MANAGEMENT OF TEACHING AND LEARNING RESOURCES IN PRIMARY SCHOOLS IN KANDARA DIVISION, KANDARA DISTRICT, MURANGA COUNTY, KENYA

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A RESEARCH REPORT SUBMITTED TO THE SCHOOL OF EDUCATION IN PARTIAL FULFILMENT FOR THE AWARD OF DEGREE OF MASTER OF EDUCATION (EDUCATION MANAGEMENT) OF KENYATTA UNIVERSITY

JUNE, 2015
DECLARATION

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

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This project report is dedicated to my dear wife Rebecca, my dear sons James and Alex and to my daughter Grace for their patience and support during the entire process of research and report writing. May God bless you.
ACKNOWLEDGEMENT

This project would have not been possible without the guidance, help support of many great people. First, I would like to give thanks to Almighty God for blessing me with the patience, determination and the ability to complete this project. I would like to thank my two supervisors Dr. Martin Ogola and Dr. Florence Itegi, for their support guidance throughout this research project. I greatly appreciate their countless hours of supervision and reading through drafts of my research proposal and report. Without their invaluable guidance, this project would have never been completed. I also thank my wife Rebecca, my daughter Grace and my sons James and Alex for their constant support, love and encouragement. If it were not for them, I would not have reached this far in my study.
ABSTRACT

The purpose of this study was to assess the availability, procurement utilization and maintenance of Teaching/learning resources and their effects on teaching/learning process in public primary schools in Kandara division. The study intended to establish the availability and adequacy of T-L resources in Kandara division, how this resource are procured and also to establish factors which influence the utilization of T-L resources in primary schools in the division. The study also intended to assess the maintenance of the teaching and learning resources in Kandara division and also get suggestions from the teachers how T-L resources maintenance may be improved. The study used production function theory to relate the utilization of instructional resources to the KCPE performance. The study adapted a descriptive survey design targeting 65 public primary schools, 65 head teachers, 5750 pupils and five TAC tutors in the division. From the targeted population, 23 primary schools, 23 head teachers and 46 teachers were sampled for the study. Five TAC tutors and 230 pupils were sampled to be interviewed in the study. Schools and pupils were selected through systematic random sampling. The head teachers of the selected schools were automatically selected to be interviewed. The class teachers of one of the class 6 streams and class teacher of one of the class 8 streams were purposively chosen for the study. TAC tutors of the 5 educational zones in the division were interviewed. However, out of 23 head teachers sampled only 20 of them responded. Out of 46 teachers sampled, 37 of them returned the questionnaires while nine didn’t. All pupils filled the questionnaires and returned. The research instruments used to collect data were; questionnaires, observation schedule, and interview schedule. The questionnaire were used to collect data from the head teachers, teachers and from the pupils. Interview schedule were used to collect data from the TAC tutors. The researcher also used observation schedule to verify the information collected through the other instruments. Descriptive and inferential analysis was done to explain level and tread of the instructional materials and the relationship to pupils performance in KCPE exam. Data collected was analyzed using descriptive statistics; percentages and frequencies and results presented in summary tables and charts. The study established that in majority of public primary schools there is inadequacy of T-L resource. This affects the teaching/learning process negatively. The study also revealed that, procurement of T-L materials guidelines from the MoE are not followed to the latter. Teachers reported that that most of the procurement processes are carried out by the head teachers. This is contrary to the MoE guidelines regarding T-L materials procurement. According to the MoE guidelines, SIMSC is the mandated body to do T-L materials procurement in primary schools. The study also established that there are many challenges facing maintenance of T-L materials in primary schools. These includes: Theft, lack of proper storage facilities, delayed disbursement of T-L materials fund, inadequate funding from the Ministry and lack of corporation from the parents who refuses to replace the damaged and lost learning materials. The study also revealed some suggestions on improvement of T-L materials maintenance. Teachers suggested that disbursement of T-L materials should be done early enough to allow procurement to be done at the right time. Also, the T-L materials fund need to be increased and also they suggested that improvisation of T-L materials should be improved to cut the cost of purchasing commercially made resources which can be made using locally available materials.
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### ABBREVIATIONS AND ACRONYMS

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<tr>
<td>ADEA</td>
<td>Association for the Development of Education in Africa</td>
</tr>
<tr>
<td>ASEI</td>
<td>Activity, Student, Experiment and Improve</td>
</tr>
<tr>
<td>DEO</td>
<td>District Education Officer</td>
</tr>
<tr>
<td>DFID</td>
<td>Department of Foreign International Development</td>
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<tr>
<td>EFA</td>
<td>Education for All</td>
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<tr>
<td>EFT</td>
<td>Electronic Fund Transfer</td>
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<td>FPESP</td>
<td>Free Primary Education Support Project</td>
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<td>I M</td>
<td>Instructional Materials</td>
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<td>IMMU</td>
<td>Instructional Materials Management Unit</td>
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<tr>
<td>JKF</td>
<td>Jomo Kenyatta Foundation</td>
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<tr>
<td>KIE</td>
<td>Kenya Institute of Education</td>
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<td>KLB</td>
<td>Kenya Literature Bureau</td>
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<tr>
<td>MOEST</td>
<td>Ministry of Education Science and Technology</td>
</tr>
<tr>
<td>IPRA</td>
<td>Institute of Policy Research and Analysis</td>
</tr>
<tr>
<td>PDSI</td>
<td>Plan, Do, See and Improve.</td>
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<tr>
<td>PPD</td>
<td>Public Procurement Disposal Act</td>
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<tr>
<td>SACMEQ</td>
<td>Southern Africa Consortium for Monitoring Education Quality</td>
</tr>
<tr>
<td>SEPU</td>
<td>School Equipment Production Unit</td>
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<tr>
<td>SIMBA</td>
<td>School Instructional Materials Bank Account</td>
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<tr>
<td>SMASE</td>
<td>Strengthening of Mathematics and Science Education</td>
</tr>
<tr>
<td>SMC</td>
<td>School Management Committee</td>
</tr>
<tr>
<td>SIMSC</td>
<td>School Instructional Materials Selection Committee</td>
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<td>SWAP</td>
<td>Sector Wide Approach</td>
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<td>TAC</td>
<td>Teachers Advisory Centre</td>
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<td>TLRs</td>
<td>Teaching / Learning Resources</td>
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<td>UNESCO</td>
<td>United Nations Educational Scientific and Cultural Organizations</td>
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<td>UNICEF</td>
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CHAPTER ONE

INTRODUCTION

The chapter presents the background Information of the study, Statement of the Problem, Study Objectives, Research Questions, Significance of the Study, Limitation and Delimitations of the Study, Assumption of the Study, Theoretical Framework of the Study and lastly the chapter presents the Conceptual Framework of the Study.

1.1 Background to the Study

Learning and teaching materials refers to textbooks and other reading materials, equipment and tools used for instructions in learning process. Such materials include; chalkboards, maps, charts and simple science equipments as well as non-durable supplies used by the pupils and teachers such as exercise books, pencils and chalk. Management of resources refers to the process by which the head teacher applies the functions of planning, organizing, staffing, leading, co-ordinating and controlling to effectively utilize the human, physical and financial inputs of the school organization. Under the overall supervision of the head teacher, other members of staff also contribute variously towards resource management.

Ng’ang’a (2008), Simiyu (2007) and Mesis (2006) assert that teaching and learning materials enhance efficient learning, sustain students attention and remove monotony of speech. Teaching can only be effective when adequate and relevant instructional materials are used. Afalabi, Adeyanj, Adedapo, Falade and Oyeniran (2003) posited that pupils learn best if they are given the opportunity to see and to make observation of what they are taught. They added that, good instructional
materials might be a substitute for real life objects in the classroom. Since textbooks and other instructional materials have a direct impact on what is taught in schools and how it is taught, curriculum development and curriculum materials are sensitive matters which are of great political, economic and social importance.

Due to the importance attached to learning resources in teaching/learning process, both developed and developing countries give great emphasis to provision of learning resources. In developed countries, for example Japan, the Ministry of Education publishes these materials and bears the cost of distributing them. In both public and private school the materials distributed become school property. These materials includes; textbooks, audio visual equipment and any other necessary teaching materials. In addition to broadcast media, schools are also equipped with computers. In developed countries teachers have ample teaching materials which facilitate the learning process to be successful.

In developing countries the governments are struggling to provide learning and teaching materials in all sectors of education. These governments are yet to reach the desired levels of learning and teaching materials provision. In Uganda for example, there are several problems related to the management of teaching and learning materials (Ward et.al, 2006, p. 67-68). These includes: books may be stored instead of being used; there is no significant evidence of widespread use of effective class sets of individual textbooks and book pupil ratio are often so poor that the perceived benefit of teaching and learning materials are rarely achieved (Ward et.al, 2006, pg 67-68). Hassan (2000) on his study of evaluation of mathematics teaching in Nigeria
noted that, there is inadequate Teaching and Learning Resources for teaching and learning mathematics in Zamfara Estate.

Adeleke (2010) in his study on assessment of resources and instructional materials status in the teaching of mathematics in South Western Nigerian revealed that most of the essential resources and instructional materials are lacking or under utilized. Adeleke concluded that there are inadequate resources for instructional materials in the schools for the teaching of mathematics. The study recommends various means of improvisation and sourcing for these instructional materials to be devised. The study also recommends that the teachers should be trained in the appropriate use of instructional materials and sound management skills.

After the introduction of Free primary Education in Kenya in 2003, provision of instructional materials was identified as one of the major achievements of Free Primary Education programme, particularly leading to an influx of pupils to schools. To cater for provision of necessary instructional materials through its budget allocation, the instructional materials fund is channeled through the individual schools’ instructional materials bank account (SIMBA). Every school through the head teacher and the school instructional materials selection committee (SIMSC) are allowed to select books from a list approved by the Ministry of Education in the Orange book.

The schools are required to operate within the provision and guidelines issued by the Ministry of Education. Head teachers and schools committees are expected to ensure good governance of institution under their management in setting up Free
Primary Education Instructional Materials Account and to purchase approved instructional materials. Teachers’ role in instructional materials is to prepare teaching and learning resources. Also, teachers are supposed to help pupils to take care of the materials under them. Parents are supposed to mobilize additional resources required by the school and also to monitor and supervise the use of all the school resources (MOEST, 2005).

Kaaria (2009) on his study on availability, acquisition and utilization of teaching and learning resources of English language in primary schools in Bururi division of Imenti north district, in Kenya, revealed that textbooks were the major teaching and learning resources that was available in primary schools. Although other teaching and learning resources were available in the Kenya National Library Services (KNLS) and teacher advisory centre’s (TAC), Resource person and realia were rarely used in the teaching and learning English language. The study also found that acquisition of other teaching and learning resources was a challenge to most schools. This is because of lack of finance, understaffing, limited time and heavy workload.

Wanderi (2011) in the study on barriers to effective utilization of resources in the teaching and learning of science in secondary schools in Thika district, Kiambu County revealed that some students have a negative attitude towards science subjects. It emerged from the study that class textbooks were adequate in most schools as two students shared a textbooks but other textbooks for further work were not available. The study established that teachers supported students in the use of learning resources in science subjects despite the fact that most of them had not received training in strengthening mathematics and science in secondary education.
(SMASSE). However, teachers did not involve students more in class activities while teaching, which is against SMASSE recommendations. In the Activity Student, Experiment and Improve/Plan, Do, See, and Improve (ASEI / PDSI) approach of teaching science, the study revealed that other areas that require to be addressed by the schools that hinder effective utilization of resources in the schools were- shortage of space and facilities, low shortage of science teachers, lack of laboratory assistant in the laboratory.

Wanderi( 2011) recommended that schools, parents and the community at large should join hands and ensure that schools have adequate learning resources for science subjects especially laboratory equipment. The researcher would like to find out whether the same problems might be the cause of poor Kenya certificate of education (KCPE) performance in Kandara division.

Kangethe (2011) on the study in challenges of Teaching and Learning Materials in public secondary schools in Tana River District, Kenya, revealed that Teaching and Learning Materials are inadequate and this leads to ineffective teaching and learning process and hence poor performance. According to the study, inadequate funds and long distance were major problems in relation to acquiring Teaching materials and this consequently lowers time utility.

Kangethe also established that, available teaching and learning materials are not properly maintained and in some cases there is no specific period of replacement of spoilt and lost items by learner’s resources. Also science rooms and modern libraries are not in place while storage rooms of teaching and learning materials are in poor
Teachers were found not to be enough and students reported lack of vital textbooks, Atlases, Bibles and Qurans. A good number of students said they do not have a calculator. Most schools had only one science laboratory which is not spacious to contain single class of learners. He also recommend that, at the school level there should be specific period of replacing lost items and to ensure that the government policy of Teaching and Learning Materials lasting for four years is achieved.

School heads and parents should be sensitized concerning availing materials such as set books and newspapers to their children. Democracy should also prevail in our institutions by involving learners in selection of Teaching and Learning Materials.

Jeptanui (2011) in the study on efficiency in the use of instructional resources in public primary school, a case study of Kapseret Zone, Wareng district, Kenya, concluded that, not all the required Instructional Resources are available for use by both teachers and pupils in public primary schools. Book to pupil ratio in public primary schools was not conforming to the expected current ratio of 1:1 per students in each class. The ratio of Mathematics books to the number of pupils is conforming, while in social studies and Religious education it is the contrast. This then calls for special attention in provision of Instructional Materials for all the subjects.

In spite of the importance attached to use of a variety of Instructional Resources in the learning process, Jeptanui established that, teachers do not conform to this. Chalkboard and textbooks were widely used Resources in the Zone. Other
Instructional Resources like charts, maps, newspapers/ magazine, audio materials (radio) and audio- visual materials were not well utilized.

