudes developed must be of value to the society as a whole for the education system to be efficient, (Psacharopoulos and Woodhall, 1985).

A system of education is judged to be internally efficient if there is optimal enrolment, no wastages (dropouts and repetitions), reduced unit cost and presence of optimal class size as a result of the optimal enrolment (Winkler, 1988). He further pointed out that internal efficiency of schools and other educational institutions is achieved when educational resources are

utilized in an optimal way. The implication here is that there should be optimum enrolment of students in educational institutions so that the resources can be fully utilized. Actually, the resources used in education should be properly utilized by the enrolled number of students so that they can reap maximally from them and hence a given educational institution realizing internal efficiency.

Tan and Mingat (1992) argued that a high rate of survival or retention within cycles of education, particularly in primary and secondary education, is necessary, although insufficiency mark is of an efficient system; conversely a system that exhibits low intra-cycle retention rate is designed to impart and reinforce certain cognitive skills; students who exit before the end of the cycle will acquire those skills only partially and probably temporarily. As much as this outcome holds the resources invested in those students' education would be wasted, leading to inefficiency in the system. Therefore reduced rate of wastage (high retention) is necessary for internal efficiency in schools.

Other indicators which will affect internal efficiency of schools include students to classroom ratio (class size), student to teacher ratio and student to textbook ratio. These efficiency indicators provide a picture on the learning/teaching classroom environment in terms of overcrowding, student-teacher contact and availability of learning/teaching materials. For this entire indicator, a lower value indicates better learning conditions. An optimum class size will be determined by optimum enrolment in schools. Ideally, a class size

of 40 (i.e. 40 students per class) is recommended to secondary schools (Okwach, 2007). This will result to the teacher giving the students adequate individualized attention and also improvement in the student-textbook sharing ratio and thus enhancing internal efficiency in schools. Therefore there is need for increased enrolment in secondary schools up to the optimum levels and hence promoting internal efficiency.

2.5 Influence of Government Funding on Internal Efficiency

Government funding in public schools is usually directed towards various vote heads. They include the instructional materials, infrastructure and remuneration of teachers.

2.5.1 Effect of Instructional Materials on Performance

In the government funding, it is the responsibility of the government to provide funds for instructional related materials. These instructional materials are intended to enhance the teaching and learning process hence improves the performance of the students. It is estimated that about 1 million school-children are in need of textbooks, whose cost would be Kshs. 1,960.6 million. However, only 3% of this amount is provided. As a result, inadequate instructional materials hinder many children from attending school regularly; in the end, these children give up education. Yet, despite the recognition of the acute need of textbooks by the Ministry of Education, over 90% of the government's recurrent expenditure pays teachers' salaries, while only 1% is allocated textbooks (Abagi, 1997b); this appears to be an inefficient

allocation of resources. If the government cannot provide adequate instructional materials the burden of provision of the same is shifted to the parents. Therefore, there is need to evaluate whether the government funding of instructional materials is viable (Okwach & Odipo, 1997)

2.5.2 Influence of Infrastructure on Students' Enrolment

One consequence of government funding of secondary education has been the serious deterioration of education infrastructure: in nearly all countries it became and still is the norm to expect communities to be responsible for building. Yet infrastructure is expensive in terms of time and money. While communities could reasonably be expected to erect simple temporary or semi-temporary structures, such structures were regarded as permanent by governments, which allocated no resources. Foreign aid agencies frequently financed shells of buildings, to be completed by communities, but in many countries even these were an excessive burden, or simply unsuitable for any number of different reasons. As long as the benefits from education were significant and visible, communities could be mobilised, but when enrolment ratios started to decline it was less likely that communities would take such a strong interest: the reasons for declining enrolment ratios were precisely those reasons which reduced enthusiasm for local education development. A vicious spiral of decline set in, and it is now apparent in almost all African countries that the absence of good structures and teachers' houses is a strong factor in enrolment decline. Where teachers have poor living conditions they are absent

or late and demoralised, and this affects parental and children's attitudes to school (Okwach & Odipo, 1997).

2.5.3 Influence of Provision of Teachers on Quality of Education

Haddad (1978) indicated that on the basis of available data no optimum class size can be scientifically established as a function of educational benefits. In his review, it was concluded that how a teacher organizes and motivates the class is more important than class size and that savings made from increased class size might be invested in teacher-training or educational materials, which have been shown to have stronger effects on learner's achievement. Available studies suggest that high or very low pupil: teacher ratio is one of the main reasons for the poor quality and low efficiency which characterize primary education in Africa. Many policy oriented interventions and research studies consider a 40:1 ratio reasonable. In secondary education however the effect is felt in the curriculum based teacher deployment where schools do not have adequate teachers in some subjects while there is overstaffing in other subjects. The challenge is seen where the head teachers do not have adequate teachers and hence have to employ the BOG teachers. Parents on the other hand are not able to meet the demands of paying the teachers hence teaching and learning in the schools is affected (MoE, 2007)

2.5.4 Student Enrolment and Drop out

The completion rates at secondary level in Kenya have not been stable. They have been fluctuating over time having peaks in 1996 and 2004. In between, the completion rates have been showing a downward trend as table 2.1 shows.

Table 2.1: Secondary school completion rate by sex 1994 – 2004

Year	1994	1995	1996	1997	1999	2000	2001	2002	2003	2004
Boys	82.3	76.2	95.8	88.6	87.0	79.8	91.7	98.1	97.3	87.0
Girls	81.9	78.2	94.9	87.9	75.1	75.5	89.0	94.8	96.1	85.0
Total	82.1	77.1	95.4	88.3	77.8	77.8	96.5	96.5	96.7	86.0

Source: MOEST 2005

The above data is not analysed into drop outs and repetitions. However, it is clear that not all the students who enrol in form 1 complete the four year secondary cycle. The completion rate of 86.0 percent of 2004 implies that 14 percent of the students must have either dropped out of school or repeated classes.

The first two decades after independence saw enrolment and participation increasing throughout the education system. However, those gains were lost in 1990s especially in primary and secondary levels. These were characterised by high dropout and repetition rates (GoK and UNICEF, 1998). In Kitui District of Eastern Province, the perennial drought coupled with hunger threat has made drop out cases to increase. Parents are continuously torn between

sacrificing to fight hunger and meeting school costs for their children (UNESCO, 2001). This situation has been reversed to some extent with the introduction of FDSE as enrolment has increased in most secondary schools.

According to Kisii Central District Development Plan (2002 – 2008), a major constraint to education and training in the district is high cost and inadequate physical facilities. Many parents are unable to provide the requirements demanded by schools where the government funds are not adequate to cater for the resources needed. Students waste a lot of learning time when sent home to collect the levies needed to purchase these resources thereby losing a great deal of what was taught in their absence, a situation which could affect their performance in National Examination (Republic of Kenya, 1995). This situation can lead to dropout as students' loose link with others in class (Pontefract & Hardman, 2005).

2.6 Summary of Literature Review

Winkler (1998) pointed out that internal efficiency of schools is achieved when educational resources are utilized in an optimal way. A class size of 40 (i.e. 40 students per class) is recommended as it enables the students get individualized attention by the teachers and improved student textbook ratio enhances the teaching and the learning process (Okwach, 2007). Haddad (1978) said that it is how a teacher organizes and motivates the class that is more important than class size. Available studies suggest that a very low student teacher ratio is one of the main reasons for poor quality and low

efficiency that characterizes education in Africa. The GoK and UNICEF (1998) cited the high dropout and repetition rates in secondary level as being as a result of poor educational environment that include infrastructure. Okwach and Odipo (1997) in their study said that there was need to evaluate whether the government funding of instructional materials was viable.

Past studies available have proved that completion of secondary education has been associated with large economic and social returns (UNESCO, 2002). Some studies have been done where analysis of internal efficiency in secondary schools have been carried in Murang'a district by Gitau (2004). These studies however have not addressed how the provision of instructional materials, infrastructure and teachers through government funding has affected internal efficiency but only examined those aspects that encourage initial enrolment and retention. This study therefore intended to address the void by establishing the influence of government funding on internal efficiency in public secondary schools in Nyandarua West district, Kenya

2.7 Theoretical Framework

The study was based on the education production theory by Pritchett and Filmer (1996). In this theory, different combinations of inputs produce different levels of outputs. The education production theory describes the relationship between inputs and outputs. It posits that education is a process which requires financial, physical and human resources to produce schools' internal efficiency. The main independent variable of this research;

adequate government funding significantly influences public schools' internal efficiency (dependent variable) which is characterized by low educational wastage, high enrolment and completion rates and low dropout and repetition rates (Olembo, 1992).