Instructional Resources in some schools are inadequate despite the fact that the government is investing heavily on them through Free Primary Education fund. This compromises equality in access to resources by pupils. There is then need for the government to find out why. The government is not vigilant in supervision monitoring and evaluation of free primary Education implementation and especially the procurement and use of instructional materials. The study recommends that the government strengthen supervision to ensure that funds allocated to instructional resources and materials are utilized appropriately. Jeptanui recommended induction and training of SIMSC on the procurement procedures.

There is shortage of supplementary reading books in Kenyan public primary schools (Kenpro, 2010). UNESCO (2005) on assessment research on FPE implementation in Kenya identified that provision of instructional materials including textbooks as one of the major achievement of the FPE programmed, particularly through reducing the cost burden of Education on parents and thus leading to an influx of pupils to schools. However, it was noted that the FPE grants disbursement and procurement procedures were cumbersome and time consuming. The expanded roles for head teachers was also indentified as a challenge facing FPE implementation.

A policy brief by Transparency International (2010) indicated that Kenya scored poorly in the provision of basic learning materials and textbooks. The policy brief recommends to the government to re-evaluate and streamline the current textbook
acquisition system to ensure that textbooks are actually purchased and the purchased textbooks actually get to the pupils. Transparency international (2010) also reported that there are strong indication that some schools heads and textbook sellers are still colluding to misappropriate FPE fund meant for purchase of instructional materials using all sorts of corrupt tricks.

At schools level the policy brief recommends that SIMSC need to practice sound inventory control in an attempt to balance inventory needs and requirement with the needs to minimize costs resulting from obtaining and holding inventory. It involves ensuring that the required stock level of the various items are set and maintained, that, orders are made in good time and what is ordered is received, checked, counted or otherwise is done to ensure that losses are occurring due to pilfering, theft, damage or poor storage.

Transparency international (2010) also revealed that around one in every five pupils did not have all the basic learning materials needed for effective participation in classrooms activities. The researcher is assuming that lack of proper management of Teaching and Learning Resources in Kandara division might have contributed to poor performance in KCPE for the last five years. The researcher intended to find out whether management of Teaching and Learning Resources is carried out according to the Ministry of Education guidelines. Poor management of these resources may lead to poor performance in national examinations the researcher analyzed the KCPE results for 5 years as shown in table 1.
Table 1.1: Showing the KCPE Result Analysis in Kandara Division (2009-2013)

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<tr>
<td>2009</td>
<td>43.45</td>
<td>42.83</td>
<td>49.86</td>
<td>46.65</td>
<td>46.41</td>
<td>225.49</td>
</tr>
<tr>
<td>2010</td>
<td>47.56</td>
<td>51.19</td>
<td>45.41</td>
<td>44.19</td>
<td>48.80</td>
<td>236.87</td>
</tr>
<tr>
<td>2011</td>
<td>46.43</td>
<td>45.31</td>
<td>47.79</td>
<td>46.55</td>
<td>45.65</td>
<td>231.66</td>
</tr>
<tr>
<td>2012</td>
<td>48.53</td>
<td>45.87</td>
<td>47.34</td>
<td>41.51</td>
<td>46.56</td>
<td>234.79</td>
</tr>
<tr>
<td>2013</td>
<td>46.18</td>
<td>45.81</td>
<td>47.81</td>
<td>46.97</td>
<td>44.44</td>
<td>229.44</td>
</tr>
</tbody>
</table>

Table 1 revealed that in Kandara division, performance in Kenya Certificate of Primary Education (KCPE) has been below average for the last five years. In all subjects, the mean standard score has been below 50% except in 2010 when Kiswahili scored a mean standard scores of 50.19%. The researcher assumed that one of the courses of this low performances would be poor management of Teaching and Learning Resources in the primary schools. The researcher intended to find out how Teaching and Learning Resources are managed in the schools in Kandara Division. For the last five years the study showed that the highest M.S.S. ever attained in the sub-county was in the year 2010 when the sub-county attained a mean standard score of 236.87 out of 500 marks.

1.2 Statement of the Problem

In Kandara division, the KCPE performance has been very low for the last five years. Literature has shown that teaching and learning resources are essential elements which improve the learner’s understanding and grasping of concepts. Jeptanui (2011) found that, inspite of the importance attached to the use of a variety of instructional resources in the teaching/learning process, instructional materials are
not well managed leading to inadequate T-L materials in Kenyan schools. It is line with this that there was need to investigate the IM that were available, how they were acquired and utilized by both teachers and pupils in the teaching/ learning process in Kandara division.

1.3 The Purpose of the Study
The study investigated how the procurement, utilization and maintenance of instructional materials are being carried out in public primary schools in Kandara division. The study also sought to establish the effectiveness in I.M. management and challenges encountered by the schools during procurement, utilization and maintenance of Instructional materials in public primary schools in Kandara division.

1.4 Objectives of the Study
The study sought to fulfill the following objectives.

i. To establish the availability and adequacy of teaching /learning resources in public primary schools in Kandara division.

ii. To examine how the available teaching and learning resources are procured.

iii. To establish factors influencing the utilization of Teaching and Learning Resources in primary schools in Kandara division.

iv. To establish the effect of availability of Instructional Materials in schools on KCPE performance in Kandara division.

v. To assess the maintenance of Teaching and Learning Resources in primary schools in Kandara division.
1.5 Research Questions

The study was guided by the following questions:

i. Which teaching and learning resources are available in public primary schools in Kandara division?

ii. What steps are followed when ordering of teaching/learning materials in primary schools?

iii. What factors influence the utilization of T-L resources?

iv. Importance of T-L materials in national examinations performance?

v. How are the Teaching and Learning Resources maintained in public primary schools in Kandara Division?

vi. What are the challenges in management of Teaching/ Learning Resources in Kandara division?

vii. What are the possible solutions to challenges in management of Teaching/ Learning Resources in Kandara division?

1.6 Significance of the Study

The findings of this study are useful in that, they may contribute to the advancement of knowledge in the area of teaching and learning resources and the impact they have on learning process. The study highlighted some of the problems surrounding the effective utilization of Instructional Materials and therefore the Inspectorate department of the MoE would use this information to design In-service and teacher training programmes which may facilitate better utilization of Instructional resources. The In-service programme would enable teachers to be in a better position of finding ways to eradicate the problems they experience in using teaching/learning resources. The study findings gave suggestions on how
challenges experienced in relation to management of teaching and learning resources can be resolved. Also, the research findings drew attention to the ministry of education and Kenya Education Management Institute (KEMI) to problems encountered by head teachers, teachers and pupils in managing teaching and learning materials and the solutions were sought. Teachers are also challenged to use locally available materials and also improvise non-existent ones and hence increasing teachers’ knowledge in teaching and learning materials. The findings also assist Educational Planners in developing budgets for acquiring more teaching/learning materials. Finally, the study formed a base on which others can develop their studies (Orodho, 2005).

1.7 Limitations and Delimitations

1.7.1 Limitations

The limitations of the study were:

i. The study was carried out in one division

ii. Some respondents might have given false information thinking that the researcher is on a fault finding mission.

iii. Some respondents were too busy to respond to the questions adequately.

iv. Lack of proper records may have affected the study results.

1.7.2 Delimitations

The delimitations of the study were:

i. The schools considered were public primary schools. Private primary schools were not included in the study since they are not beneficiaries of Free Primary Education fund (FPE) provided by the government.
ii. The study involved head teachers, teachers, pupils and TAC tutors of the sampled schools as respondents. Other Education Stakeholders who may have a different view from those given by the respondents were excluded in the study due to cost and time factors.

iii. The study sampled pupils from classes 6 and 8 only since they were able to fill the questionnaire independently unlike the pupils from lower classes who would require some assistance. This saved time although pupils from other classes may be having adequate resources.

iv. There may be many other factors which affects instructional materials management but the researcher only studied procurement factors, utilization factors, supervision of T/L materials and maintenance of instructional materials in Kandara division.

1.8 Assumptions of the Study

The following assumptions were made in the study:

i. In the schools considered there was good management of teaching and learning materials.

ii. Teachers in the division use teaching/learning materials in teaching/learning process.

iii. Schools which lacked instructional materials performed poorly in KCPE exam.

iv. Respondents co-operated and gave reliable responses.
1.9 Theoretical Framework

The study was guided by the production function theory. This theory outlines the process by which inputs are converted into outputs. Hanushek (1995) affirms that the production function approach is the most appealing and useful in explaining determination of pupils’ achievements. The theory focuses on the relationship between school outcomes and measurable inputs into the educational process.

Hanushek (2001) in applying the production function theory to education explains that education resources, the teachers’ and the learners’ efforts contribute to learner’s achievements in Examinations. Okumbe (1998) equates a school to an industry which turns given inputs into required output. Therefore, the production function theory fits in the study in the sense that good management of instructional materials and other factors contribute to good education performance. The procurements, acquisition, utilization and good maintenance of instructional materials determine the quality of the Education performance. Good management of instructional materials will result to good education performance. Poor management of instructional materials on the other hand results to poor academic performance. Therefore, adequacy of instructional materials due to good management and good quality of teaching in primary schools in Kandara Division will be the input while K.C.P.E examination results will be the output. The theory supports the current study in that, good management of T-L resources would help in providing adequate resources which will be converted to good academic performance.
1.10 Conceptual Framework of the Study

Conceptual framework is the relationship between variable in a study showing them graphically and diagrammatically. The purpose is to help the reader quickly see the proposed relationship of concepts (Mugenda, 1999, Orodho 2004). The conceptual framework in this study was based on management skills on instructional materials which in turn affect the performance. The main variables that influenced the availability of instructional materials are procurement, utilization and maintenance of instructional materials.

Figure 1 indicates that the Headteacher had influence on the teachers and pupils performance since he/she influenced the availability of teaching/ learning resources in the school.
Figure 1.1: Conceptual Framework showing interaction between the school manager and the Teaching and Learning Resources

Figure 1.1: Management of Instructional Materials

Source: Researcher, 2013
The conceptual framework for the study as presented in Figure 1, considered management of Instructional Materials to comprise of: procurement, utilization and maintenance of the Resources to be used in the school from the needs assessment and following required procedures to acquire the resources. The acquired resources are supposed to be well maintained to ensure they are safe, efficiently used and last for a longer period of time. Management practices are the dependent variables and the head teachers, the teachers and the SIMSC are the independent variables. Good resources management will result to good procurement methods, effective utilization and also good instructional materials maintenance.

Good resources management therefore gives a good academic performance. Poor management of teaching/ learning resources on the other hand will lead to inadequate resources that are required in schools. This affects teaching and learning which in the long run resort to poor KCPE performance. Good management practices on the other hand will results to adequate learning resources made available in schools to be utilized by both teachers and pupils. This will resort to better performance in KCPE examinations.
1.11 Operational Definitions of Terms

**Attitude:** Refers to learnt predisposition to respond in a constantly favorable or unfavorable manner with respect to a given subject. In this study, attitude refers to willingness to provide and use teaching/learning resources by parent, teachers and pupils.

**Barriers:** Refers to that which blocks or hinder or prevent effective use of resources in the teaching/learning process. This includes inadequate materials and untimely provision of materials.

**Challenges:** Refers to problems or difficulties encountered in the process of procuring, utilization and maintaining instructional materials which could negatively impact on quality of education.

**Class size:** This is the number of pupils in a given class for the purpose of teaching.

**Efficiency:** Refers to maximum production from minimum input. In this study, production is the learner’s performance while in-puts are the resources used.

**Improvisation:** This is the ability to invent, make, prepare or produce a representation of a teaching/learning resource which will be used as a substitute of the original resource materials.

**Instructional Media:** It is any materials used as a means of communicating information in the teaching/learning process. It can be in
print form like books, magazines and newspapers or in non-print form like filmstrips, slides recorded tapes etc.

**Management**
In this study, management refers to the process of selecting, acquiring, utilizing and maintaining of teaching and learning resources in order to accomplish the institutional goals and standard.

**Performance:**
The final marks scored at the end of a teaching/learning session. In this study, the final marks scored in KCPE.

**Procurement:**
This is a process of obtaining, selecting and ordering the teaching/learning materials through purchase, exchange and borrowing or as gifts.

**Public schools:**
Refers to schools which receive government grants for Instructional materials, school’s maintenance and payment of teachers and other staff or personnel.

**Realia:**
These refers to real things or objects obtained from the natural environment in their original form such as collections of rocks samples, soil samples, plant seedlings among others.

**Teaching and learning resources:**
Refers to human and materials resources. These are: teachers, textbooks and stationary.

**Utilization:**
Refers to making effective use of resources to accomplish the institutional goals and standard.
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviewed the literature related to this study. Orodho (2008) says that all available literature concerning the problem at hand must necessarily be surveyed and examined, before a definition of a research problem is provided, information regarding what various Educators have expressed concerning the problem in hand. The management of Instructional materials in the process of Teaching/Learning and specifically in primary schools is provided in this literature review. The chapter covers the importance of T-L Resources, procurement of Instructional Materials, Utilization of Teaching/Learning Resources, and also the literature reviews the Maintenance of Instructional Materials in schools.

2.1 Importance of Teaching/Learning Resources

UNESCO (2008) opined that, teaching and learning resources such as textbooks, classrooms, teaching aids stationeries and laboratories affect academic performance of the learners. Also the results of the finding agreed with that of Mutai (2006) who asserted that learning is strengthened when there is enough references materials such as textbooks, exercise books teaching aids and classrooms. In Ghana, Glewe (2002) identified large estimated impact for some schools inputs. However, the estimated effects were small and not statistically significant. According to the MOE (2006) manipulation of Teaching and Learning Materials helps to convey meaning and will serve a motivational force to awaken the interest of learners. Twoli (2007) notes that teaching and learning materials enhance standard participation in class for effective learning.
According to Nasibi and Kiio (2006) teaching and learning resources are important in education because they motivate learners by linking instructions with reality. Both Nasibi and Kiio note that instructional materials also encourage learners to utilize more than one sense hence increase their attention and retention capacity. A textbook, for example remains pupils companion after the teacher has left. According to the Ministry of Education (2006) manipulation of teaching and learning materials helps to convey meaning and will serve as motivational force to awaken the interest of the learners. It is therefore important to have good management practices of the Teaching and Learning Materials to ensure that these materials are available, adequate, properly utilized and also are well maintained.