The education production theory is a positive theory of education expenditures. The theory posits that the misallocation of public sector educational spending across inputs that leads to under spending on productive inputs like books, instructional materials, and facilities is due to political forces-thus requires political solutions. The accumulated results of empirical studies show that the public sector typically chooses spending on inputs such that the productivity of additional spending on books and instructional materials is 10 to 100 times larger than that of additional spending on teacher inputs (for example, higher wages, smaller class size). Pritchett and Filmer (1996) argue that this pervasive and systemic deviation of actual spending from the technical optimum requires a political, not economic or technical, explanation. This points to the critical role that adequate government funding plays in enhancing the public schools' internal efficiency. The evidence is consistent only with a class of positive models in which public spending choices are directly influenced by a desire for higher spending on teacher inputs, over and above their role in producing educational outputs. This desire could be due either to teacher power, or bureaucratic budget-maximizing behavior, or political patronage. Pritchett and Filmer (1996) conclude by exploring the implications of these positive political models of

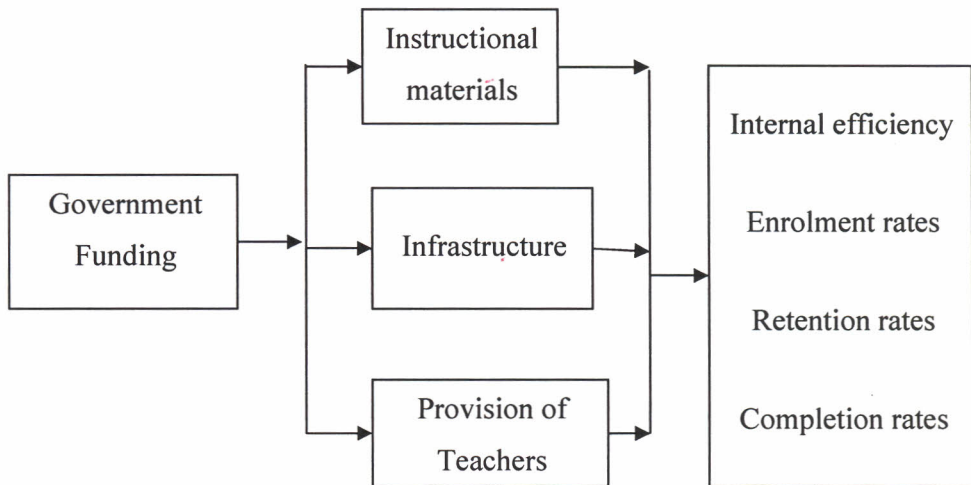
educational spending behavior for various types of proposed educational reforms (localized control, parental participation, and so on) which requires an examination of how the proposed reforms shift the relative powers of the stakeholders in the educational system: students and parents, educators, bureaucrats, and politicians (Pritchett, 1996).

These resources obtained through adequate government funding include teaching and learning materials, infrastructure and the human capital, which are inputs to the production function. These resources affect the teaching and learning process, participation and quality of education in terms of performance in secondary education which are the outputs in the education system (Mutuma, 2005).

2.8 Conceptual Framework

The study had one main independent variable which was the government funding. The main variable influenced the other three variables which were instructional materials, infrastructure and provision of teachers. The dependent variable for the study was the school internal efficiency which is characterized by enrolment rates, retention rates and completion rates.

Figure 2.1: Inputs and outputs in the education system



Independent variables

Dependent variable

The conceptual framework in figure 2.1 shows that the independent variable, government funding, is the input in education. The funding is in terms of the amount contributed by the government in provision of secondary education used to finance acquisition of instructional materials, infrastructure and teachers salaries. All these are used in the teaching and learning process to produce the desired output in this case, internal efficiency. The dependent variable therefore is the internal efficiency which is achieved when the education system registers low educational wastage ensuring high enrolment and completion rates with low dropout and repetition rates in schools.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This section outline the methodology used in the study. It describe the research design, target population, sample size and sampling techniques, research instruments, validity and reliability of the instruments, data collection procedures and data analysis techniques.

3.2 Research Design

Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions (Mmaduakonam, 1998). Research design provides a framework for planning and conducting a study. It constitutes the blue print for collection measurement and analysis of data (Kothari, 2001). The research design in this study was descriptive survey design. Descriptive research design is a valid method for researching specific subjects and as a precursor to quantitative studies. The design was deemed suitable since it helps describe the state of affairs as they exist without manipulation of variables which was the aim of the study.

3.3 Target Population

According to Mugenda and Mugenda (2003) target population is an entire group of individuals' events or objects having common characteristics. It is the

sum total of all that conforms to a given specification. The target population was all the students, teachers and principals in the 12 public secondary schools in Nyandarua West District. The study therefore targeted 5009 students and 154 teachers and 12 head teachers (data taken from the D.E.O's office Nyandarua West district as at January, 2011).

3.4 Sample Size and Sampling Techniques

According to Orodho and Kombo (2002), sampling is the process of collecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group. Nsubuga (2000) argues that no specific rules on how to obtain an adequate sample have been formulated. He suggests that in a homogenous situation a small sample would be required while a heterogeneous variable situation a large sample is required. Mugenda and Mugenda (1999) suggest that 10 percent of the accessible population would be enough for descriptive surveys. From the sampled schools, all the head teachers were purposively used. Simple random sampling was used to select four teachers from each school. To sample the students, every sampled school was stratified into Forms. Two students were picked from every stratum through random sampling. 10 head teachers and 48 teachers and 500 (10% of 5000) students were picked for the main study. The number of students was divided by the number of schools (500/12) giving 40 students per school. The percentages were 100% head teachers, 31% teachers and 10% students.

3.5 Research Instruments

This study used questionnaires to collect data from headteachers, students and teachers. Mugenda and Mugenda (1999) define a questionnaire as a written set of questions to which the subject responds in writing. They further state that questionnaires are cheap to administer to respondents who are scattered over a large area. It is convenient for collecting information from a large population within a short span of time. The questionnaire had two sections. Section one had items seeking demographic information while section two had items seeking information on the influence of government funding on internal efficiency in public secondary schools in Nyandarua west district.

3.5.1 Reliability of Instrument

Reliability is a measure of the degree to which a research instrument yields consistent results after repeated trials (Nsubuga 2000). This research study used Test-rest method which involved administering the same scale or measure to the same group of respondents at two separate times. This is after a time lapse of one or more weeks. A pilot study was conducted in 2 schools in the district. Two schools were used for pilot study where two head teachers, eight teachers and twenty four students were picked for pilot study. Test re-test method was used to test for reliability of the instrument. The instruments were administered and re-administered to the same respondents after one week. This is in line with Shuttleworth, (2009) who state that the instrument should be administered at two different times and then the

correlation between the two sets of scores are computed. The following formula was used to get the coefficient that is the reliability estimate

$$r_{xx^1} = \frac{S_1^2}{S_x^2}$$

Where;

x = Performance on the first measurement

x^1 = Performance on the 2nd measurement

r_{xx^1} = Correlation coefficient between x and x^1

S_1^2 = Estimated variance of the true score

S_x^2 = Calculated variance of the observed scores

$$r_{xx^1} = ?$$

$$S_1^2 = 0.213$$

$$S_x^2 = 0.232$$

$$r_{xx^1} = \underline{0.213}$$

$$0.244$$

$$r_{xx'} = 0.872$$

A correlation coefficient of above 0.7 is deemed the instrument as reliable. The coefficient for head teacher's questionnaire was 0.872, for the teacher it was 0.75 and the students was 0.8 hence they were all reliable.

$$r_{xx'} = ?$$

$$S_1^2 = 0.213$$

$$S_x^2 = 0.232$$

$$r_{xx'} = \underline{0.231}$$

$$0.289$$

$$r_{xx'} = 0.800$$

A correlation coefficient of above 0.7 is deemed the instrument as reliable. The coefficient for the students was 0.8 hence they were all reliable.

3.5.2 Validity of Instrument

Validity is defined as the accuracy and meaningfulness of inferences which are based on the research results (Mugenda and Mugenda, 1999). Validity is the degree to which results obtained from the data actually represents the phenomena under study. This study used content validity because it measures the degree to which the sample of tests item represents the content that

the tests are designed to measure. To determine the validity of the instrument, a pilot study was carried out where 2 head teachers, 8 teachers and 80 students were presented with the questionnaires. To ensure content validity, the researcher also liaised with the supervisors who are specialists in the area of study while framing the questionnaires. Through their guidance, the researcher made modifications on the questionnaire in line with the objectives of the study.

3.6 Data Collection Procedures

The researcher sought permission to conduct the study from the National Council of Science and Technology (NCST). The researcher then proceeded to seek authority from the District Commissioner (DC) and the District Education Officer (DEO) Nyandarua West District. She then booked appointments with head teachers of schools to agree on when to administer the questionnaires. On the material day, the researcher created rapport with the respondents and administer the questionnaires to head teachers, teachers and students. The questionnaires were collected and filled immediately.

3.7 Data Analysis Technique

Data analysis followed after the data had been collected. The research yielded both qualitative and quantitative data from the structured and the unstructured items. Obai (1998) points out that analyzing survey research includes coding, tabulating responses into specific categories and then entering them in the Statistical Package for Social Sciences (SPSS) computer software

for windows. Coding was done for the structured items. Coding is usually done through which categories of data are transformed into symbols that may be tabulated and counted (Kothari, 2004). Quantitative and qualitative methods of data analysis were used in which descriptive statistics like frequencies and percentages were applied to summarize quantitative data while the qualitative data were arranged into themes.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATIONS

4.1 Introduction

This chapter presents data from the field, analysis and interpretations. The results are presented on the influence of government funding on internal efficiency in provision of education in public secondary schools in Nyandarua West district, Kenya. The data was gathered exclusively through questionnaires.

4.1.1 Response Rate

The table below shows the response rates for the various respondents in the study

Table 4.1 Response rate for the students, teachers and head teachers

	Students		Teachers		Head teachers	
	F	%	F	%	F	%
Responded	400	80	40	75	10	100
Did not respond	100	20	8	25	0	0
Total	500	100	48	100	10	100

The study targeted a total of 500 students out of which 400 responded and returned their questionnaires forming an 80% response rate. The study also targeted a total of 48 teachers out of which 40 responded and returned their questionnaires duly filled in making a response rate of 75%. The study also targeted 10 head teachers all of whom responded and returned their questionnaires duly filled in making up a response rate of 100%. The respective response rates for students, teachers and head teachers were good representatives and conformed to Mugenda and Mugenda (1999) stipulation that a response rate of 50% is adequate for analysis and reporting; whereas a rate of 60% is good and a response rate of 70% and over is excellent. This commendable response rate was made a reality after the researcher made personal calls and visits to remind the respondent to fill-in and return the questionnaires.

4.2 Demographic information of head teachers, teachers and students

Demographic information of the head teachers, teachers and students was based on the age, gender, experience, qualification and academic level where applicable. This is illustrated in the tables and figures that follow.

Figure 4.1 Age brackets for head teachers

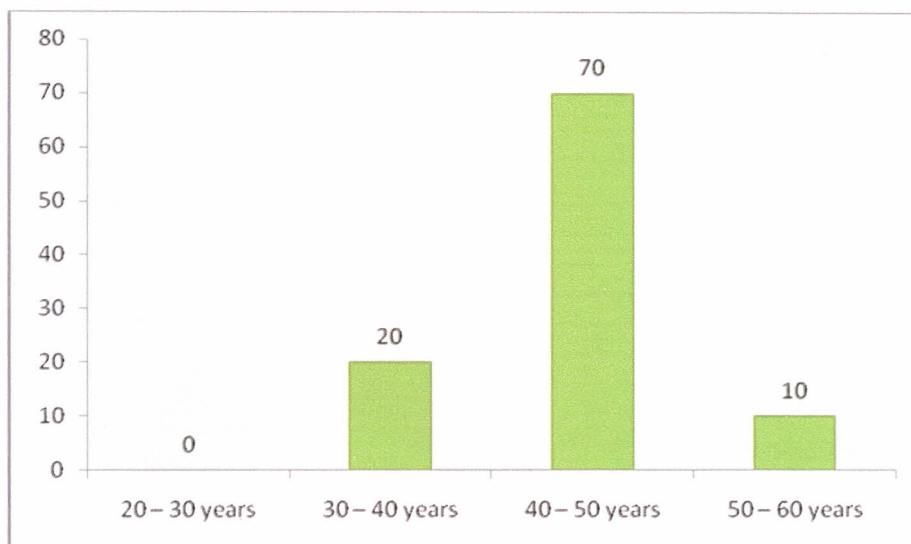


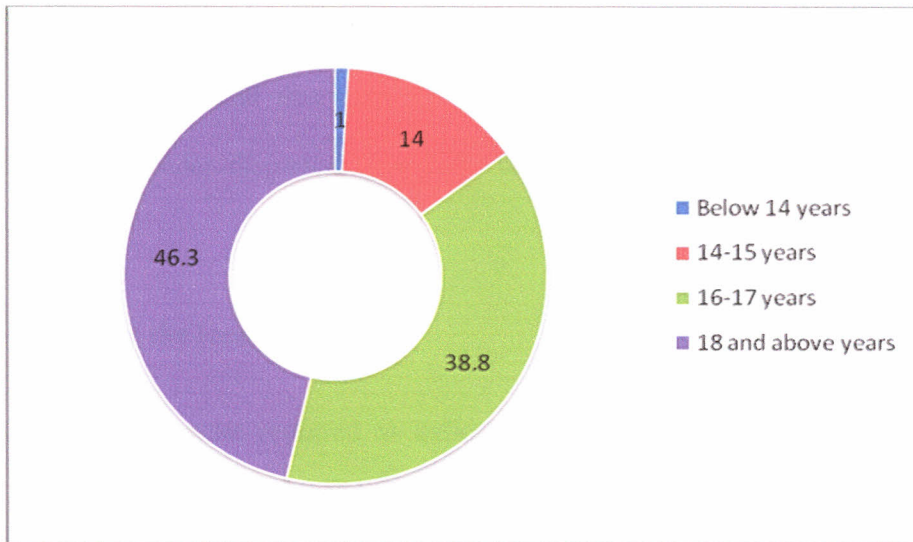
Table 4.2 Age bracket for teachers

Age bracket	Frequency	Percent
20 – 30 years	11	27.5
30 – 40 years	15	37.5
40 – 50 years	11	27.5
50 – 60 years	3	7.5
Total	40	100

The respondents were required to indicate their age by selecting the age bracket they belonged to. According to the findings, the majority of the head teachers (70%) were 40-50 years old. This illustrates that the head teachers have a wealth of experience accumulated due to their age and therefore are best placed in management of school resources including funds availed by government.

On the other hand most of the teachers (37.5%) were aged between 30-40 years. This depicts that most of the teachers are mature and responsible in their work.

Figure 4.2 Age distribution of students



The study sought to find out the age distribution of students. From the results, in figure 4.3, 46.3% were aged 18 years and above while 38.8% were aged 16-17 years of age. This shows that the students are mature and can provide high quality of information about the schools' operations.

Respondents' gender

The teachers were required to indicate their gender and the results are as shown in table 4.4.

Table 4.3 Gender of the teachers

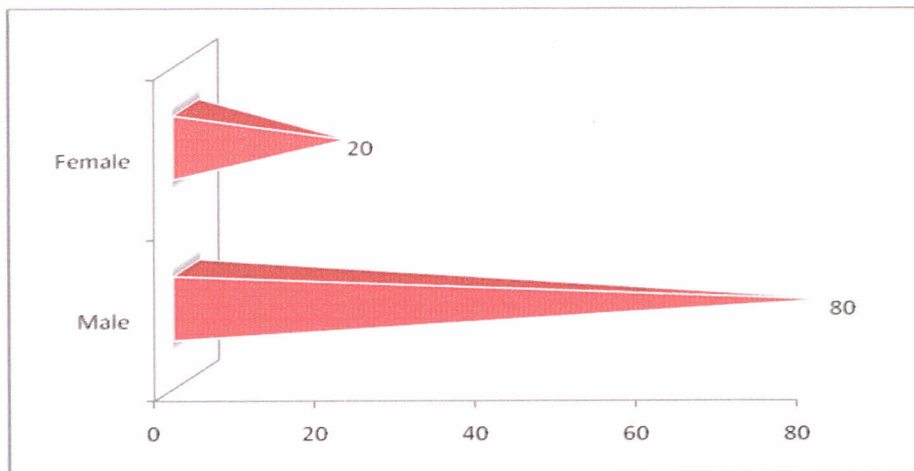
	Frequency	Percentages
Male	24	60
Female	16	40
Total	40	100

The research found that majority of the teachers (60%) were male. This indicates gender disparity among the teachers as a majority of them were males.

Gender of the Head teachers

The teachers were required to indicate their gender and the results are as shown in table 4.4.

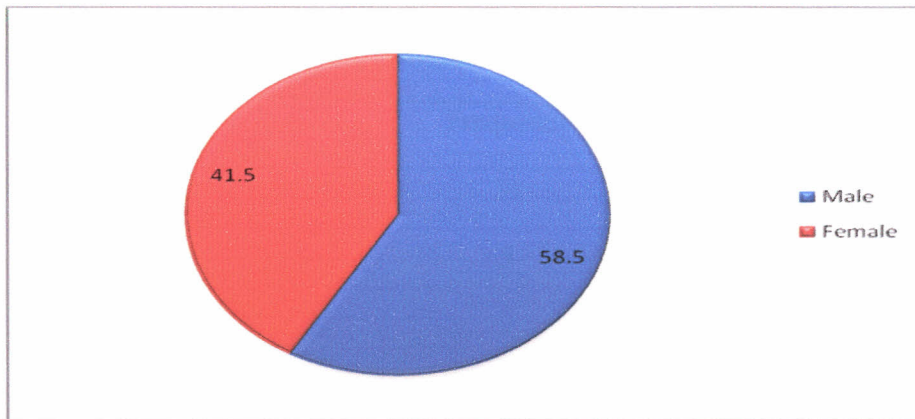
Figure 4.3 Gender of the Head teachers



The study sought to establish the distribution of respondents' gender. From the findings, the majority of the head teachers (80%) were males. This

indicates gender disparity among the head teachers as a majority of them were males.