2.2 Availability of Teaching /Learning Materials

A study by transparency international (2010) shows that around one in every five pupils do not have all the basic learning materials needed for effective participation in classrooms activities. Southern Africa Consortium for Monitoring Education Quality (SACMEQ, 2011) reveals that in the year 2007, only 78% of the standard six (6) pupils had at least one exercise books a pencil or pen and ruler. In other words around one in every five (5) pupils do not have all the basic learning items that are considered necessary for effective participation in classrooms activities.

Jeptanui (2011) found that instructional resources are inadequate in Kenyan schools despite the fact that government is investing heavily on them through F.P.E funds. This compromises equity in access to resources by pupils. Kenpro, (2010) report also identified shortage of supplementary reading books in Kenyan public primary schools as one of the causes of poor performance in schools. The researcher
intended to find out the management factors which affect the availability and adequacy of the Teaching and Learning Resources in primary schools in Kandara division.

Simiyu (2007) did her study on factors influencing availability and utilization of instructional materials in teaching Kiswahili in Githinguri Division, Kiambu district. The researcher found that lack of enough finances was among the impediments to using instructional resources among teachers.

Kangethe (2011) in the study on challenges of Teaching/Learning Materials in public Secondary schools, established that as a result of inadequate Teaching and Learning Resources there was ineffective teaching and learning process. The researcher also established that, there is inadequate funds for purchase of Teaching and Learning Resources. This study finding agree with the findings of the current study.

Therefore according to the literature reviewed above despite huge allocation by the government for Teaching/Learning Materials, the materials are still inadequate. The researcher intend to investigate the management factors which may be contributing to this scenario.

2.3 **Procurement in Schools**

Public procurement in Kenya has undergone significant development. From a system with no regulations in the 1960s to a system regulated by the treasury and MoE circulars in the 1970s, 1980s and 1990s. The introduction of Public

The MoE Sessional paper No.1 (2005) reformed the education sector in support of quality Education for all (EFA) by 2015 by introducing procurement in schools. The MoE directed that, all public schools procure their inputs in accordance with procurement guidelines specified by the MoE public procurement and disposal act of 2005 and the public procurement regulations of 2006 (MOE, 2005). Similarly, schools were directed to constitute teaching and learning materials selection committee (GoK 2007).

Both Laysons and Farnington (2006) on procurement found that purchasing as a function of procurement entails the acquisition of goods and services in return for money or equivalent. That is in agreement with Bailey, Jossep and Jones (2005), who support that purchasing is effective when personnel involved are skilled and specialized to execute the procurement function ethically and professionally.

2.3.1 School Instructional Materials Selection Committee (SIMSC)

In the year 2005, Kenya Education Sector Support Programme (KESSP), a sector wide approach to education planning was introduced covering the period 2005-2010. The goal was to reduce duplication, mobilize resources and common partnership between the government and Development partners. Abu-Duhou (2004 and MoE (2003) are in agreement that school based management approach to resources acquisition should support procurement decisions, remain accountable to school management committee and MoE. Head teachers entrusted with authority appoint staff to this committee and allocate duties (TSC Act, 1980) to enhance school operations. Findings by Kuria (2007) revealed that in some schools, BoGs and non-teaching staff comprise the procurement committee. Romboll (2007:10-18) affirms that institutional integrity and transparency rely on effective audit control mechanism and comprehensive information sharing to minimize procurement flaws and failure.

Both Hallak and Murial (2006) established that areas in Education Management and Administration prone to malpractise are purchasing and tendering of textbooks among other curriculum support materials findings that are in agreement with Institute of Policy, Research and Analysis( IPRA ,2006). Lack of transparency and accountability increase the total cost of Education denying teachers and learners appropriate learning resources. According to Odhiambo and Kamau (2003) and Romboll, (2007), procurement competence levels in appointed procurement committee members have been ignored. Appointed committee members lack skill and capacity to handle procurement matters. UNESCO, (2007) noted procurement disparities among institutions. Both Hallak and Murial argue that financial
mismanagement in procurement occurs when payments are delayed or expenditure and documents falsified when accounting. Budgeting of Teaching and Learning Resources should be within allocated finances (KESSP, 2005). For transparency and accountability all approved materials and resources for procurement should be recorded in the Teaching and Learning Material Selection Committee Minute book and counter signed by the head teacher and the deputy head teacher for procurement (MOE, 2007).

The procurement of Instructional Resources process in primary schools involves four stages, namely, selection, ordering, receipt and payment. The overall principles of the textbook policy are accountability, transparency and sustainability of the textbooks.

2.3.2 Selection of Teaching/Learning Materials

Selection of teaching/learning materials is the most crucial exercise in materials procurement. Ayaga (2010) found that, choosing the most effective resources from among many alternatives is one of the most disturbing problems of educational practitioners. Ayaga further explains that, this is because in any learning or teaching situation, there are a multitude of interactive factors which make the selection process complex. Moriasi (2008) found that selection and acquiring instructional materials is a challenge to many head teachers in Kenya.

One of the responsibilities of Ministry of Education (MoE) is supporting the provision of Teaching and Learning Materials. The MoE (2003) gave guidelines to follow when selecting books as represented diagrammatically in Figure 2.1
Figure 2.1: The Schools Instructional Materials Procurement Process  

In figure 2.1 the MoE funds all the public primary schools to purchase instructional materials. The fund is channeled through school instructional materials bank account (SIMBA) of every primary school in Kenya. The fund is managed by the SIMSC. The SIMC is mandated to select the Instructional Materials and order them from the supplier of their choice.

The schools are required to operate within the provision and guidelines issued by the MoE. Head teachers are expected to ensure good governance of instructional materials in their schools. The role of the teachers in instructional materials is to prepare and use locally available learning materials. Also teachers are supposed to help pupils to take care of the materials under them. As the manager, the head teachers should identify the resources that are needed and how they could be obtained. The responsibility is delegated to SIMSC. Distribution of Teaching/Learning Materials should be done in good time to avoid unnecessary delays and the necessary records should be well kept.
The researcher intended to establish the current T-L resource procurement process in public primary schools in Kandara division and also find out the challenges encountered by the schools during procurement process. Kaaria (2009) established that most of the Teaching and Learning Resources are acquired from MoE supplies. Parents and pupils contribute very little towards teaching and learning materials acquisition. Also, Kaaria found that improvisation of teaching materials by the teachers is minimal.

As stated earlier every primary school has school instructional materials selection committee (SIMSIC). Parents are represented in this committee by two members. SIMSC priorities the school materials which should be purchased. Therefore parents are involved in Teaching/ Learning Materials procurement by the government as a deliberate policy of involvement of stakeholders in policy dialogue planning and implementation of free primary education. Parents are supposed to mobilize additional resources required by the school and also to monitor the use of all the school resources.

The purchase of learning materials through the SIMBA account has attracted controversy. (World bank, 2009) reported that, anomalies concerning procurement and management of instructional materials continue to be reported in the majority of learning institutions despite several government guidelines to safeguard usage of public fund by schools and colleges Department of Foreign International Development (DFID, 2010) reveals that 5.8 millions books have been lost within a period of six (2003-2008).
These books attrition is high in both quality and cost. It’s vital that some mechanism is developed for penalizing or holding somebody accountable for these losses. There is a strong possibility that governance issues are at core of this loss. Transparency international (2010) discovered numerous incidences of corruption involving FPE fund during the purchase of I.M in primary schools. Kangethe (2011) revealed that selection of the Instructional Materials is not democratically done. The principals decide what to purchase without consulting anybody else. According to United Nations Education Scientific and Cultural Organization (UNESCO, 2007), head teachers prefer their procurement committee members being ignorant in procurement matters, to increase their discretion of disposing school funds. To address governance in schools, Institute of Policy Research (IPAR, 2006) notes that, school procurement committees lack relevant procurement skills, leading to inefficiency and wastage of Teaching/Learning Resources (TLRs). Head teachers abuse their position for personal gain and death of information on proficient procurement processes.

2.3.3 Ordering, Receiving and Payment of Instructional Materials

While schools are free to make their own decisions on ordering and organizing their textbooks, instructional materials and stationery procurement for themselves, there are some basic rules to be followed (MoE, 2003). Schools are directed to order instructional materials from the latest list of Approved Instructional Materials from the Ministry of Education. Schools are also supposed to order class set of textbooks but not small quantities of competing textbooks for a particular subject. When ordering, school should ensure that the I, M supplier is a well established one who will be able to deliver the ordered materials in good time. It is also important to
follow the decision made by the SIMSC, and all matters related to ordering should be recorded in SIMSC Minute book. Also it is important to spend as much as possible all the I, M fund disbursed by the MoEST.

After ordering, the I, M will be delivered to the school. All schools through their SIMSC, must check carefully to ensure that the books they have received are correct according to their order and that they are in good condition. The head teacher and one of the parent representatives on the SIMSC should be present during delivery. No night delivery should be accepted. All the documents involved should be well checked to ensure they tally with that which was ordered (MoE, 2003) after receiving the I.M and all is well, the head teacher should then prepare a school Payment Voucher in duplicate. One copy should go with the payment cheque to the supplier and the other copy should be kept in the school I.M file (MoE, 2003).

2.4 Utilization of Teaching/Learning Resource

Teaching/ Learning Resources may be available in the school, but how they are utilized is what will determine the learner’s performance in the school. Factors influencing the effective utilization of Teaching and Learning Resources are many. According to SECMEQ 1, supervision visits is an important monitoring tool used by Quality Assurance and Standards Officer (QASO) to undertake assessments of education Institutions. Human resources are the most important inputs in the education system. Thus effective management and utilization of human resource is critical to the quality of learning outcomes (GoK, 2005). The role of a teacher in learning is central. A part from being conversant with the content he/she needs to be able to deliver it appropriately by use of a variety of Teaching/learning resources.
Teacher’s role in instructional materials is to prepare and use locally available learning materials. Studies has reviewed that teachers knowledge and other attitude toward use of visuals media plays important role in determining teacher’s use of visual media in instruction (Aila 2005 and Gomo 2003). Jeptunui (2011) found that, charts, maps, newspapers/ magazine, audio materials (radio) and audio visual materials are not well utilized by the teachers in public primary schools.

Teachers should be trained, and it’s important that the teacher should acquire sufficient subject masterly and pedagogy (Session Paper Number 1, 2005). Resources selection and utilization is directly related to the teacher’s knowledge and experience. Aila (2005) in his study on factors influencing the use of visual aids in pre-schools found that only 30% of the teachers were knowledgeable in use of instructional visual media. Teacher experience is thought to affect student achievement. More experienced teachers are associated with greater gains in student achievement (Alexander and Fuller, 2009). Kaaria (2009), revealed that, pupils interaction with materials was minimal during English language teaching/learning process in primary schools. Thus an experienced and a well trained teacher is expected to effectively utilize the available resources in his/her teaching/learning process to involve pupil interaction with materials.

Another factor influencing effective use of T/L materials is the teacher’s workload. This refers to the number of lessons a teacher teaches per week. If a teacher is handling too many lessons per week, no matter how motivated he/she will be he will be overworked and will most likely not in a position to prepare well. The teacher will also not have enough time to improvise the materials where necessary.
He/she may not even have time to organize for hands on activities which require prio-arrangement. Njuguna (2004) while quoting from (Daily Nation, issue of 18th March 2002, 15) observed that even experts were alarmed over shortage of teachers in Kenyan schools. The article noted that shortages of teachers continues to threaten the provision of quality education. The overloading of teachers may lead to minimal utilization of resources. Kaaria (2009) in his study on availability of utilization of teaching/learning resources of English language established that teachers are not enough in most schools in Imenti North division Meru. This will increase the teacher’s workload.

Many teachers who work in over crowded classes have low morale and low self-esteem and motivation. Classroom teaching methods are restricted to lecturing thus students will lack the opportunity to discover on their own in hands on activities. Another effect on large class size is on students behaviour as such reduce the opportunity for schools to provide quality teaching/learning resources utilization needed to enhance student learning and achievements (Nieuwenhius, 2000). Wanderi (2011) in her study on barrier to effective utilization of resources in the teaching/learning of sciences in secondary school in Thika, Kiambu county, found that overcrowded classes were a barrier to resource utilization among students. Indiscipline among few students was also established to be another barrier to resource utilization.

The DEO’s office role is to ensure that prompt action is taken against school head teachers and SIMSC members who does not adhere to government policy on instructional materials. The Headteacher is the first supervisor who should ensure
the teaching/ learning materials are properly utilized by both the teachers and the pupils. This will ensure maximum utilization of materials and human resources. Jeptanui (2011) in her study on Efficiency in the use of Instructional Materials in primary school found that the government is not vigilant in supervision, monitoring and evaluation of Free Primary Education implementation and especially the procurement and use of Instructional Materials. Also, DFID, 2010 revealed that, though parents are members of the management committee, their involvement in management of Instructional Materials was minimal. MoE (2009), found that there is no capacity for the school Audit service and QASOs to routinely examine whether textbooks discounts are effectively obtained and properly applied and recorded.

### 2.5 Maintenance of Teaching/ Learning Resources

Good storage and maintenance of instructional materials are very important in accomplishing the principle of sustainability as laid in the textbook procurement policy. The instructional materials should be stored in a dry, secure place above the ground level. The store should have plenty of air, should be clean with good shelving system, locks and doors (MoEST 2003). There should be regular supervision and monitoring of the instructional materials to avoid loses. Conservation of resources is a concern of all members of the community, pupils, teachers, school management and parents (MoEST, 2003).