Figure 4.4 Students' Gender



Further on the gender distribution of students, the majority of them (58.5%) were males. This shows that there are more males than females enrolled in public secondary schools in the district.

Academic qualifications for teachers and head teachers

The research sought to establish the academic qualifications for the teachers.

The findings are as shown in table 4.5 below.

Table 4.4 Academic qualifications for Teachers

	Frequency	Percent
B.Ed	34	85
Diploma	5	12.5
M.Ed	-	-
Others	1	2.5
Total	40	100

According to the findings, the majority of the teachers (85%) were university graduates. Their high level of education, points to their competence in executing their duties owing to their high level of education.

Academic qualifications for head teachers

The research sought to establish the academic qualifications for the head teachers. The findings are as shown in table 4.7 below.

Table 4.5 Academic qualifications for head teachers

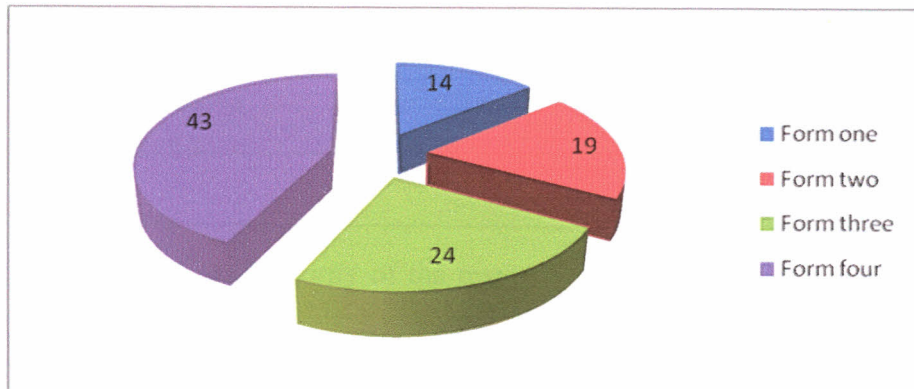
	Frequency	Percent
B.Ed	7	70
Diploma	-	-
M.Ed	3	30
Others	-	-
Total	10	100

According to the findings the majority of the head teachers (70%) were university graduates while 30% had masters. The finding implies that majority of the head teachers are university graduates, hence high level of competitiveness in management of the school resources

Students' level of education

The study required the students to indicate the classes they were in and the results are as shown in figure 4.8 below.

Figure 4.5 Students' Level of Education



According to the findings 43% were in form four while a relatively high number of respondents (24%) were in form three. This shows that, over 50% of the students who responded to the study were in the senior classes. This depicts that the study collected high quality of data as these respondents had been in schools for long enough to understand the influence of government funding on the internal efficiency in public secondary schools.

Table 4.6 Teaching experience of teachers in years

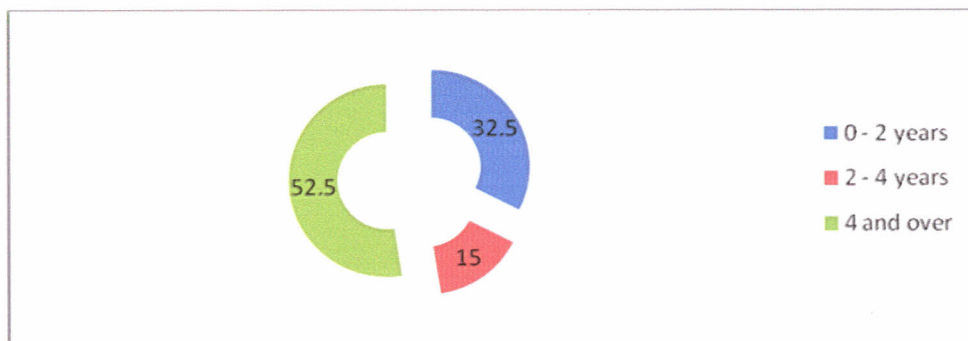
The teachers were required to indicate their teaching experience in years.

Experience in years	Frequency	Percent
1 - 5 years	14	35
6 - 10 years	6	15
11 – 15 years	6	15
16 years and above	14	35
Total	40	100

From the findings, majority of the respondents (50%) had an experience of above 11 years. The long period of teaching experience point to their efficient use of the available teaching and learning resources.

Figure 4.6 Teachers' length of teaching in Nyandarua West District

The study sought to find out the teachers' length of teaching in Nyandarua West district and the findings are as shown in figure 4.7.



The study revealed that the majority of the teachers (52.5%) had been in Nyandarua West for more than 4 years. This shows that the teachers have

worked in Nyandarua west district long enough to give reliable information on the influence of government funding on the internal efficiency in public secondary schools within the district.

Table 4.7 Number of years the teachers had served in the current school

The study sought to establish the length of stay the teachers had been in their current schools.

Length of stay	Frequency	Percent
0 - 2 years	15	37.5
2 - 4 years	6	15
4 and over	19	47.5
Total	40	100

According to the results, most of the teachers (47.5%) had been in their current schools for above 4 years. This depicts the fact that the teachers understand the subject matter of the study in their current school context.

Table 4.8 Head teachers' administrative experience

The head teachers' were required to indicate the number of years they had served as school heads.

Experience	Frequency	Percent
0 - 5 years	2	20
5 - 10 years	2	20
Over 10 years	6	60
Total	10	100

According to the findings, a majority of the head teachers (60%) had served as the head teachers for over 10 years. This shows that the head teachers had enough experience in administration to give reliable information and that they were well experienced hence effective in managing school resources including the funds.

Objective 1: Effects of Provision of Instructional Materials on flow of students

Table 4.9 Challenges relating to provision of resources in schools

The study sought to establish whether schools faced challenges relating to provision of teaching and learning resources.

Challenges	Frequency	Percent
Schools facing challenges	32	80
Schools not facing challenges	8	20
Total	40	100

According to the findings, the majority of the teachers (80%) indicated that their schools faced challenges relating to provision of resources. Some of the challenges included lack of teaching aids, lack of the most up-to date resources for teaching and lack of adequate funds to buy teaching materials. This implies that the schools face challenges relating to provision of resources such as teaching aids, up-to date resources for teaching and funds to buy teaching materials. In line with this, Haddad (1978) indicated that educational materials have stronger effects on learner's achievement.

Table 4.10 Whether there are class repetitions in the school

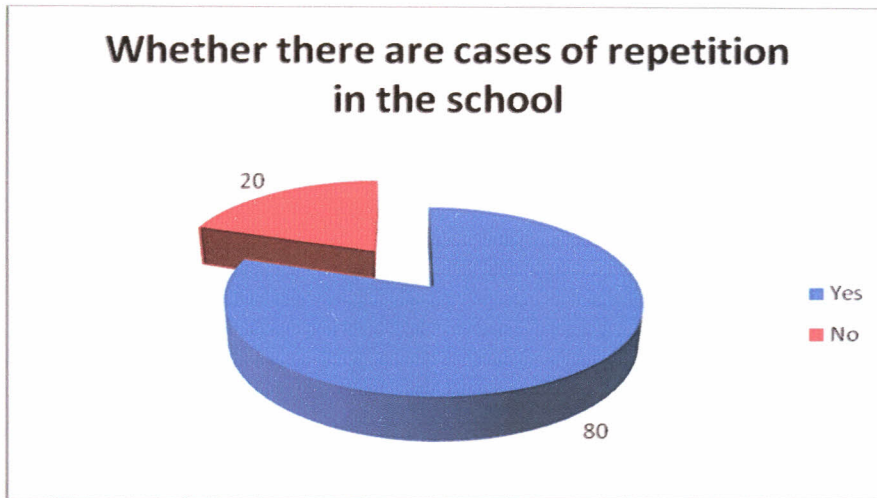
The students were required to indicate whether there were class repetitions in the school.

	Frequency	Percent
There are class repetitions	232	58
There are no class repetitions	168	42
Total	400	100

According to the findings, the majority of the students (58%) indicated that there were class repetitions in their schools with the form three being the most affected. This depicts that there were class repetitions in the public schools. Seetharam, (1995) argued that dropouts and repeaters raise costs associated with producing a graduate of secondary education system affecting the internal efficiency negatively.