Available teaching and learning materials are not properly maintained and in some cases there is no specific period of replacement of spoilt and lost items by learners (Kangethe, 2011). He also found that, resource rooms and modern libraries are not in place while storage rooms of Teaching and Learning Materials are in poor state.
Kaaria (2009) in his study on availability and utilization of teaching/learning of English language in public primary schools established that most of the teaching and learning resources are stored either in the head teachers’ office or in the staffroom.

The head teachers should manage the use and storage of materials safety. There should also be regular auditing of Resources to ensure they are not lost, damaged or destroyed.

To address the issue of book storage, the government allocated Fifty Thousand Shillings (Ksh.50,000) to each school in 2005, for a book corner (MOE, 2010). The aim was to ensure that the book storage facilities existed in classrooms to enhance pupils borrowing. Among the strategies outlined in KESSP to address issues related to textbooks, is improving availability of Instructional Materials, enhancing equity in textbooks across provinces or socio-economic background and improving learning outcomes.

2.6 Summary of the Literature Review

The literature reviewed from other parts of the world and those from Kenya has shown that instructional materials are vital component in teaching and learning process. The literature available has shown that Teaching/Learning Resources are inadequate in public primary schools. Also the literature has reviewed procurement and maintenance process of instructional materials. The literature has shown that strict adherence to the Policy on Textbook Procurement and Supply for Primary Schools is required. Literature has also revealed that there are various factors which influence the utilization of Teaching/Learning Resources. These factors include;
teachers qualification, class sizes and the ability of the administration to supervise and monitor the usage of instructional materials.

The literature also revealed that, maintenance and replacement of lost instructional materials government policy of 1.M lasting for four years is not implemented. The researcher did not come across a similar study conducted in public primary schools in Kandara division. Therefore the researcher found a need to investigate the management practices and challenges of Teaching/Learning Materials in Kandara Division which might be the root cause of poor performance in KCPE for the last five years.
CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter outlines the various steps that were necessary in carrying out the study in order to achieve the research objectives as are set out in chapter one of this study. It focuses on the research design, study locale, target population, sample and sampling procedures, research instruments, data collection procedures and data analysis.

3.1 Design of the Study

The study adapted an exploratory approach using a descriptive survey design to investigate the Availability, Procurement, Utilization and Maintenance practices of teaching and learning resources in public primary schools in Kandara division. The study adopted quantitative analysis though a limited aspects of qualitative analysis and presentation of data was adopted in order to present a clear picture of the findings. The purpose of descriptive research design is to describe and more, interpretations about the current status of individuals, objects settings, conditions, or events (Mertler & Charles, 2011).

Orodho (2009) observes that using both quantative and qualitative analysis approaches enables a researcher to explain phenomena deeply. Descriptive research design involves measurements, classification, analysis, comparison and interpretation of data (Kombo & Tromp, 2006). By involving teachers, pupils and TAC Tutors, in the study, the study fitted within the descriptive survey study designs since it will involve different groups of respondents.
3.2 Location of the Study

The study was done in Kandara division, Kandara sub-county, Muranga County, Kenya. The division has been performing poorly for many years as it was revealed in table 1. This poor performance may be due to poor management of the resources in the division. The researcher therefore chose to study the management of the teaching and learning resources in the division which may be affecting effective teaching and learning process.

3.3 Target Population

All the Sixty five (65) head teachers from the 65 public primary schools in Kandara division formed the target population. They were considered because, as they are the managers of the schools, they are responsible for the procurement, utilization maintenance and accountability of the school Resources. There are Seven hundred and eighty (780) teachers in Kandara Division. All of them form the target population. Teachers were involved in the study because they are the implementers of the curriculum. They interact directly with the instructional resources hence they were in a position to provide information on them. Also a total of Five thousand seven hundred and fifty (5750) pupils in classes 6 and 8 in Kandara division formed the pupils target population of the study.

There are five (5) TAC tutors in the division. The Five TAC tutors were part of the target population. From Teacher’s Advisory Centers, teachers are expected to get advice concerning teaching and learning process. It is from these centers where teachers are expected to get information concerning the improvisation and use of instructional materials and also recent teaching methods. Also teachers may borrow
some teaching and learning materials. TAC tutors also are expected to visit individual schools and assist the teachers to improve on content delivery using the most appropriate methods. The researcher therefore finds it worthwhile to find out from these tutors how the instructional materials management may be affecting the performance in Kandara division.

3.4 Sampling Technique and Sample Size

The target population from which a sample was selected composed of schools, head teachers, teachers, pupils, and Teachers’ Advisory Centres tutors. From each group, elements were sampled using various sampling techniques. There is need to select a representative sample from which generalization will be done as it will not be possible to cover the whole target population (Orodho, 2009). The researcher sampled Kandara division purposively, since it has been performing poorly in the KCPE exam.

Sampling of the schools in the division employed systematic random sampling technique. From a list obtained from the DEO’s office, the sample size and the sampling constant ‘K’ was determined by the researcher. It is the most accurate approach to select a representative sample since it removes the possibilities of bias. The researcher selected schools at equal intervals. That is, every 3rd school in the list of the Kandara division primary schools was picked. The process started by picking a random starting point in the list and every 3nd school in the list was selected until 23 schools were obtained. This constituted 33% of the target school population. This was sufficient because, according to Mugenda and Mugenda (1999), 30% of the target population is enough to be used for descriptive studies.
The head teachers of the twenty three schools selected were involved in the study. The researcher also purposively sampled the teachers who participated in this study. The teachers who were selected were: Class teacher of class six (6) and class eight (8) teacher regardless of the number of the streams, who made a total of two (2) teachers from every school. The study therefore, collected data from Forty six (46) teachers and Twenty three head teachers who represented the target population of the head teachers and teachers in Kandara division.

Systematic random sampling design was used to select Ten (10) pupils from each sampled school. Sampling was done in classes Six (6) and Eight (8). Therefore, Five (5) pupils from each of the two classes. Systematic sampling involves selecting members at equal intervals. This assumes the existence of a list of members. In this study, the researcher used the class registers. The selection process started by picking a random point from the register and every fifth pupil was selected until a total of 5 pupils were obtained. This enabled the researcher to select a total of two hundred and thirty (230) pupils from the sampled schools for the study. The design ensured that each pupil in classes 6 and 8 was given an equal chance of inclusion in the sample.

Kandara division has Five TAC tutors. All the five TAC tutors were purposively sampled for the study. Therefore, the sample size of this study was 304 respondents.
3.5 Data Collection Instruments

The study employed three instruments to collect data. These were: questionnaires, observation schedules and interview schedules for data collection. The questionnaires were used to collect information from head teachers, teachers and from pupils. Questionnaire offer considerable advantage in the collection of data. It presents and even stimulates potentially to a large number of people simultaneously and provides the investigation with an easy accumulation of data. According to Kombo and Tromp (2006), questionnaires facilitate the collection of information from a large sample and diverse regions.

The observation schedules were used to counter check the information obtained from the head teachers, teachers and from the pupils. Kombo and Tromp (2006) explains that an observation schedule is used as a checklist to record what the researcher observes during data collection. In the current study, the observation schedule was used to verify the information collected on the procurement of resources, utilization and their maintenance in schools.

Interview schedule was used to gather data from TAC Tutors. According to Kless and Bloomquist (1985) an interview schedule is considered appropriate when a sample is small since a researcher is able to get more information from respondents than would be possible when using a questionnaire.

3.5.1 Head teachers/ Teachers Questionnaires

The researcher employed two different questionnaires, one for the head teachers and the other for the teachers. The questionnaires were administered to the head teachers and teachers because they are the implementers of the curriculum. They handle the
teaching process and hence come in direct contact with the instructional materials, as such; they are in a position to give information on the instructional resources in the schools.

The questionnaires had two (2) sections. One sought the background data of the school. Section II had questions designed to gather data from head teachers and teachers on procurement, utilization and maintenance of T/L resources. The questionnaires also intended to determine the challenges and possible solutions to improve management of instructional resources in schools in order to improve KCP E performance.

3.5.2 Pupils Questionnaire
The pupils’ questionnaire were administered to the pupils since they are the beneficiaries of the Teaching and Learning resources. The questionnaire gathered general information about the pupils views on the availability, adequacy and use of the instructional resources. It also captured difficulties faced by the pupils in their attempt to use instructional materials and suggestion of possible solutions.

3.5.3 TAC Tutor Interview Schedule
The researcher interviewed all the Five TAC tutors to determine the effectiveness of Teachers advisory centers and in particular, in the management of Instructional Resources in the Zones. Therefore the researcher employed purposive sampling technique in selecting TAC Tutor.
3.6 Pilot Study

For piloting purpose, one school from each of the five educational zones in Kandara division was randomly selected from the zonal schools list which is randomly constructed, for the purpose of pre-testing the questionnaires. The educational zones in Kandara division are: Githumu, Ithiru, Kagunduini, Muruka and Gaichanjiru Zone. The researcher selected every seventh school in the five zonal schools lists. A total of five public primary schools was sampled for piloting. The questionnaires were pre-tested in the selected sample, which is similar (identical) to the actual sample used in the study. The piloting schools were not among the schools which participated in the actual study.

The procedure used in pre-testing the questionnaire was the same as that which was used during the actual study. Orodho (2008) observes that the practice at pre-testing the questionnaire is important because deficiencies in the pre-testing for example, unclear direction, insufficient space to write the response, clustered questions and wrong phrasing of questions can be detected. Piloting will also help the researcher to determine the reliability of the instruments to be employed in this study.

Testing-retesting technique was used in determining the reliability of the instrument used in the study. The developed questionnaires were given to 5 head teachers, 10 teachers and 50 pupils from 5 schools (not the ones included in the main study). Then, the open ended questions were scored by giving a mark for a relevant response and a zero for a blank or an irrelevant response. Then the same questions were given to the same respondents after two weeks and scored again. A comparison between the responses obtained from the first and the second set was made by employing the pearson’s product moment formula.
\[ r = \frac{\sum XY - (\sum X)(\sum Y)/N}{\sqrt{[\left(\sum X^2 - (\sum X)^2/N\right)(\sum Y^2 - (\sum Y)^2/N)]}} \]

Where \( r \) = the pearson’s coefficient of correlation index.

\( X \) = value of \( X \) variable

\( Y \) = value of \( Y \) variables

\( N \) = Number of observation or subjects of \( X \) and \( Y \)

The reliability coefficients that were obtained from different sets of questionnaires that were piloted are as follows:

Head teachers \( 0.79 \)

Teachers \( 0.73 \)

Pupils \( 0.81 \)

Consequently, the reliability of the Instruments was accepted since they all attained a reliability coefficient above 0.70 which is considered a reasonable minimum in Education (Slavin, 1984). To determine the relevance of the content used in the questionnaire, the researcher was assisted by his supervisors since they are competent in this area of the study.

3.7 Date Collection Procedure

The researcher started by applying for a research permit from the Ministry of Education. Once granted the data collection exercise followed the stages outlined below:

i. Questionnaires: The questionnaires for head teachers, teachers and pupils were distributed to the respondents in the sampled 23 schools. The exercises
took a period of one week. In every school, the researcher gave the head teacher and the teachers to respond to the questions. Then the researcher sampled 5 pupils in class 6 and other 5 pupils in class 8 and assembled them in one room. The researcher directed the pupils on how to respond to each question at a time. This was to avoid irrelevant responses as much as possible. Then the researcher collected all the pupils’ questionnaires immediately they completed filling in. There was 100% return rate of the pupils’ questionnaires. Where possible, the head teachers and teachers questionnaires were collected the same day but in some cases the researcher had to go for them later in the course of that Week. The Head teachers questionnaires which were filled and returned were 23 (86.96%), while that of teachers were 37 (80.43%).

ii. The interview schedules: These were meant to collect Instructional Materials information from the TAC tutors from the 5 educational zones in Kandara division. The researcher booked interviews with each of the TAC tutors to avoid missing them in their offices. The researcher interviewed the five TAC tutors and filled their responses in the interview schedules. The TAC tutors were very co-operative.

iii. Assembling of research instrument: This was the final phase in the data collection exercise and took place the second week of November 2014. All the duly completed research instruments were collected. Though the study had targeted 304 respondents, only 287 (94.41%) respondents returned the questionnaires.
3.8 Data Analysis

After the data collection exercise, all the research instruments were assembled for cleaning, editing and coding. This helped in catching and correcting errors and inconsistent codes (Nachmias and Nachmias, 1996). The researcher employed the Statistical Package for Social Sciences (SPSS) computer programme for analysis of quantitative data. Quantitative data were analyzed using various statistics such as means, percentages and frequencies. On the other hand qualitative data was analyzed thematically using a log-frame. This according to Mugenda and Mugenda (1999) entails creating a factual code which serves the purpose of identifying a fact, a feeling or an attitude from the text. This assisted the researcher to closely evaluate the usefulness of the information in answering research questions.

3.9 Ethical Issues Consideration

Prior to conducting the study, the researcher sought permission from the Ministry of education, science and technology. Also, permission was sought from the County Director of education, Muranga and from Sub- County director of education, Kandara.
CHAPTER FOUR

DATA PRESENTATION AND DISCUSSIONS

4.1 Introduction

This chapter presents the findings of the study based on data collected from 23 public primary schools with 304 respondents. Research objectives guided data analysis using quantitative and qualitative techniques with research questions guiding respondents in relation to the objectives of the study. Analyzed data were presented in tables. The research was guided by the following research objectives.

i. To establish the availability and adequacy of teaching/learning resources in public primary schools in Kandara sub country.

ii. To examine how the available teaching and learning resources are procured.

iii. To establish factors influencing the utilization of teaching and learning resources in primary schools in Kandara division.

iv. To establish the importance of instructional materials in teaching/ learning process in Kandara division.

v. To assess the maintenance of teaching and learning resources in public primary schools in Kandara division.

The researcher used questionnaires designed for head teachers, teachers and pupils. Interview schedule for TAC tutors were also used. Closed ended questions were analyzed by a computer using SPSS programmer. Data from open ended questions were thematically described, summarized and coded for analysis. Data collected from respondents were gathered, summarized, analyzed and presented in frequencies, percentages, tables and graphs. The sample size comprised was comprised of 23 public primary schools headteachers, 46 teachers, 230 pupils and 5
TAC tutors which made a total of 304 respondents the study. These tutors pay visits to schools to supervise curriculum implementation and offer advice to the teachers on behalf of the Teachers service commission. According to SECMEQ 1(2010), supervision visits is an important monitoring tool used by the teachers employer and Quality Assurance and Standards Officers (QASO) to undertake assessment of education institutions. TAC tutors are responsible for advising teachers on how to utilize T-L resources available in schools to achieve educational goals. Human resources are the most important inputs in the education system. Thus effective management and utilization of human resources is critical to the quality of learning outcomes (G.o.K, 2006). Frequent visit to schools by both the QASO and the TAC tutors is necessary to supervise the implementation of the curriculum implementation in schools.

Out of the 299 questionnaires administered to the respondents, 287 (95.99%) of the questionnaires were completed and returned. All the five (5) TAC tutors were interviewed and the interview schedules filled by the researcher. The breakdown of the completed and returned questionnaires used for analysis was as follows; Head teachers 20 (86.96%) questionnaires were returned, 37(80.43%) questionnaires for teachers were filled and returned, pupils 230 (100%) questionnaires were filled. (100%) interview schedules for TAC tutors were filled by the researcher.

To understand the findings of the study, background information on the schools was necessary. Information collected comprised of the KCPE performance for the last 5 years, years of service as head teacher, Years of service as teacher and pupils enrolment in primary schools sampled.
4.1.1 Schools Performance

The head teachers indicated their schools KCPE performance for the last 5 years as shown in figure 4.1

Figure 4.1: KCPE performance for the last 5 years (2009-2013) in Kandara division

From the finding in figure 4.1, the KCPE performance in this division has been below average. For the last 5 years, on average, 4 (20%) schools had a M.S.S of 200 marks and below while 3 (18 %) schools had a M.S.S of between 200-249. Only one school which managed to get a mean standard score of 300 marks in the year 2009 and another one school in the year 2010. All the other schools have never obtained a M. S.S of 300 marks since the year 2009 up to the year 2013. This might be as a result of teaching/learning resources inadequacy.
4.1.2 Number of Pupils in Schools

Large number of pupils may affect the effectiveness of utilization of T-L resources which in turn may affect the performance of the schools. Therefore, the researcher sought to find out the schools enrolment from the head teachers and their responses were as in table 4.1

<table>
<thead>
<tr>
<th>Schools Enrolment</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>500 and above</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>499 – 450</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>449 – 400</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>399 – 350</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>349 – 300</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>299 – 250</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The study revealed that, 2 (10%) schools had 500 pupils and above. The other 18 (80%) schools had less than 500 pupils or less. The study also found that, none of the schools in Kandara division had less than 200 pupils, indicating that there were no newly started schools in the area. The number of pupils in a class may affect the effective utilization of T/L resources in schools since there will be sharing of the resources available. Wanderi (2011) found that overcrowded classes was a barrier to resources utilization among students in primary schools in Kenya. However this was not the case in Kandara division.
4.1.3 Teachers Workload

The researcher intended to find out the number of lessons taught by a teacher in a week. The finding was recorded in table 4.2

Overloaded teacher would not have enough time for lesson preparation. This will affect his/her effectiveness in utilization of T-L materials which might affect the school performance in National examinations.

Table 4.2: Teachers Workload/Week

<table>
<thead>
<tr>
<th>Number of Lessons/Week</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-24</td>
<td>5</td>
<td>13.51</td>
</tr>
<tr>
<td>25-29</td>
<td>9</td>
<td>24.32</td>
</tr>
<tr>
<td>30-34</td>
<td>13</td>
<td>35.14</td>
</tr>
<tr>
<td>35-40</td>
<td>10</td>
<td>27.03</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>37</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

According to the responses in table 4.2, it was revealed that, 27 (72.97%) teachers in this division teaches less than 35 lessons per week out of possible 40 lessons. According to this study, only 10 (27 %) teachers sampled had more than 35 lessons per week. Teachers in primary schools are supposed to teach a maximum of 40 lessons of 35 minutes per week. Teachers require enough time for lesson preparation. Lesson preparation includes preparing for the right materials which will assist in achieving the lesson objectives. Some T-L materials require more time to prepare than others and therefore require enough time. Teachers in Kandara division according to this study had enough time for lesson preparation and therefore the performance in national examination may not have been affected negatively by teachers being overloaded.
4.1.4 Headteachers/Teachers Experience

The researcher intended to find out the experience of the head teachers and teachers. Their responses were as shown in table 4.3

<table>
<thead>
<tr>
<th>Years of service</th>
<th>Head teachers</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 and more</td>
<td>F 5, % 25</td>
<td>F 2, % 5.54</td>
</tr>
<tr>
<td>10-14 years</td>
<td>F 7, % 35</td>
<td>F 11, % 29.73</td>
</tr>
<tr>
<td>5-9 years</td>
<td>F 5, % 25</td>
<td>F 8, % 21.62</td>
</tr>
<tr>
<td>Below 5 years</td>
<td>F 3, % 15</td>
<td>F 15, % 40.54</td>
</tr>
<tr>
<td>Total</td>
<td>20, % 100</td>
<td>37, % 100</td>
</tr>
</tbody>
</table>

The data in table 4.3 shows that, 12 (60%) headteachers have served for ten or more years. It is expected that experienced teachers are able to manage teaching learning resources effectively. Only 3 (15%) teachers have been in headship positions for a period less than 5 years. The finding revealed that most of the head teachers had enough experience in headship hence in a better position to be able to utilize teaching/learning resources.

The findings in table 4.3 also revealed that, only 2 (5.54%) teachers sampled had served as teachers for less than five years while 11 (29.73%) teachers had taught for a period of between 5 to 9 years. Majority of the teachers, 12 (62.16%), reported that, they had taught for a period of 10 years or more. Therefore, according to the finding of this study, majority of the teachers have enough experience which may
enable them to utilize the resources available in schools to improve the K.C.P.E performance in the division. However, this is not the case in Kandara division where academic Performance continues to be below 250 marks for the last five years.

### 4.2 Teachers /TAC tutors views on Adequacy of teaching/learning resources

The first objective sought to establish whether there were enough T-L resources in public primary schools. The findings were recorded in table 4.4

<table>
<thead>
<tr>
<th>Learning Resources</th>
<th>Adequate</th>
<th>Inadequate</th>
<th>Adequate</th>
<th>Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbooks</td>
<td>9</td>
<td>24.23</td>
<td>28</td>
<td>75.68</td>
</tr>
<tr>
<td>Library</td>
<td>6</td>
<td>16.22</td>
<td>31</td>
<td>83.38</td>
</tr>
<tr>
<td>Wall Maps</td>
<td>11</td>
<td>29.73</td>
<td>26</td>
<td>70.27</td>
</tr>
<tr>
<td>Exercise books</td>
<td>12</td>
<td>32.43</td>
<td>25</td>
<td>67.57</td>
</tr>
</tbody>
</table>

Data in table 4.4 shows that, twenty eight (75.68 %) teachers reported that textbooks were inadequate in primary schools while 9 (24.32 %) teachers indicated that, there were adequate textbooks in all the six subjects taught in primary schools in
Kenya. Library books were reported being inadequate by 83.38% of the teachers. Only 16.22% of the teachers indicated that, there were adequate library books in schools. Concerning wall maps, 26 (70.27%) teachers indicated that, they were inadequate while 11 (29.73%) teachers reported that there were adequate wall maps in schools. In this study, 25 (67.57%) teachers indicated that exercise books were inadequate while 12 (32.43%) teachers cited presence of adequate exercise books.

On the other hand, 3 (60%) TAC tutors reported that textbooks were adequate while 40% reported that textbooks were inadequate. Library books were reported by one (20%) TAC tutors as being adequate and by 80% as being inadequate. All the five TAC tutors involved in this study reported that wall maps are inadequate in schools. Exercise books were cited by 2 (20%) TAC tutors as being adequate and by 3(60%) TAC tutors as being inadequate.

The differences in responses between teachers and TAC tutors concerning availability of T-L materials in schools may be due to differences in positions held by the two different groups of education stake holders. Teachers may be trying to create an impression that poor examination performances is caused by lack of enough teaching/ learning resources while TAC tutors may be trying to blame teachers for poor examinations performances or even due to lack of enough information concerning adequacy of teaching/ learning materials in schools.

Textbooks and other teaching aids are essential in implementation of the curriculum. Textbooks and set books ensure that students can do their private reading, complete assignments in time and conduct group discussions. Textbooks can also be used as
reference materials to supplement the teacher’s instructions. Inadequacy of T-L materials as was reported by the majority of teachers makes learning very abstract to the pupils and could be a factor contributing to poor performance in national examinations in Kandara division.

The study finding from the teachers/TAC tutors conform with that of Transparency International (2010) which revealed that around one in every five pupils in Kenya did not have all the basic learning materials needed for effective participation in the classroom activities. However, teaching/learning resources may be adequate in schools, but how they are utilized is what will determine the learners performance.

4.3 Procurement of Teaching/ Learning Materials in Schools

The second objective sought to find out how the available T-L materials are procured. The researcher first sought to find out the sources of the available T-L materials in schools. In relation to sources of teaching/learning resources, the responses were as shown in table 4.5.

Table 4.5: Sources of Teaching/ Learning Resources according to head teachers and pupils

<table>
<thead>
<tr>
<th>Sources</th>
<th>Head teachers</th>
<th>Pupils</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>M.o.E</td>
<td>15</td>
<td>65.22</td>
</tr>
<tr>
<td>Teachers</td>
<td>3</td>
<td>17.39</td>
</tr>
<tr>
<td>Parents</td>
<td>2</td>
<td>8.70</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>8.7</td>
</tr>
<tr>
<td>No response</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>
The finding in table 4.5 shows that, 15 (65.22%) head teachers and 144 (62.61%) pupils reported that most of textbooks, exercise books and other T-L materials were obtained from the Ministry of education. According to the respondents, parents only contributed 15.87% of the available T-L materials in schools. Two (8.7%) head teachers indicated that schools also acquire resources from other sources. These other sources would be, non-governmental organizations and also from other donors such as Longhorn and Moran publishers.

The current study finding shows that there is poor participation of other stakeholders in education in providing T-L materials required in schools. Most of the T/L materials are provided by the government. The finding agrees with Wanderi’s (2011) finding, which revealed that, parents and the community at large do not fully participate fully to ensure that schools have adequate learning resources for science subjects especially laboratory equipments. Wanderi also found that, teachers and pupils do not make use of resources which are locally available as teaching / learning resources to reduce cost on expensive commercially manufactured materials.

4.3.1 Ordering of Teaching/ Learning Materials in Schools

Head teachers and teachers indicated who orders T-L materials in schools. The question intended to find out whether MoE ordering guidelines are followed in primary schools. Their responses were as in table 4.6.
Table 4.6: Ordering of T-L materials in schools in primary schools

<table>
<thead>
<tr>
<th>Responses</th>
<th>Head teachers</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>Head teachers</td>
<td>18</td>
<td>48.65</td>
</tr>
<tr>
<td>D/ head teachers</td>
<td>10</td>
<td>27.03</td>
</tr>
<tr>
<td>SIMSC</td>
<td>8</td>
<td>24.32</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>37</td>
<td>100.00</td>
</tr>
</tbody>
</table>

According to the finding in table 4.6, eighteen (48.65 %) head teachers and 11 (55 %) teachers reported that, ordering of instructional materials is done by the head teachers. Ten (27.03 %) head teachers and 6 (15 %) teachers reported that, ordering of T-L Materials was done by the deputies head teachers. Only 8(24.32%) head teachers and 3(15 %) teachers indicated that ordering of T –L materials is done by all the members of School Instructional Materials Selection Committee (SIMSC).

According to United Nations Education Scientific and Cultural Organization (UNESCO, 2008), head teachers prefer their procurement committee members being ignorant in procurement matters, to increase their discretion of disposing school funds.

The finding revealed that, most of the head teachers in Kandara division may order what they want since they do not involve all those concern with the T-L materials procurement. This may cause inadequacy of T-L materials in schools and open to misappropriation of Government funds which in turn may cause poor performance in primary schools in Kandara division due to lack of adequate resources.
4.3.2 Challenges Faced by Headteachers in Procurement of T-L Materials

The researcher intended to find out the challenges which the head teachers faced in effective procurement of T-L materials in schools. Head teachers indicated the challenges they faced in procurement of T-L materials as shown in table 4.7.

Table 4.7: Challenges Faced by Headteachers in acquiring of T-L Resources

<table>
<thead>
<tr>
<th>Challenges</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underfunding by MoE</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>Delay in FPE funds disbursement</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Delayed delivery</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Lack of Procurement skills</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Expensive resources</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

According to the finding in table 4.7, Nine (45%) head teachers reported that, underfunding was a challenge faced by the head teachers in the procurement of T-L materials in primary schools in Kandara division. The amount allocated to a pupil for the purchase of teaching materials is not enough for the basic T-L materials required for effective learning in schools. Also irregular disbursement of FPE funds was cited as a challenge in procurement of T-L materials by five (25%) of the respondents. Disbursement of teaching/learning materials is usually done being late. This finding agrees with UNESCO, 2008, who found that textbooks reached in schools sometimes even in second term and in third term. This causes a lot of inconveniences to the teachers since they are not able to start the year having all the required materials. This may cause under coverage of the syllabus due to time.
wastage. Delay in delivery of T-L materials was cited by 15% of the respondents as a challenge in acquiring T-L materials in schools. This might be due to inefficiency of the suppliers selected by the schools who are not competent. Delay in delivery of T-L materials will also cause inefficiency in curriculum delivery in schools which will resort to poor examinations performance.