Figure 4.7 Cases of Repetition in the School

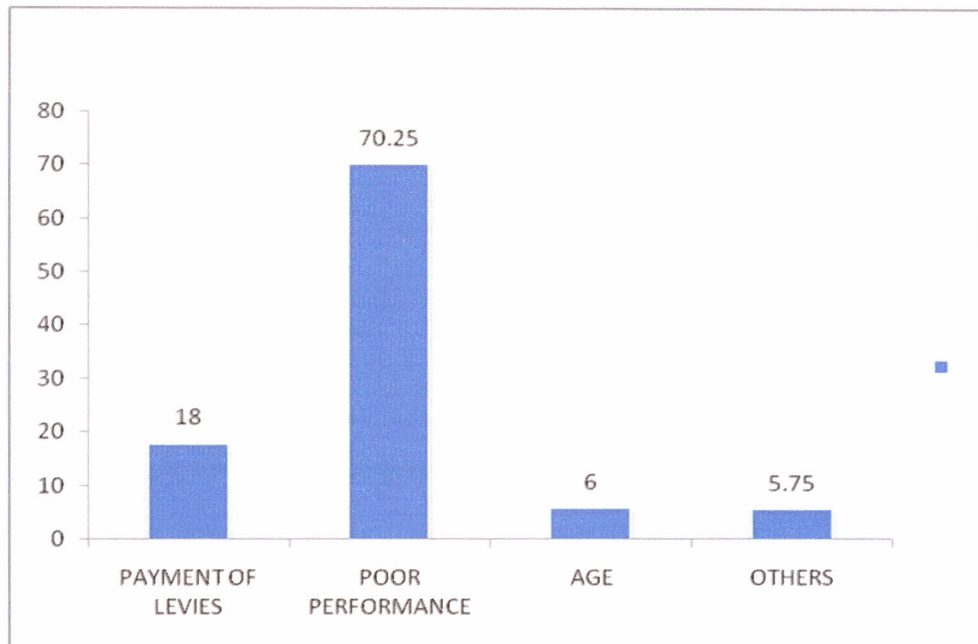
The research further sought to find out from the head teachers whether there were cases of repetition in the school and the results are as shown in figure 4.8 below.



On whether there were cases of repetition in school, a majority of the head teachers (80%) indicated that they experienced cases of repetition in school. The respondents also indicated that repetition in school was caused by lack of extra levies like development levies leading to continued absenteeism and lack of opportunity for the students to better their grades at the form four. This implies that there are cases of repetition in school caused by lack of levies (development levies) leading to continued absenteeism and lack of opportunity for the students to better their grades at the form four.

Figure 4.8 Causes of Class Repetition

The study required the students to indicate the causes of class repetition in their schools.



According to the findings in figure 4.9, the majority of the students (70.3%) indicated that it was caused by poor performance. This shows that class repetition were mainly caused by poor performance mainly due to inadequate text books and reference materials.

Table 4.11 Students report on rate of school dropout in the school

The study required the students to indicate the significance of the following factors that lead to school dropout in their school.

Responses	Mean	Std. Deviation
Poor academic performance	2.31	0.960
Forced class repetition	1.79	1.135
Lack of facilities	2.00	1.115
Inadequate teachers	2.04	1.237
Inability to pay levies	3.04	1.321

According to the findings in table 4.11, the inability to pay levies was cited to be the most important factor in causing school dropout as indicated by a mean score of 3.04. Other factors that were cited to cause school dropout in order of importance were poor academic performance, inadequate teachers, lack of facilities and forced class repetition as indicated by a mean score of 2.31, 2.04, 2.00 and 1.79 respectively. This shows that the most important factor in causing school dropout was inability to pay levies. This points to the critical role that adequate government funding plays in preventing school dropouts. The findings of the students contradicts with the teachers' findings which indicated that drop out were mainly caused by indiscipline, lack of extra levies, early pregnancies among female students, poverty and lack of enough physical facilities in school.

Head teachers' view on whether their schools had cases of students' dropout

The head teachers were to indicate whether their schools experienced dropout problem. All the head teachers (100%) indicated that their schools experienced drop out problems. This is in line with the finding by the GoK and UNICEF, (1998) that the first two decades after independence saw enrolment and participation increasing throughout the education system. However, those gains were lost in 1990s especially in primary and secondary levels which were characterised by high dropout and repetition rates.

Table 4.12 Head teachers' report on school dropout

The head teachers were further requested to indicate the classes mostly affected by school dropout.

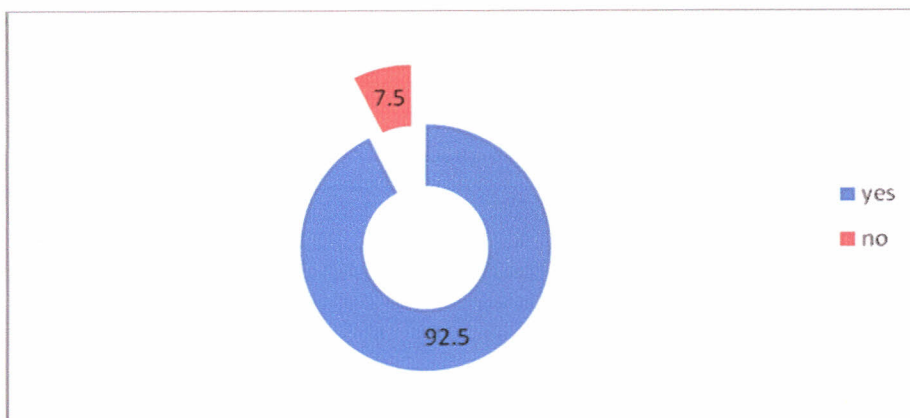
Class	Frequency	Percentage
Form one	1	10
Form two	4	40
Form three	4	40
Form four	1	10
Total	10	100

According to the findings, the classes mostly affected included form two (40%) and form three (40%). The respondents indicated that the causes of dropout in the schools are indiscipline, lack of fees, early pregnancies among

female students, poverty, lack of enough physical facilities in school, inability to cope with restriction in school life and ignorance by the parent on the importance of education. The respondents reported that the effects of drop out in the schools include poor performance due to low motivation, under enrolment and low retention. These causes are different from those found by UNESCO (2001) that in Kitui District of Eastern Province, the perennial drought coupled with hunger threat has made drop out cases to increase. Parents are continuously torn between sacrificing to fight hunger and meeting school costs for their children.

This shows that the schools in Nyandarua west district experienced drop out problems which mainly affect form two and form three caused by indiscipline, lack of fees, early pregnancies among female students, poverty, lack of enough physical facilities in school, inability to cope with restriction in school life and ignorance by the parent on the importance of education.

Figure 4.9 Teachers' Responses on Absenteeism in the Class



The teachers were required to indicate whether there were cases of absenteeism in their classes. From the findings, a majority of the teachers (92.5%) indicated that they experienced cases of absenteeism. This shows that there are high cases of absenteeism in the district probably due to lack of funds.

Table 4.13 Teachers' reasons for students' absenteeism

Teachers were further required to give the reasons why there were cases of absenteeism in their classes.

Reasons	Frequency	Percent
Lack of levies	36	90
Other	4	10
Total	40	100

According to the findings in table 4.13, the majority of the cases of absenteeism (90%) were caused by lack of levies. This shows that lack of levies is a major contributor to absenteeism in the schools.

Table 4.14 Provision of Instructional Materials

The research required the teachers to indicate whether provision of instructional materials through government funding affected the academic performance in their school.

Responses	F	%
Provision of instructional materials affects performance	38	95
Provision of instructional materials does not affect performance	2	5
Total	40	100

According to the findings in table 4.15, the majority of the teachers (95%) indicated that provision of instructional materials through government funding affected academic performance in their school. This depicts the fact that provision of instructional materials through government funding affected academic performance in their school. Therefore, there is need to evaluate whether the government funding of instructional materials is viable.

The teachers further explained that government funding of education had improved students' participation in terms of reduced absenteeism and dropout. The provision of infrastructure, instructional materials and teachers through government funding had increased enrolment in the schools, improved the quality of teaching and learning hence improving the general performance of the students. The teachers also intimated that delayed disbursement of the funds and their inadequacy affected the utilization of the available resources since they were overstretched in many schools due to high students'

enrolment. This shows that government funding on education had improved students' participation in terms of reduced absenteeism and dropout.

The respondents confided that the instructional materials provided by the government are inadequate to cater for the over enrolment leading to low performance. In addition late delivery of the materials due to delayed disbursement of funds affected the students negatively. On the other hand, the instructional materials provided by the government have made learning more effective and they have made teachers delivery of lessons easier and students and teachers have more reference materials.