Expensive resources was also cited as a challenge by 5% of the head teachers involved in the study. Most of the consumable T-L materials such as exercise books, pens and chalk are expensive due to hiking of cost by the suppliers so that they may get a bigger profit. This causes the schools not able to acquire most of the materials required for the effective teaching/learning process. The system was also time consuming and teachers spent time selecting textbooks.

Head teachers were further withdrawn from their teaching duties as they also had to collect the books. Institute of policy Research (IPAR, 2006) notes that school procurement committees lack relevant skills leading to inefficiency and wastage of teaching/learning resources. Bailey (2005) concludes that purchasing is effective when personnel involved are skilled and specialized to execute the procurement function ethnically and professionally.

4.4 Factors Influencing Utilization of T-L Materials in schools according to Teachers

The researcher sought to find out the factors which influence the utilization of resources in schools. Teachers’ responses to this question were summarized in table 4.8.
Table 4.8: Factors Influencing Utilization of T-L Materials in Primary Schools according to teachers

<table>
<thead>
<tr>
<th>Factors influencing utilization of T-L materials</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers workload</td>
<td>17</td>
</tr>
<tr>
<td>Adequacy of teaching learning materials</td>
<td>4</td>
</tr>
<tr>
<td>Nature of classroom</td>
<td>6</td>
</tr>
<tr>
<td>Teaching/learning skills</td>
<td>4</td>
</tr>
<tr>
<td>Teachers experience/knowledge</td>
<td>3</td>
</tr>
<tr>
<td>Number of learners in class</td>
<td>2</td>
</tr>
<tr>
<td>Storage space</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>37</strong></td>
</tr>
</tbody>
</table>

Table 4.8 shows that, seventeen (45.95%) teachers reported that high numbers of lessons taught by teachers per week hinder effective utilization of resources. Enough time is required for effective lesson preparation. Lesson preparation includes improvisation of T-L materials needed in teaching/learning process. Teachers in Kenyan primary schools are supposed to teach a maximum of 40 lessons of 35 minutes each, in a week. According to the finding of this study, this Ministry of Education policy is not in favour of the effectiveness in use of T-L materials in schools.

Six (16.22%) teachers reported that the conditions of classrooms influences the utilization of T-L resources. Some classes have no doors and windows and therefore after using the T-L materials, they are taken back to the store which are not spacious enough to accommodate and keep these materials in good conditions. The
walls of some of the classes in primary schools are very rough to allow charts and maps to be effectively displayed in classrooms. After teaching, T-L materials need to be left displayed in the class to help the pupils to internalize what they have learnt.

Also, according to this study, 4 (10.81%) teachers reported that, inadequacy of T-L materials hindered effective utilization of T-L materials. A teacher might require to use a certain T-L materials but it is not available in the school. The teacher will opt to use other teaching methods such as lecture method which do not require many T-L materials. Lack of enough knowledge in utilization of T-L resources was also cited by 3 (8.11%) teachers as a factor influencing effective utilization of T-L resources. Teachers (5.41%) also reported that the number of pupils in a class influences the effectiveness in the T-L resources utilization. Large classes require more resources than classes with few number of pupils.

Educational outcomes in schools are closely linked to utilization and adequacy of T/L resources in different ways; poor utilization, under utilization, unqualified educators brings forth low educational achievement. Resource selection and utilization is directly related to the teachers’ knowledge and experience (Johan, 2004). The study finding agrees with Aila (2005), who found that only 30% of the teachers were knowledgeable in the use of Instructional media.

4.4.1 Teachers’ In-Service Courses
The researcher intended to find out whether the head teachers/teachers ever attended refresher courses to help them utilize teaching/learning materials
effectively in teaching/learning process. They were asked to indicate whether they have ever attended T/L materials related courses for the last two years. Their responses were recorded in table 4.9

<table>
<thead>
<tr>
<th>Responses</th>
<th>Head teachers</th>
<th>Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>Attended</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Not attended</td>
<td>14</td>
<td>70</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Data in table 4.9 shows that, five (25%) head teachers sampled had attended courses in T-L materials management while 14 (70%) head teachers had not. According to the finding 29 (78.38 %) teachers had not attended any course related to T-L materials for the last two years. Eight (21.62%) teachers did not respond to this question. Relevant skills in handling T/ L materials are necessary to make the best use of resources available. These skills are acquire in teachers’ colleges and also through in- service courses and seminars organized by the Teachers service commission and also by the ministry of education. The finding of this study concur with that of Institute of Policy Research (IPAR, 2006) which notes that, school procurement committees in Kenya lack relevant procurement skills leading to ineffective and wastage of teaching/learning resources (TLRs).
The study finding shows that, teachers are not updated on current information on utilization of T/L materials in schools which lead to inefficient in handling teaching/learning resources. Teachers should be trained in all aspects of teaching including the use of T-L materials and it is important that the teachers should acquire sufficient subject mastery and pedagogy (Sessional, paper Number 1, 2005). Resources selection and utilization is directly related to the teacher’s knowledge and experience. Therefore the more experienced a teacher is, the more effective the teacher is expected in performing his/her duty. This finding also agrees with Aila (2005) who found that only 30% of the teachers were knowledgeable in the use of Instructional media such as visual aids. Teachers with relevant knowledge and skills are at advantage of effectively selecting the right materials and utilizing them effectively to improve the performance in national examinations.

4.4.2 Challenges Faced by Teachers in T-L Materials Utilization

The researcher intended to find out the challenges faced by teachers in utilization of T-L materials. Teachers were asked to indicate the challenges they faced in utilizing T/L materials during teaching/learning process. Their responses were summarized in table 4.10
Table 4.10: Challenges faced by teachers in utilization of T-L resources

<table>
<thead>
<tr>
<th>Challenges</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequacy of resources</td>
<td>12</td>
<td>32.43</td>
</tr>
<tr>
<td>Irregular disbursement of T-L Funds</td>
<td>5</td>
<td>13.51</td>
</tr>
<tr>
<td>Inadequate time</td>
<td>7</td>
<td>18.92</td>
</tr>
<tr>
<td>Poor maintenance</td>
<td>4</td>
<td>10.81</td>
</tr>
<tr>
<td>Storage</td>
<td>3</td>
<td>8.11</td>
</tr>
<tr>
<td>Lack of proper coordination</td>
<td>2</td>
<td>5.41</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>37</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Finding in table 4.10, reveals that, 12 (32.42%) teachers reported that, inadequate resources was a challenge in use of T-L materials. The findings also showed that, lack of enough time (18.92%), poor maintenance practices (10.81%), lack of enough storage facilities for T-L materials (8.11%), and lack of proper coordination among teachers (5.41%), affects negatively T-L materials utilization in schools. The amount allocated to purchase Instructional materials by the Ministry of Education (MoE) is not enough to purchase the required materials needed in teaching/learning process and there materials for teaching are never enough in schools. Also, enough storage facilities for T-L materials will enable the resources to be stored safely and make it easier to get the materials required by the teachers hence safe time

Inadequacy of T-L materials force the teachers to use lecture method which is teacher centered in teaching. This may have a negative effect in pupils’ performance in examinations. The finding of this study agrees with Kangethe’s (2011) who
established that as a result of inadequacy of T-L materials there was ineffective teaching and learning process.

4.5 Importance of T-L Material in Teaching/Learning Process

The researcher intended to find out the effects of T-L materials on teaching/learning process from the teachers. Teachers stated the importance of T-L materials as shown in table 4.11

<table>
<thead>
<tr>
<th>Importance of T-L materials</th>
<th>Teachers</th>
</tr>
</thead>
</table>
| Remove monotony of speech                               | 14       | 37.84%
| Enhance efficient learning                              | 9        | 24.32%
| Sustain student attention                               | 7        | 18.92%
| Create positive attitude towards subject                | 7        | 18.92%
| Improve participation                                   | 6        | 16.22%
| **Total**                                               | **37**   | **100**%

According to table 4.11, it is evident that use of T-L materials in the process of teaching and learning has positive effects which would improve the performance in national examinations. According to the finding of the current study, 14 (37.84%) teachers reported that, use of T-L materials such as charts and other teaching aids in teaching/learning process remove monotony of speech. This help to sustain students’ attention and therefore enhance efficient teaching/learning process. Also it was reported by 7 (18.92%) teachers that, use of T-L materials create positive
attitude towards subject. Of all the factors of learning and success that have been discovered, attitude is known to be the most fundamental in achieving any meaningful success (Mbugua Mumbi, 2012). This implies that, use of T-L resources will change how a learner perceive him/herself, others, things and situations. Positive attitude towards a subject will make learning enjoyable and hence easily understood. Also 16.22% of the sampled teachers indicated that use of T-L materials in classrooms improves pupils’ participation in learning, hence improves academic performance. The learning becomes child centered and the teacher just act as a facilitator. The finding agree with Afalabi, Adejany, Adedapo (2003) and Nganga (2008) who posited that pupils learn best if they are given the opportunity to see and to make observation of what they are taught. According to the ministry of education (2006) manipulation of teaching and learning materials helps to convey meaning and will serve as motivational force to awaken the interest of the learners.

4.6 Challenges in Maintenance of Teaching/Learning Materials

The last study objective was to find out the challenges faced by the head teachers in T-L materials maintenance. The head teachers indicated the challenges faced in maintaining T-L resources in schools as shown in table 4.12
Table 4.12: Challenges in T-L materials maintenance according to the head teachers.

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate maintenance fund</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>Damage and loss by pupils</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Theft cases</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Lack of enough storage facilities</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Loss by teachers</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Data in Table 4.12, shows that, 10 (50 %) head teachers reported that inadequate funds for T-L materials maintenance in primary schools hindered effective maintenance of teaching and learning resources in schools. Textbooks and other teaching/ learning materials like all other tools of production, require regular maintenance practices in order to last for a longer time. The maintenance practices of T-L materials includes, gluing, stapling and also covering the text books using water and dust proof wrappers. These maintenance practices are expensive and therefore, require more funds from the Ministry of Education and also from other sources such as donors and from parents.

Currently, every pupil in Kenyan primary school is allocated Six hundred and fifty shillings (Sh. 650) both for purchase and maintenance of T- L materials per year. These funds is not adequate to purchase T-L materials leave alone their maintenance.
Another challenge which was cited by 20% of the head teachers sampled was damage and loss of T-L materials by pupils. Pupils mishandles the materials given to them and in the process get damaged and others get lost. Pupils are not trained on handling of materials under their care to ensure the T-L materials last for a longer time. The damaged and lost text books and other teaching/learning materials if not replaced immediately will cause T-L materials inadequacy in schools which will lead to poor examinations performance. If the materials are purchased and then they disappear through loss and also through damage by the users, the expected ratio of 1 textbook to 1 pupil, will never be achieved.

Department of Foreign International Development (DFID, 2010) reveals that 5.8 millions books were lost in schools in Kenya within a period of six years (2003-2008). This book attrition is high in both quality and cost. Maintenance funds from the MoE is very little to maintain materials in good conditions. Also, Parents and other education stake holders are not ready to provide storage facilities in order for the materials bought to be stored safely and in good condition in order to last longer.

To address the issue of book storage, the government allocated fifty thousand shillings (Ksh. 50,000) to each school in 2005 for a book corner (MoE, 2010). Unfortunately, the study found no book corner in Kandara division. The aim was to ensure that the book storage facilities existed in classrooms to enhance pupils borrowing. The finding of this study agrees with the finding of Kangethe (2011) who found that, available teaching and learning Materials were not properly maintained and in some cases there was no specific period of replacement of spoilt and lost items by learners.
4.6.1 Improving T-L Materials Maintenance in Schools

The researcher sought suggestions from both head teachers and teachers on how teaching/learning resources maintenance may be improved. The head teachers and teachers’ responses were summarized in table 4.13

| Table 4.13: H/teachers/teachers suggestions on improving T-L material maintenance |
|-----------------------------------------------|-----------------|---------------|
| H/teachers/teachers responses                | Headteacher     | Teachers      |
| Proper covering and replacement              | 4               | 6             | 20%           | 16.22 |
| Involving parents in repairing of I.M        | 2               | 6             | 10%           | 16.22 |
| MoE Increase T-L material fund               | 4               | 1             | 20%           | 2.70  |
| Use of Lockable cabinets                     | 2               | 5             | 10%           | 13.51 |
| Strengthen security                         | 6               | 5             | 30%           | 13.51 |
| Enlarged and well ventilated store          | 2               | 2             | 10%           | 5.41  |
| Control movement in store                   | -               | 5             | -             | 13.51 |
| No response                                 | -               | 2             | -             | 5.41  |
| **Total**                                   | **20**          | **37**       | **100**       | **100** |

Table 4.13, shows that, 21.76% of the respondents suggested that, security in schools need to be strengthened in order to minimize theft cases in schools. In the recent past, most of the schools in Kandara division have been broken into and textbooks and other resources worth hundreds of thousands shillings stolen. Watchmen in some of these schools may be involved in these theft cases. Kaaria (2009) established that most of the T-L resources are stored either in the head teacher office or in the staffroom hence risking loss of these materials through theft.

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Use of polythene wrappers and replacement of the damaged and lost T-L materials were suggested by 18.11% of the respondents as ways of maintaining T-L materials in schools. Polythene wrappers will protect textbooks from water and dust, hence prolong their life. It was also suggested by 11.35% of the respondents that, MoE need to increase the funds allocated to T-L materials maintenance to allow purchase of more T-L materials and be able to maintain them in good conditions.

As the finding indicates, use of lockable cabinets to store teaching/learning materials and also controlled movement in stores may improve T-L materials maintenance in Kandara division. Unauthorized person entering into the store may misplace or even carry some resources from the store since the person in-charge of the store will not be able to control and monitor all the materials moving in and out of the store.

Inspection of teaching learning resources by the teachers is necessary since it will reveal the damaged and lost materials in good time. This will allow replacement of these resources by those concerned in good time. Regular checking of textbooks and other T-L materials by the teachers will encourage the pupils to be more responsible in maintaining T-L maintaining instructional materials under their care.

According to the MoEST, (2003), conservation of resources is a concern of all members of the community, pupils, teachers, school management and parents and therefore all the education stake holders have a responsibility of taking care of T-L materials in schools.
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the main research findings, conclusions and recommendations. The chapter also gives suggestions for further research.

5.2 Summary

The study investigated how the procurement, utilization, and maintenance of instructional materials are being done in public primary schools in Kandara division. The sample comprised of 23 public schools, 23 head teachers, 46 teachers, 230 pupils and 5 TAC tutors.

i. To establish the availability and adequacy of teaching/learning resources in public primary schools in Kandara sub country.

ii. To examine how the available teaching and learning resources are procured.

iii. To establish factors influencing the utilization of teaching and learning resources in primary schools in Kandara division.

iv. To establish the importance of instructional materials in teaching/ learning process in Kandara division.

v. To assess the maintenance of teaching and learning resources in public primary schools in Kandara division.

The summary of the findings based on the stated objectives were as follows:
5.2.1 Teaching and Learning Resources Adequacy in Public Primary Schools in Kandara Division

The study found that recommended textbooks (75%), library books (83.38%), wall maps (70.27%) and exercise books (67.57%) were inadequate in primary public primary schools and this may affect the examination performance in Kandara division.

5.2.2 MoE Procurement Guidelines in Ordering of Instructional Materials

The challenges in procurement of T/L materials includes: Underfunding (45%), delay in FPE funds disbursement to schools (25%), delayed delivery by the suppliers (15%) lack of appropriate resources in the markets (10%) and expensive resources (5%).

The study revealed that the main source of textbooks in primary schools was MoE. Other sources includes: improvisation by teachers and from parents among others. Most of the Ordering of teaching/ learning materials is done by Head teachers and deputy head teachers (80.34%). The study revealed that schools only involved a small percentage of SIMSC, which is against government procurement guidelines.

5.2.3 Factors Influencing the Utilization of Teaching and Learning Resources

According to the respondents, teachers’ workload (45.95%), affects the utilization of T-L materials in schools. A teacher with many lessons in a week would not have enough time to prepare for the lesson well. Time is required to look for the appropriate teaching aids which would make effective teaching/learning process to take place. Nature of classrooms also would affect the effectiveness of a teacher in
teaching/learning process. This was cited by 16.25% of the teachers who were studied. Some of the classrooms in this division have no doors and windows to help in providing security to the materials left in classroom. This would force the teachers to take the T-L materials back to the store after use. This causes inconveniences to both the teachers and also to the learners. In adequate teaching/learning materials is a factor influencing utilization of teaching/learning materials as was reported by 10.81% of the teachers. Inadequate materials would not give every learner an opportunity to acquire a hand-on experience which is necessary for effective learning. The teacher with limited T-L materials will demonstrate to the learners instead of the pupils using the materials themselves. The same scenario would be caused by a high number of learners in a class. Teachers experience was another factor which would affect the effectiveness of T-L materials utilization. This was reported by 8.15% of the teachers who were involved in this study. The more experienced and qualified a teacher is, it is assumed, the more effective would be in teaching/learning process. The study found that in Kandara division most of the teachers had enough experienced to be able to post good performance in national examination Storage facilities also influence the utilization of T-L materials in teaching/learning process since the materials will be well maintained and are easily retrieved when required.

5.2.4 Importance of Teaching/Learning Resources in Teaching/Learning Process

The study established that, Provision of conducive classrooms and T-L materials such as textbooks, exercise books and library books can positively change teachers’ and pupils attitude to teaching and learning and make the subject to be very
interesting, meaningful and exciting to the student which will make them alive and thinking and will also help them to realize the applications of various subjects. This was according to the respondents’ responses. Also the respondents reported that, teaching/ learning resources are important in education because they motivate learners by linking instructions with reality. Resources also enhance standard participation in class for effective learning and remove monotony of speech.

5.2.5 Challenges Faced by Headteachers in Maintenance of Teaching/Learning Resources in Public Primary School in Kandara Division

The head teachers (50%) indicated that, inadequate maintenance funds affects the T-L materials maintenance. Funds is required to buy polythene cover for text books covers stables and also to construct facilities such as book corners. Teachers (20%) reported that, damage and loss of textbooks by pupils was hindering effective maintenance of textbooks. Pupils were damaging textbooks given to them. This was mainly due to the way these books are carried home. Most of the pupils carried home these textbooks in polythene bags which contributes much in their damage. Theft cases was reported by 15% of the headteachers as another maintenance challenge of teaching/ learning materials in schools. This is due to lack of security in schools. Another challenge which was cited by 10% of the headteachers was lack of storage facilities. Most schools sampled had congested stores. This affected proper storage of teaching/ learning materials due to limited space available.
5.3 Conclusion

From the findings of the current study based on the first objective, concluded that, Instructional materials were inadequate in primary schools in Kandara division. The second objective sought to examine how teaching and learning resources are procured and in particular, how ordering of these materials is carried out in schools. The study found that procurement process of T-L resources in primary schools do not adhere to government procurement guidelines. The study also found that, the main source of T-L resources in public primary schools in Kandara division was from the government of Kenya. Based on the third study objective which intended to establish the factors which influenced the utilization of the T-L materials in primary schools, the study concluded that, underfunding by the MoE, delayed disbursement of T-L funds to schools, delayed delivery of resources after ordering, lack of procurement skills among the members of schools instructional materials selection committee (SIMSC) and high cost of instructional materials influenced the availability of IM in schools. For effective utilization of teaching /learning materials the study concluded that teachers’ teaching workload needs to be minimal, there should be conducive learning environment especially the classrooms, adequate T-L resources, manageable number of learners in the class, skilled teachers in T/L materials utilization, adequate storage facilities and also enough security in schools to curb theft cases.

Fourth study objective was to establish the importance of teaching and learning materials in teaching and learning process. The study concluded, that, use of teaching aids would enhance effective learning, sustain student attention, create positive attitude towards learning and also improves participation level of individual learner. The last study objective concluded that, there are challenges facing head teachers in maintenance of teaching/ learning resources. These includes: inadequate maintenance funds, damage/ loss of IM by both the teachers and pupils, theft cases, and lack of storage facilities for teaching and learning materials.
5.4 Recommendation

The study recommends as follows:

i. Ministry of Education (MoE) should increase the teaching/learning materials funds in public primary schools since the present capitation is not adequate to purchase all the necessary materials for an effective teaching and learning process.

ii. Since the study revealed that head teachers do not follow the MoE guidelines, head teachers and other members of SIMSC should follow MoE procurement guidelines to the latter to avoid the possibilities of misappropriation of funds by an individual. The study also recommends that schools initiate income generating activities to raise funds to supplement resources donated by the Ministry of Education (MoE).

iii. The study found that in-service courses for teachers is minimal. Teachers should be in-serviced by the Teachers’ service commission with collaboration with the ministry of education to be abreast with the current teaching methods especially in use of T-L materials.

iv. The current study revealed that facilities for storing T-L materials are inadequate in schools. Therefore, the study recommended enough storage facilities to be provided by the ministry of education and the parents to ensures safety, easy retrieval and good maintenance of the resources in schools.

v. Schools should formulate policies of replacing the damaged and lost teaching/learning materials. For example, the lost and damaged T/L materials should be replaced at the beginning of every term instead of waiting until the beginning of the year. This will ensure that there are enough materials for use throughout the year.
vi. Schools management needs to strengthen schools security to avoid theft cases. This may be achieved by employing competent schools guards and pay them well.

vii. Parents need to be sensitized on importance of providing teaching/learning materials in schools in order to compliment the MoE effort in providing teaching/learning materials for their children since the study found very little parent participation in provision of teaching/learning resources. Parents sensitization would be done by the school management during schools’ prize giving days, during annual general meetings and also during school closing ceremonies.

5.5 Recommendation for Further Research

The current study investigated whether ordering of teaching/learning materials guidelines are followed in schools which may be affecting the availability and utilization of teaching/learning materials in schools. The study showed that ordering of T-L materials is done by the head teachers or the deputy head teachers. Further research need to be carried out to find out whether other MoE procurement guidelines are followed in primary schools. These other procurement guidelines includes: selecting SIMSC members, selection of instructional materials and receiving of the materials. The researcher also recommends further study on the supervision and monitoring and evaluation of the use of instructional materials in public primary schools is carried out by the Quality assurance and standard officers (QUASO).
REFERENCES


http://www.imc-cim.org\programmes\wfm3\papers\session-4\alcu_no.pdf


APPENDIX

APPENDIX 1: Headteachers Questionnaire

Dear Headteacher,

This questionnaire is intended to collect information regarding the management of teaching and learning resources in public primary schools. The information you give will be treated confidentially. You need not write your name anywhere in the questionnaire. Please respond to all the questions.

Part A: Personal and school Data

Tick (✓) appropriately

1. For how many years have you served as a head teacher?
   - Below 5 years [  ] 5-10 years [  ]
   - 10-15 years [  ] Over 15 years [  ]

2. KCPE performance for the last 5 years (2009-2013) in your school

<table>
<thead>
<tr>
<th>Year</th>
<th>M.S.S</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
</tr>
</tbody>
</table>

Part B

Availability of teaching and learning resources

3. Number of pupils enrolled in your school
   - Between 50 – 149 [  ] Between 150 - 249 [  ]
   - Between 250 – 349 [  ] Between 350 – 450 [  ]
   - Over 450 [  ]

4. Number of teachers employed by the government in your school
   - Between 1 – 4 [  ] Between 5 – 9 [  ]
   - Between 10 – 14 [  ] Over 14 [  ]
5. In case of a transfer of a teacher do you get replacement?
   Yes [ ]    No [ ]

6. If yes in question 5, to you always get replacement immediately?
   Yes [ ]    No [ ]

7. How would you rate the availability of the following resources in your school?
   Tick appropriately

<table>
<thead>
<tr>
<th>Resources</th>
<th>Available and adequate</th>
<th>Available but not adequate</th>
<th>Not available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbooks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercise books</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wall maps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chalks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pens</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classrooms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Store room</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others(Specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. What is the ratio of course textbooks to pupils in every subject in classes, 6 and 8?
   Fill the table below.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Class 6</th>
<th>Class 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiswahili</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part C

Procurement of Teaching and Learning Resources

9. Indicate the source(s) of instructional materials available in your school.
   - Government [ ]
   - Parents [ ]
   - Teacher’s improvisation [ ]
   - Others (specify) ........................................................................................................

10. Have you ever attended a course on T/L procurement for the last 2 years?
    - Yes [ ]
    - No [ ]

11. If yes in question 10 above, which course(s) have you attended? ..........................
    ..........................................................................................................................................
    ..........................................................................................................................................
    ..........................................................................................................................................

12. Who select members of school instructional materials selection committee in your school?
    - Headteacher [ ]
    - Teachers [ ]
    - Others (Specify) ........................................................................................................

13. What are the academic qualifications for a parent to be selected as a member of SIMSC in your school? ........................................................................................................
    ..........................................................................................................................................
    ..........................................................................................................................................
    ..........................................................................................................................................

14. When selecting textbooks which factors do you consider?
    - [√] Syllabus coverage [ ]
    - Content of the book [ ]
    - Illustrations and layout [ ]
    - Exercises and activities [ ]
    - Any others [Specify] .....................................................................................................
15. Who evaluate quotations and select Instructional Materials in your school?
   Head teacher [   ]
   SIMSC [   ]
   Others (specify)........................................................................................................

16. Which factors do you consider when selecting instructional materials supplier?
   [√]Tick where applicable]
   Has trade license and company registration [   ]
   Has permanent premises, open all the year [   ]
   Discount offered [   ]
   Has a bank account [   ]
   Any other [Specify]......................................................................................................

17. Does your school have a written agreement with your school’s instructional materials supplier?
   Yes [   ] No [   ]

18. Who prepare instructional materials order in your school?
   Head teacher [   ]
   Deputy head teacher [   ]
   SIMSC [   ]
   Others (Specify)...........................................................................................................

19. Do you always purchase textbooks which are in the Approved list of primary school textbooks and instructional materials?
   Yes [   ] No [   ]

20. After delivery who receipts, check and accept the ordered instructional materials?
   Head teacher [   ]
   SIMSC [   ]
   Deputy head teacher [   ]
   Others (specify)...........................................................................................................
21. Which problem(s) do you experience when receiving the Instructional Materials Resources? List them down.

22. How would you rate the parents provision of learning materials in your school?

<table>
<thead>
<tr>
<th>Rating</th>
<th>Tick appropriately</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>[ ]</td>
</tr>
<tr>
<td>Good</td>
<td>[ ]</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>[ ]</td>
</tr>
<tr>
<td>Poor</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

23. Is there any external force influencing you in any way to buy Instructional Materials from a certain seller?

Yes [ ]  No [ ]

24. If yes in question 23, how are you influenced?

25. Have you ever bought instructional materials on credit for your school?

Yes [ ]  No [ ]

26. Do teachers in your school improvise teaching and learning resources

Yes [ ]  No [ ]

27. Please give any suggestion that may assist in improving the selection and acquisition of teaching and learning resources in primary schools.
Part D

Utilization of learning resources

28. According to you, are all the teaching/learning materials available in your school fully utilized?
   Yes [ ] No [ ]

29. If the answer is No in question 28 above, explain why they are not fully utilized.
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................

30. How often do teachers in your school use Teaching and Learning Resources in their lessons?
   Always [ ] Sometimes [ ] Never [ ]

Maintenance of Teaching and Learning Resources

31. Please, list down the basic records kept on teaching/learning resources in your school.
   ........................................................................................................................................