Head teachers view on provision of the instructional materials

The study sought to find out whether the provision of the instructional materials through government funding had affected students' participation in school. According to the findings, all the head teachers (100%) indicated that the provision of the instructional materials through government funding had affected students' participation in school. They added that it had eased the parents' burden, led to higher enrolment, decreased absenteeism improving internal efficiency because of the reduced number of dropout. This shows that the provision of the instructional materials through government funding had affected students' participation in school as it had eased the parents' burden, led to higher enrolment, decreased absenteeism improving internal efficiency because of the reduced number of dropout.

The respondents indicated that the average student- teachers' ratio was 1: 55. They further indicated that this student- teachers' high ratio had reduced the student-teachers individual attention, the teachers work load was very high and there were cases of inadequate syllabus coverage.

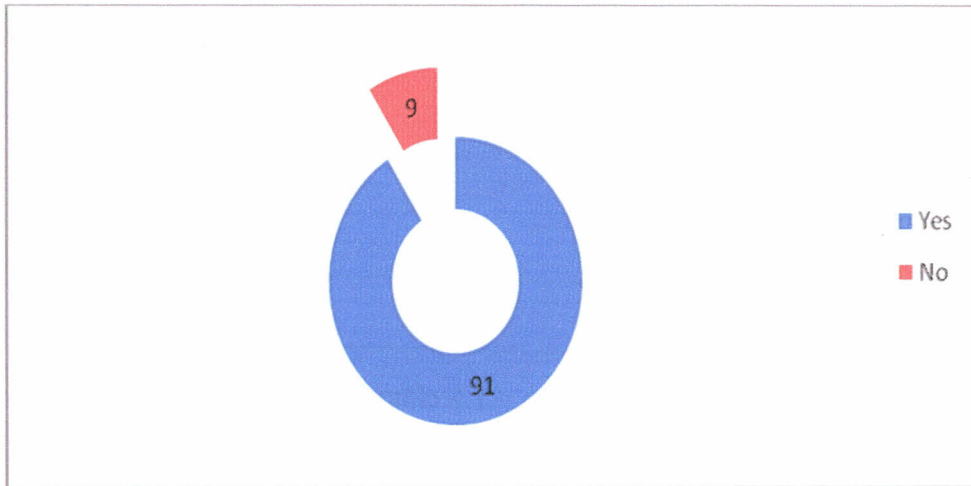
On the effects of provision of instructional materials on internal efficiency, the study found that the schools face challenges relating to provision of resources such as teaching aids, up-to date resources for teaching and funds to buy teaching materials. Provision of the instructional materials through government funding had eased the parents' burden, led to higher enrolment, decreased absenteeism improving internal efficiency because of the reduced number of dropout.

The study also revealed that government funding plays an important role in preventing school dropouts and provision of instructional materials, infrastructure and teachers through government funding affected academic performance in their school.

Objective 2: Effects of acquisition of school infrastructure on the quality of education

Figure 4.10 Students' Levies Payment in School

The study sought to find out whether the students paid levies in their schools.



From the findings in figure 4.11, majority of the students (91%) indicated that the students paid levies in their schools. This shows that the students paid levies in their schools.

Table 4.15 Students' Inability to Pay School Levies

The study required the students to indicate what happened to the students who were unable to pay the required levies.

Responses	Frequency	Percent
Sent home	256	64
Forced to stay out of class	24	6
Given more time	104	26
Others	16	4
Total	400	100

According to the findings in table 4.15, majority (64%) of the students who were unable to pay the required levies were sent home. This shows that most of the students who were unable to pay the required levies were sent home. Earlier findings showed that students waste a lot of learning time when sent home to collect the levies needed to purchase these resources thereby losing a great deal of what was taught in their absence, a situation which could affect their performance in National Examination (Republic of Kenya, 1995). This situation can lead to dropout as students' loose link with others in class (Pontefract and Hardman, 2005).

Table 4.16 Government Funding on Students' Participation in Schools

The teachers were also asked to indicate whether government funding of education affects students' participation in schools.

Responses	Frequency	%s
Government funding affects student participation	37	92.5
Government funding does not affects student participation	3	7.5
Total	40	100

As shown in table 4.16, the study found out that the majority of the teachers (92.5%) said that government funding of education affects students' participation in schools. Thus it is clear that government funding of education affects students' participation in schools.

Table 4.17 Influence of School Infrastructure on Quality of Education

The head teachers were also required to indicate whether the provision of school infrastructure through government funding had affected quality of education in their schools.

Responses	Frequency	Percent
Infrastructure affects quality of education	9	90
Infrastructure does not affects quality of education	1	10
Total	10	100

According to the findings in table 4.17, majority of the head teachers, (90%) indicated that the provision of school infrastructure through government

funding affected quality of education in their schools. The head teachers indicated that with more classrooms, teaching and learning had improved and learning had improved due to provision of text books and other basic requirements. This shows that the provision of school infrastructure through government funding affected quality of education in their schools in that with more classrooms, teaching and learning had improved and learning had improved due to provision of text books and other basic requirements.

On the government funding of secondary education in public secondary schools, the head teachers indicated that the government should release funds promptly and in time and that all schools should be treated equally in fund allocation, regardless of enrolment. The fund should include those for boarding facilities. Schools from disadvantaged backgrounds should be allocated more funds than those that are already established. They also intimated that sometimes the funds are released in doses making planning and implementation delays and that there is need for evaluation and adjustment relative to the cost of living. This shows that the government should release funds promptly and in time, all schools should be treated equally in fund allocation regardless of enrolment, the fund should include those for boarding facilities and schools from disadvantaged backgrounds should be allocated more funds than those that are already established.

Status of the various facilities /resources in the school

Table 4.18 Head teachers view of Status of the various facilities in the school

The study also required the head teachers to indicate the status of the various facilities/resources in their school in terms of adequacy.

Facility	Mean	Std. Deviation
Class rooms	2.8	0.632
Text books	2.6	0.516
Toilets	2.4	0.516
Water	2.5	0.527
Teachers	2.1	0.316
Others	1.4	0.516

From the study as shown in table 4.18 the head teachers indicated that the class rooms were the most adequate as indicated by a mean score of 2.8. Other facilities/resources in order of adequacy were text books, water, toilets and teachers as indicated by mean scores of 2.6, 2.5, 2.4 and 2.1 respectively.

Table 4.19 Teachers view of Status of the various facilities in the school

The study required the teachers to indicate the status of the various facilities/resources in their school in terms of adequacy.

Facility	Mean	Std. Deviation
Class rooms	2.8	0.620
Text books	3.0	0.504
Toilets	2.7	0.656
Water	2.7	0.679
Teachers	2.2	0.427
Others	2.05	3.441

The teachers while rating facilities/resources in terms of adequacy as shown in table 4.19, indicated that text books were the most abundant as indicated by a mean score of 3.0. Other facilities/resources in order of their abundance were class rooms, water, toilets and teachers as indicated by mean scores of 2.8, 2.7, 2.7 and 2.2 respectively.

Table 4.20 Students view of status of the various facilities in the school

The students were also asked to indicate how these facilities/resources are adequate in their school.

Facility	Mean	Std. Deviation
Class rooms	3.09	0.667
Text books	2.95	0.662
Toilets	2.78	0.703
Water	2.83	0.772
Teachers	2.61	0.845
Others	1.65	0.849

According to the findings as shown in table 4.20, classrooms were the most adequate as indicated by a mean score of 3.09. The other facilities/resources in order adequacy were text books, water, toilets and teachers as indicated by mean scores of 2.95, 2.83, 2.78 and 2.61 respectively. This shows that class rooms and text books were the most adequate facilities/ resources.

On the effects of provision of school infrastructure on internal efficiency, the study established that most of the students who were unable to pay the required levies were sent home. The study also deduced that the provision of school infrastructure through government funding affected quality of education in their schools in that with more classrooms, teaching and learning had improved and learning had improved due to provision of text books and other basic requirements.

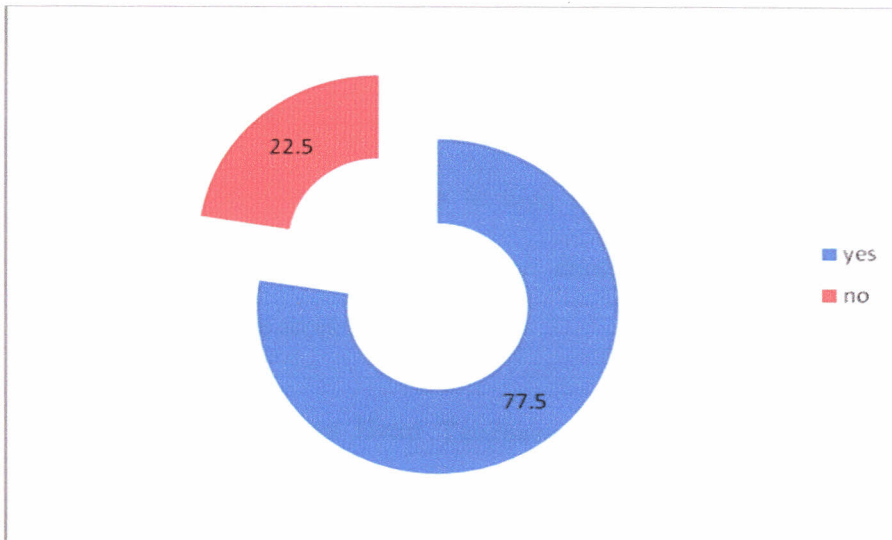
In the utilization of government funds, they faced various challenges such as delay in disbursement; inadequate funding and situations where more funds were channeled to stationary and laboratory equipments at the expense of other vote heads such as water and conservancy. On the status of the various facilities /resources in the school, it was clear that class rooms and text books were the most adequate.