32. In your school, how are instructional materials maintained?
   [√] Tick appropriately]
   Always make sure books are well covered [ ]
   Carrying books in a book box [ ]
   Keep books away from water and damp [ ]
   Regular repairing [ ]
   Any others (Specify) ...........................................................................................................

33. How often does your school replace worn out instructional materials?
   Regularly [ ] Occasionally [ ]
   When funds are available [ ]
   Others (specify) ..............................................................................................................
34. How are the lost Textbooks and Materials replaced in your school?
   Bought by parents [    ]
   Bought by the government [    ]
   Others (Specify) ...........................................................................................................

35. Are there instructional materials inventories in your schools?
   Yes [    ] No [    ]

36. Has any instructional materials monitoring team ever visited your school for the last two years?
   Yes [    ] No [    ]

37. If yes in question 36, which one?
   Provincial monitoring committee [    ] District monitoring committee [    ]
   Any other (specify) ...........................................................................................................

38. If yes in question 37, how often are the visits?
   Termly [    ]
   Yearly [    ]
   Others (specify) ...........................................................................................................

39. Problems you encounter in the maintenance of Teaching and Learning Resources in your school.

   **Problem** .......................................................... **Tick appropriately** ...........................................
   Theft cases [    ] Lost by pupils [    ]
   Lost by teachers [    ] Damaged by pupils [    ]
   Lack of enough storage facilities [    ] Lack of enough fund for I.M [    ]
   Others (Specify) ...........................................................................................................

40. Suggest measures which could be taken to improve on maintenance of teaching and learning resources in your school? ...........................................................................................................
........................................................................................................................................
........................................................................................................................................
APPENDIX 2: Teachers Questionnaire

Dear Teacher,

This questionnaire is intended to collect information regarding the management of teaching and learning resources in public primary schools in Kandara division. The information you give will be treated confidentially. You need not write your name anywhere in this questionnaire. Please respond to all relevant questions.

**Part A  Personal data**
√ Tick appropriately
1. For how long have you being a teacher? ..............................................................

2. Your professional qualification
   PI [ ]   Dip [ ]   Bed [ ]
   Others ....................................................................................................................

**Part B  Availability of Teaching and Learning Resources**

Please indicate whether the following Resources are available and adequate, available but inadequate or not available in your school. (√ Tick appropriately)

<table>
<thead>
<tr>
<th>Resources</th>
<th>Available and adequate</th>
<th>Available but inadequate</th>
<th>Not available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers guides</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A list of recommended books</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syllabus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textbooks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercise books</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pens / pencils</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wall maps</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Part C**
### Procurement of Teaching and Learning Resources

3. Are you involved when selecting instructional materials for your school?
   
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

4. If yes in question 3 which factors do you consider when selecting textbooks?
   
   | Syllabus coverage | [ ] |
   | Content of the book | [ ] |
   | Illustrations and layout | [ ] |
   | Exercises and activities | [ ] |
   | Any other (Specify) | .......................................................... |

5. After selecting I. M, who order for those materials?
   
   | Headteacher | [ ] |
   | Deputy Headteacher | [ ] |
   | Others (Specify) | .......................................................... |

6. Who receive I.M when brought to school?
   
   | Headteacher | [ ] |
   | Deputy Headteacher | [ ] |
   | SMC Chair person | [ ] |
   | SIMSC Member | [ ] |
   | Others (Specify) | .......................................................... |

7. Are all the materials selected by the SIMSC delivered to school?
   
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

8. If No in question 7, why are some of the selected materials not delivered?
   
   Please explain ..........................................................

9. Do you improvise any Teaching and Learning Materials for your lesson?
   
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
10. If your answer is yes in question 9 which Teaching and Learning Resources do you commonly improvise?

11. Do you involve pupils in production of Instructional Materials?
   Yes [ ] No [ ]

12. Which challenges do you encounter when selecting instructional materials?
   List them down........................................................................................................
   .................................................................................................................................
   .................................................................................................................................

Part D
Utilization of learning resources

13. List down your Teaching subjects
   i.
   ii.
   iii.
   iv.
   v.

14. What is the average size of your class in terms of enrolment? (√Tick appropriately)
   20-30 pupils [ ]
   31-40 pupils [ ]
   41-50 pupils [ ]
   Over 50 pupils [ ]

15. How many lessons do you teach per week? (Tick appropriately)
   20-24 [ ] 29-32 [ ]
   25-28 [ ] 33-40 [ ]
   Any other (specify) .................................................................................................
16. How often do you use the following Instructional Resources in the teaching learning process

<table>
<thead>
<tr>
<th>Resources</th>
<th>Frequently used</th>
<th>Rarely</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbooks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Realia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio-visual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pictures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Models</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagrams</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chalkboards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource person</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. Does your teaching workload per week affect proper utilization of Teaching and Learning Resources?
   Yes [ ]        No [ ]

18. If the answer is yes in question 17 above, how does workload affect Utilization of Resources?
   ........................................................................................................................................
   ........................................................................................................................................

19. Are there some instructional materials which are available in your school but are never used?
   Yes [ ]        No [ ]

20. If the answer is Yes in question 19 above, please list those Materials available in your school but never used...
   ........................................................................................................................................
   ........................................................................................................................................

21. Does the Teaching and Learning Resources availability/unavailability affect the Teaching method you opt to use in your lesson?
   Yes [ ]        No [ ]
22. Explain your answer in question 21 above.

23. List down any challenges that you face in the utilization of Teaching and Learning Resources?

24. Please give any suggestion that may assist in improving proper utilization of teaching and learning resources in your school.

**Maintenance of Teaching/Learning Resources**

25. How are the Teaching/Learning Materials maintained in your school?

- Always making sure the books are covered [ ]
- Books are always carried in book box [ ]
- Books are always kept away from water and damp [ ]
- Repairing textbooks regularly [ ]
- Any other (Specify) .................................................................

26. Suggest ways which can be employed to improve Teaching/Learning materials maintenance in your school .................................................................

Thank you for your co-operation
APPENDIX 3: Pupils Questionnaire

Dear pupil,

This questionnaire is intended to collect information regarding the management of teaching and learning resources in public primary schools. The information you give will be treated confidentially.

Part A  Pupils details

Answer the questions below.

1. How old are you? ................................................................. Years

2. You are in class,   Six   [ ]     Eight   [ ]

Part B

Availability of teaching and learning resources

3. Do you have class textbooks for: (√Tick appropriately)

<table>
<thead>
<tr>
<th>Textbooks</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiswahili</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C R E</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Where do you get textbooks from? (Tick on the box)

   Teacher   [ ]
   Parents   [ ]   Guardian   [ ]
   Other (Specify) 5  .................................................................

5. A part from the textbook you use in class with the teacher, how many other textbooks you have in
<table>
<thead>
<tr>
<th>Subjects</th>
<th>Number of textbooks</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td></td>
</tr>
<tr>
<td>Kiswahili</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td></td>
</tr>
<tr>
<td>Social studies</td>
<td></td>
</tr>
<tr>
<td>CRE</td>
<td></td>
</tr>
</tbody>
</table>

6. Where do you get these textbooks from?
   Teacher [ ]
   Parents / guardian [ ]
   Other (specify)…………………………………………………………………………………………………………………………

7. Which other learning materials do you use in class? List them down………………
   …………………………………………………………………………………………………………………………………………………
   …………………………………………………………………………………………………………………………………………………

8. Who provide you with the materials which you have written above?
   Teacher [ ]
   Parents [ ]
   Others (specify)…………………………………………………………………………………………………………………………

9. Do you share textbooks in class?
   Yes [ ]  No [ ]

10. If yes in question 10 above, which textbooks do you share in class? List them down…………………………………………………………………………………………………………………………

11. Do the learning materials help you to understand better what the teacher is teaching?
   Yes [ ]  No [ ]
12. How many pupils sit in one desk in your class?
   Two [  ]
   Three [  ]
   Four [  ]
   Others (Specify)........................................................................................................

13. Indicate by a tick when your teacher uses the following in the class when teaching

<table>
<thead>
<tr>
<th>Resource</th>
<th>Used always</th>
<th>Used sometimes</th>
<th>Never used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chalkboard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textbooks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagrams</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Realia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. What do you use to carry your books in?
   Box [  ] Bag [  ] Polythene bag [  ]
   Others (specify)........................................................................................................

15. Have you covered all your textbooks?
   Yes [  ] No [  ]

16. Do your teachers check the condition of the textbooks you have regularly?
   Yes [  ] No [  ]

17. Do your parent/guardian pay for the lost or damaged textbooks?
   Yes [  ] No [  ]

Thank you for your co-operation
APPENDIX 4: Interview Schedule for TAC Tutors

1. How long have you been a TAC Tutor? ................................................... Years

2. How many public primary schools are in your zone? ........................................

3. How many teachers are in your zone? ..............................................................

4. How many pupils are in your zone? .................................................................

5. What was the KCPE mean standard score of your zone for the last 5 years

   Zonal KCPE MSS for the last 5 years
   
<table>
<thead>
<tr>
<th>Year</th>
<th>M.S.S</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
</tr>
</tbody>
</table>

6. Do you normally visit schools in your zone to give advice to teachers on proper management of instructional materials in their schools?
   Yes [ ]  No [ ]

7. If yes in question 5 how often do you visit each schools?
   Occasionally [ ]  Termly [ ]  Yearly [ ]
   Other (Specify) ........................................................................................................

8. In your opinion, are the following learning resources adequate, inadequate or not available in the schools in your zone?

<table>
<thead>
<tr>
<th>Resource</th>
<th>Adequate</th>
<th>Inadequate</th>
<th>Not available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbooks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wall maps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chairs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classrooms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9. According to you, do head teachers always follow the government guidelines when procuring instructional materials?

Yes [ ] No [ ]

10. Comment on your answer in question 9. .................................................................

11. How frequently do teachers in your zone use teaching and learning resources in their lessons

Always [ ] Sometime [ ] Never use [ ]

Any other specify................................................................................................................

12. Do teachers in your zone ever borrow teaching and learning materials from the Zonal Teacher Advisory Centre?

Yes [ ] No [ ]

13. If yes in question 11, which materials do they borrow from the centre?

14. According to you, which measures would be taken to improve management of teaching/learning resources in primary schools. –List them down.

Thank you for your co-operation
APPENDIX 5: Resources Observation Form

Name of the school..............................................................................................................................

Zone..................................................................................................................................................

Date......................................................................................................................................................

1. Are the teaching/learning resources available, not available, adequate or not adequate? (Tick appropriately)

<table>
<thead>
<tr>
<th>Teaching / Learning Resources</th>
<th>Available</th>
<th>Not available</th>
<th>Adequate</th>
<th>Not adequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbooks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Print media</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference books</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers guides</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3dimensional items</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio visual</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classrooms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syllabus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercise books</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Which are the Teaching and Learning Resources found in use in classrooms

   Realia       [ ]       Print       [ ]
   Audio visual [ ]       Charts &Posters [ ]
   Models       [ ]
   Any other (Specify)....................................................................................................................

3. Which are the Teaching and Learning Resources improvised? .........................
   ...................................................................................................................................................

4. Which are maintenance of resources mechanisms in place in the school?............
   ...................................................................................................................................................

5. Did the pupils interact effectively with the Teaching and Learning resources
during the lessons? Yes [ ] No [ ]

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## APPENDIX 6: Budget

<table>
<thead>
<tr>
<th>Budget Items</th>
<th>Quantity</th>
<th>Unit cost (Ksh)</th>
<th>Total (Ksh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of research instrument and documents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typing</td>
<td>300 pg</td>
<td>300 x 5</td>
<td>1500</td>
</tr>
<tr>
<td>Printing</td>
<td>300 pg</td>
<td>300 x 25</td>
<td>7500</td>
</tr>
<tr>
<td>Photocopying</td>
<td>1200 pg</td>
<td>300 x 2</td>
<td>2400</td>
</tr>
<tr>
<td>Binding</td>
<td>4 documents</td>
<td>4 x 50</td>
<td>200</td>
</tr>
<tr>
<td>Browsing</td>
<td>300 minutes</td>
<td>300 x 4</td>
<td>1200</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td><strong>12800</strong></td>
</tr>
<tr>
<td>Stationery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ruled papers</td>
<td>2 reams</td>
<td>2 x 400</td>
<td>800</td>
</tr>
<tr>
<td>Printing papers</td>
<td>1 ream</td>
<td>1 x 600</td>
<td>600</td>
</tr>
<tr>
<td>Pens</td>
<td>5 pieces</td>
<td>3 x 20</td>
<td>100</td>
</tr>
<tr>
<td>Erasers</td>
<td>3 pieces</td>
<td>3 x 20</td>
<td>60</td>
</tr>
<tr>
<td>Flash disk</td>
<td>1 piece</td>
<td>1 x 850</td>
<td>850</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>30 days</td>
<td>30 x 500</td>
<td>15000</td>
</tr>
<tr>
<td>Lunches</td>
<td>30 days</td>
<td>30 x 200</td>
<td>9000</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td><strong>24000</strong></td>
</tr>
<tr>
<td>10% contingencies</td>
<td></td>
<td></td>
<td>4000</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td></td>
<td></td>
<td><strong>43,210</strong></td>
</tr>
</tbody>
</table>
APPENDIX 7: Study Permit

THIS IS TO CERTIFY THAT:

MR. PETER MUCHERU KARANJA

of KENYATTA UNIVERSITY, 1389-1000

Thika, has been permitted to conduct
research in Muranga County

on the topic: TEACHING AND LEARNING
RESOURCES IN PRIMARY SCHOOLS IN
KANDARA DIVISION, KANDARA
DISTRICT, MURANGA COUNTY,
KENYA

for the period ending:
31st December, 2014

Signed

National Commission for Science,
Technology & Innovation

Secretary