Objective 3: Effects of Remuneration of Teachers on Quality of Education

The research further sought to evaluate the effects of remuneration of teachers on internal efficiency.

Figure 4.11 Remuneration on Teaching and Learning Process

The teachers were further asked whether remuneration of teachers affected teaching and learning process in their schools.



According to the findings as shown in figure 4.12, the majority of the teachers (77.5%) indicated that remuneration of teachers affected teaching and learning process in their school. Regarding this the teachers explained that due to poor remuneration and issues of salary arrears, when the teachers under the board of governors (BOG) got greener pastures they left. They also indicated that there is low morale due to poor remuneration hence low performance. On the other hand, better remuneration led to commitment to duty. It was also reported that teachers were moving to other occupations due to low pay, and that teachers being were overburdened by over enrolment and the salaries did not commensurate to the work load. They further indicated that there should be special allowances for teachers working in boarding schools as the

systems demands more from them. This shows that remuneration of teachers has an effect on teaching and learning process in the school as it leads to high turnover ratios, low morale and teachers being overburdened by over enrolment and the salaries not commensurate to the work load.

On the effects of remuneration of teachers on internal efficiency, the study revealed that remuneration of teachers has an effect on teaching and learning process in the school as it leads to high turnover ratios, low morale and teachers being overburdened by over enrolment and the salaries not commensurate to the work load.

Objective 4: Challenges Head Teachers Face in the Utilization of the Government Funds

The head teachers were required to indicate whether the government funding that their schools received was adequate. The findings are presented in the table 4.21 below.

Table 4.21 Head teachers comment on adequacy of funding

Responses	Frequency	Percent
Government funding is adequate	2	20
Government funding not adequate	8	80
Total	10	100

The majority of the head teachers (80%) stated that the government funding that their schools received was not adequate. The head teachers further

explained that in the utilization of government funds, they faced various challenges such as delay in disbursement; inadequate funding and more funds were channeled to stationary and laboratory equipments at the expense of other vote heads such as water and conservancy. They suggested that to ensure high students' completion rates and public schools' internal efficiency, the government should increase education funding, employ more teachers, improve the infrastructure and provide funds for the feeding programs. This shows that there are challenges in the utilization of government funds such as delay in disbursement, inadequate funding and more funds were channeled to stationary and laboratory equipments at the expense of other vote heads such as water and conservancy. To ensure high students' completion rates, the government should increase education funding, employ more teachers, improve the infrastructure and provide funds for the feeding programs.

The head teachers also insinuated that the schools were not able to engage enough employees since the operations fund were always inadequate and the parents have to supplement it with other levies such as development funds and lunch programs. They also intimated that the government funding in their schools had not kept pace with the increased cost of goods and services. This reveals that the government funding the schools received was not adequate the schools are not able to engage enough employees since the government funding in their schools has not kept pace with the increased cost of goods and services.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMENDATIONS

5.1 Introduction

This chapter gives a summary of the research findings conclusion and recommendations. In this chapter, the researcher gives a summary of the influence of government funding on internal efficiency in provision of education in public secondary schools in Nyandarua West district, Kenya. The researcher suggests recommendations on what the management of these schools and the government should do in order to enhance the schools internal efficiency.

5.2 Summary of the Study

The aim of this study was to find out the influence of government funding on internal efficiency in provision of education in public secondary schools in Nyandarua West district, Kenya. The specific objectives of the study included to determine how provision of instructional materials through government funding affects internal efficiency in public secondary schools in Nyandarua West district; to establish how provision of school infrastructure through government funding affects internal efficiency in public secondary schools in Nyandarua West district; to assess how remuneration of teachers by the government influences internal efficiency in Nyandarua West district and to examine challenges faced by the head teachers in the utilization of the

government funds in public secondary schools in Nyandarua West district.

The questionnaires were designed in line with the specific objectives of the study. The questionnaires were used to collect quantitative data. To enhance the quality of data obtained, structured type questions were included whereby respondents indicated the extent to which the variables were practiced. Frequency distribution tables are used to present data while percentages are used to discuss the findings. Ten schools were sampled for the study with 10 head teachers, 40 teachers and 500 students.

From the study findings, it is established that majority of the teachers had teaching experience of 16 years and above or 1-5years. They had also served in Nyandarua west district and in their current schools for at least 4 years. This shows that the teachers had served in their profession long enough and had in depth understanding of the issues in the district owing to their experience

5.3 Discussion of the Findings

The research sought to find out the influence of government funding on the internal efficiency in provision of education in public secondary schools. The discussions of the key findings are based on the research variables.

5.3.1 Influence of Instructional Materials on Internal Efficiency

The study found that the majority of the schools 80 percent face challenges relating to provision of resources. Some of the challenges included lack of teaching aids, lack of the most up-to date resources for teaching and lack

of funds to buy adequate textbooks and reference materials. This is in line with this, Haddad (1978) who indicated that educational materials have stronger effects on learner's achievement.

The study also revealed that provision of instructional materials through government funding affected academic performance in their school as indicated by majority of the teachers 92.5 percent. This depicts the fact that provision of instructional materials through government funding affected academic performance in their school. This is in line with this, Okwach and Odipo, (1997) who observed that if the government cannot provide adequate instructional materials the burden of provision of the same is shifted to the parents.

The research also established that government funding of education had improved students' participation in terms of reduced absenteeism and dropout. It further concludes that the provision of infrastructure, instructional materials and teachers through government funding had increased enrolment in the schools, improved the quality of teaching and learning hence improving the general performance of the students. This concurs with Kiarie (2010) who found out` that suitable and sufficient infrastructure, a high teacher: student ratio and a high textbook: student ratio, all influence students' participation positively improving internal efficiency in the schools reports.

The study further established that the instructional materials provided by the government are inadequate to cater for the over enrolment leading to low

performance translating into internal inefficiency in the public secondary schools. The late delivery of the materials due to delayed disbursement of funds affected the students negatively since high enrolment increases the students: textbook ratio which may lower the quality of teaching and learning.

On the other hand, the researcher found out that the instructional materials provided by the government have made learning more effective and they have made teachers delivery of lessons easier and students and teachers have more reference materials. This correlates with Abagi, (1997b) findings that inadequate instructional materials hinder many children from attending school regularly; in the end, these children give up education. Yet, despite the recognition of the acute need of textbooks by the Ministry of Education, over 90% of the government's recurrent expenditure pays teachers' salaries, while only 1% is allocated textbooks; this appears to be an inefficient allocation of resources.

The research found out that the provision of the instructional materials through government funding had affected students' participation in school as indicated by majority of head teachers.

5.3.2 Effect of School Infrastructure on Internal Efficiency

The study found that majority of the head teachers 90 percent, indicated that the provision of school infrastructure through government funding affected quality of education in their schools. From the study the head teachers indicated that the classrooms were the most adequate with a mean score of

2.8 with toilets and water at 2.4 and 2.5 respectively. With the additional classrooms, teaching and learning had improved and the provision of the other basic physical facilities improved the students' participation. Where schools had class sizes of over 45 students, they tended to overstretch the resources leading to internal inefficiency. Some small schools had under enrolment of class sizes of below 40 students. The implication is that there is under utilization of resources including the classrooms which leads to low internal efficiency.

5.3.3 Influences of Remuneration of Teachers on Internal Efficiency

The research established that as indicated by the majority of the teachers 77.5 percent remuneration of teachers affected teaching and learning process in their school. Regarding this the teachers explained that due to poor remuneration and issues of salary arrears, when the teachers under the board of governors (BOG) got greener pastures they left. They also indicated that there is low morale due to poor remuneration hence low performance affecting the education output. With inadequate teachers teaching and learning had been affected raising the student teacher ratio causing internal inefficiency.

The study also found out that better remuneration led to commitment to duty. The researcher further found out that teachers were moving to other occupations due to low pay, and that teachers being were overburdened by over enrolment and the salaries not commensurate to the work load. The findings are similar to Okwach and Odipo, (1997) who found that where

teachers have poor living conditions they are absent or late and demoralised, and this affects parental and children's attitudes to school.

5.3.4 Challenges Faced in the Utilization of the Government Funds

The study found out that in the utilization of government funds, the majority of head teachers 100 percent faced various challenges such as delay in disbursement; inadequate funding and more funds were channeled to stationary and laboratory equipments at the expense of other vote heads such as water and conservancy. They suggested that to ensure high students' completion rates, the government should increase education funding, employ more teachers, improve the infrastructure and provide funds for the feeding programs.

The research further established from the head teachers that the government should release funds promptly and in time and that all schools to be treated equally in fund allocation, regardless of enrolment. The funds should include those for boarding facilities. In addition schools from disadvantaged backgrounds should be allocated more funds than those that are already established. The research also established the funds are released in small tranches making planning and implementation delays and that there is need for evaluation and adjustment relative to the cost of living.

The majority of the head teachers (100%) said that the government funding to the schools received was inadequate. The head teachers also insinuated that the schools are not able to engage enough employees since the

operations fund is always inadequate and the parents have to supplement it with other levies such as development funds and lunch programs. They also intimated that the government funding in their schools has not kept pace with the increased cost of goods and services affecting the internal efficiency in public secondary schools.

5.4 Conclusions

The study concludes that the provision of instructional materials through government funding affected students flow rates by improving the students' participation in public secondary schools. On the contrary, the instructional materials provided by the government were inadequate to cater for the over enrolment of students.

The study concluded that the provision of school infrastructure through government funding had affected the quality of education in terms of enrolment, retention and completion of students in the public secondary schools. The government funding enhanced the efforts of building additional classrooms, and provision of the other basic physical facilities which improved the students' participation, and promoted the teaching and learning process.

The research concluded that the remuneration of teachers affected the quality of education in public secondary schools. Teachers' remuneration was not commensurate to the workload creating low morale amongst the teachers

which affected the quality of education offered in schools.

The study further concluded that the head teachers faced various challenges in the utilization of the government funds in public secondary schools. The main challenges established were inadequate funding, delay in funds disbursement and more funds being channeled to stationary and laboratory equipments at the expense of other vote heads such as water and conservancy.

5.5 Recommendations

- a) The study recommends that the government should ensure that there are enough instructional materials to facilitate teaching and learning in the secondary schools.
- b) The study also recommends that the government should employ more teachers in secondary schools to help ease the burden on the current understaffing.
- c) Further, the government should provide more funds for infrastructure.
- d) The study also recommends that the government releases funds promptly and all schools to be treated equally in fund allocation regardless of enrolment.
- e) The study recommends that the government evaluates and adjusts the funding relative to the current cost of living.

5.6 Suggestion for Further Studies

Since this study explored the influence of government funding on internal efficiency in provision of education in public secondary schools in Nyandarua West district, Kenya, the study recommends that;

- i. Similar study should be done in other districts in Kenya for comparison purposes.
- ii. More research to be done to establish additional factors that contribute to the influence of government funding on the internal efficiency in provision of education in public secondary schools.

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Appendix II

Questionnaire for Teachers

This questionnaire is for the purpose of the research only and your identity will be treated with confidentiality. Please answer all the questions provided as honestly as possible, to the best of your knowledge.

SECTION A

1. Please indicate your age bracket.

a) 20 – 30 years [] b) 30 – 40 years []

c) 40 – 50 years [] d) 50 – 60 years []

2. Please tick against your gender

a) Male [] b) Female []

3. What is your academic qualification?

a) M.Ed [] b) B.Ed []

c) Diploma []

d) Others (specify) _____

4. Indicate your professional experience in years (tick one)
- a) 1 – 5 years [] b) 6 – 10 years []
- c) 11 – 15 years [] d) 16 years and above []
5. How long have you served as a teacher in this district?
- a) 0 – 2 years [] b) 2 – 4 years []
- c) 4 and over []
6. How long have you been in this school?
- a) 0 – 2 years [] b) 2 – 4 years []
- c) 4 and over []

SECTION B

- 7 Do you have cases of absenteeism in your class?
- Yes [] No []
8. If your answer is yes in (7) above, what are the most likely reasons?
- a) Lack of books (exercises/texts) []
- b) Lack of levies []
- c) Lack of physical facilities in the school []

d) Poor performance []

e) Other (specify)

9. How many students who entered Form one are still in this class.

a) Number enrolled in Form I _____

b) Current number in this class _____

10. Does your school face challenges relating to provision of resources?

a) Yes []

b) No []

11. Do you think remuneration of teachers has affected teaching and learning process your school? a) Yes [] b) No []

Please explain

12. Does government funding of education affects students' participation in schools? a) Yes [] b) No []

Please explain _____

13. Has the provision of instructional materials through government funding affects academic performance in your school?

a) Yes []

b) No []

Please explain _____

14. Please tick the status of the following facilities /resources in your school.

Facilities	Very adequate	Adequate	Not adequate	Not available
Class rooms				
Text books				
Toilets				
Water				
Teachers				
Others (specify)				

Appendix III

Questionnaire for Head Teachers

This questionnaire is for the purpose of the research only. Your identity will be treated with confidentiality and will only be used for research purposes. Please answer all the questions provided as honestly as possible, to the best of your knowledge.

SECTION A: Tick (✓) the appropriate option (bracket)

1. Please tick against your age bracket.

a) 20 – 30 years [] b) 30 – 40 years []

c) 40 – 50 years [] d) 50 – 60 years []

2. Please tick against your gender

a) Male [] b) Female []

3. What is your academic qualification?

a) M.Ed []

b) B.Ed []

c) Diploma []

d) Others (specify) _____

4. How long have you served as a head teacher?

a) 0 – 5 years [] b) 5 – 10 years []

c) Over 10 years []

SECTION B

5. Do you think the government funding you receive is adequate?

a) Yes []

b) No []

Please explain

6. What is your Students Classroom ratio in all the forms?

F1 [] F2 [] F3 [] F4 []

7. a) Do you experience dropout problem in your school? _____

b) If yes, which classes are most affected? _____

c) What are the causes of dropout in your school? _____

d) What are the effects of this dropout in your school? _____

8. a) Are there cases of repetition in your school? Yes [] No []

b) If yes, what are the causes of the repetition? _____

9. Do you think the provision of the instructional materials through government funding has affected students' participation in school?

a) Yes [] b) No []

Please explain _____

10. What is the student –Teacher ratio in your school?

11. How has the student –teacher ratio affected the teaching/learning in your school?

12. Do you think the provision of school infrastructure through government funding has affected quality of education in your school?

a) Yes [] b) No []

If yes, explain

13. State the challenges that you face in the utilization of the government funds in your school? _____

14. In your own opinion, what should the government do to ensure high students completion rates in your school? _____

15. Comment briefly on the government funding of secondary education in public secondary schools. _____

16. Please tick the status of the following facilities /resources in your school.

Facilities	Very adequate	Adequate	Not adequate	Not available
Class rooms				
Text books				
Toilets				
Water				
Teachers				
Others (specify)				

Appendix IV

Questionnaire for Students

The information in this questionnaire is for research purpose only. Do not write your name on the questionnaire. Please respond to each question by ticking or filling the spaces provided.

Section A

1. Please indicate your gender Male () Female ()
2. Indicate your class? _____
3. Indicate your age in years? _____

Section B

4. a) Do students pay levies in this school? Yes () No ()
b) If yes, what happens to those who are unable to pay? i) Sent home ()
ii) forced to stay out of class () iii) given more time ()
iv) Others (specify) _____
5. a) Are there class repetitions in your school? Yes () No ()
b) If yes, which among the following do you consider the causes of repetition?

i) Payment of levies () ii) Poor performance () iii) age ()

Others (specify) _____

6. Please indicate how the following facilities are adequate in your school.

Facilities	Very adequate	Adequate	Not adequate	Not available
Class rooms				
Text books				
Toilets				
Water				
Teachers				
Others (specify)				


10 .How often do the following factors lead to school dropout in your school?

Influences	Very often	often	Sometimes	Rarely	Never
Poor academic performance					
Forced class repetition					
Lack of facilities					
Inadequate teachers					
Inability to pay levies					

Appendix V

Research Authorization Letter

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi
Telephone: 254-020-241349, 2213102
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-011/896/4**

Date: **8th July, 2011**

Catherine Wamucii Wanjohi
University of Nairobi
P. O. Box 30197
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "**Influence of government funding on the internal efficiency in public secondary schools in Nyandarua West District, Kenya**" I am pleased to inform you that you have been authorized to undertake research in **Nyandarua West District** for a period ending **30th September, 2011**.

You are advised to report to **the District Commissioner & the District Education Officer, Nyandarua West 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.

SAID HUSSEIN
SAID HUSSEIN
FOR: SECRETARY/CEO

Copy to:

The District Commissioner
Nyandarua West District

The District Education Officer
Nyandarua West District