INFLUENCE OF TEACHER-PUPIL RATIO AND AVAILABILITY OF READING MATERIALS ON READING ACHIEVEMENT LEVELS OF STANDARD THREE PUPILS IN KENYENYA SUB-COUNTY, KISII COUNTY, KENYA

OBUNGA ELIJAH ORANGI

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A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR AWARD OF THE DEGREE OF MASTER OF EDUCATION (EARLY CHILDHOOD STUDIES) IN THE SCHOOL OF EDUCATION OF KENYATTA UNIVERSITY

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DECLARATION

I confirm that this research thesis is my original work and has not been presented in any other university/institution. The thesis has been complemented by referenced works duly acknowledged. Where text, data, graphics, pictures or tables have been borrowed from other works- including the internet, the sources are specifically accredited through referencing in accordance with anti-plagiarism regulations.

Signature_____ Date_____

Obunga Elijah Orangi (E55/OL/10368/2008)

Department of Early Childhood Studies

We confirm that the work reported in this thesis was carried out by the candidate under our supervision as University supervisors.

Signature_____ Date_____

Dr. Gladwell Wambiri

Department of Early Childhood Studies

Kenyatta University

Signature_____ Date_____

Dr. John Ng'asike

Department of Early Childhood Studies

Kenyatta University

DEDICATION

To my wife Bochere, son Duke and daughter Lucy. God bless abundantly.

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ABBREVIATONS AND ACRONYMS

CSAE	-Centre for the Study of African Economies
EPRC	-Economic Policy Research Centre
FPE	-Free Primary Education
GoK	-Government of Kenya
KIE	-Kenya Institute of Education
KIPPRA	-Kenya Institute for Public Policy Research and Analysis
KNEC	-Kenya National Examinations Council
MOE	-Ministry of Education
MOEST	-Ministry of Education Science and Technology
NAEP	-National Association of Educational Progress
NAPE	-National Assessment of Progress in Education
NASMLA	-National Assessment System for Monitoring Learner Achievement
No.	-Number
NSO	-National Statistics Office
OECD	-Organisation for Economic Cooperation and Development
ORC	-Opinion Research Corporation
PLE	-Primary Leaving Examinations
PRIMR	-Primary Math and Reading
S.E.O	-Sub-county Education Officer
SACMEQ	-Southern and eastern African Consortium for Monitoring Educational Quality
SID	-Society for International Development

SPSS	-Statistical Program for Social Sciences
STAR	-Student/Teacher Achievement Ratio
UNEB	-Uganda National Examinations Board
UNESCO	-United Nations Educational Scientific and Cultural Organisation
UNICEF	-The United Nations Children's Fund
UPE	-Universal Primary Education
Vol.	-Volume

ABSTRACT

Reading ability is one of the basic requirements which enable people to engage themselves successfully in their daily activities. Reading achievement determines the child's success in school and eventual career development. Despite this, there are low reading achievement levels among standard three pupils. The purpose of this study was study the influence of teacher-pupil ratio and availability of reading materials on reading achievement levels of standard three pupils in Kenyenya Sub-County, Kisii County, Kenya. The study was guided by the following objectives: to establish reading achievement levels of standard three primary school pupils, to establish the influence of pupil-teacher ratio, text books-pupil ratio, story books- pupil ratio and charts-pupil ratio on reading achievement levels of standard three primary school pupils. This study was guided by Lev Vygotsky's sociocultural theory. Descriptive survey and correlation research designs were used. The independent variables included pupil-teacher ratio, text books-pupil ratio, story books- pupil ratio and charts-pupil ratio. The dependent variable was the reading achievement levels of standard three pupils. Cluster and simple random sampling methods were used in this study. The population for this study comprised of all primary school and all standard three primary school pupils out of which 65 primary schools were sampled for observing reading materials and 355 standard three pupils were sampled for testing reading ability. The validity of English reading test was established by concurrent validity and the validity of the observation schedule was achieved by item review. The researcher used inter-rater (inter-observer) method to determine the reliability of the observation schedule which was found to be +0.85 using the Cohen's Kappa index. The test re-test method used to test the reliability of the reading test was found to be +90. Quantitative data was collected from reading test and observation schedule. The data was presented using frequency tables and analysed using chi-square, simple regression and multiple regression using SPSS version 20 computer software. The major findings indicated that majority of standard three pupils were at word level; there was a significant relationship between pupils' reading achievement levels and pupil-teacher ratio, textbook-pupil ratio, story books-pupil ratio and charts-pupil ratio. In the recommendations, the ministry of education should organise refresher courses to equip teachers with reading literacy skills in order to assist pupils acquire reading competency, there is need for the government through Teacher Service Commission to increase the number of teachers in primary schools, ministry of education should provide policy guidelines on the development of teaching and learning resources. Also, teachers should improvise own ways of helping children to acquire reading skills. Teachers should initiate book harvesting programme where they will engage different stakeholders to collect new books for their schools and should develop reading charts from locally available materials. Further research should be conducted at pre-primary school level which is the foundation for developing reading skills in the learners to unearth the possible school level challenges.

CHAPTER ONE

INTRODUCTION AND CONTEXT OF THE STUDY

1.0 Introduction

This chapter focuses on the background to the study, problem statement, purpose of the study, research objectives, research questions, research hypothesis, significance of the study, limitations and delimitations of the study, assumptions of the study, theoretical framework, conceptual framework and operational definition of terms.

1.1 Background to the Study

Reading is one of the most important skills necessary for a happy, productive and successful life (Shriver, 2006). Reading competencies by the learners ensures that children performs well in school and eventually career development. A child who is a good reader is confident, has a high level of self-esteem and is able to make easy transition from learning to read to reading to learn (Schweinhart, Montie, Xiang, Barnett, Belfield and Nores, 2005). Ministry of Education (MoE) (2002) stipulates clearly that one of the objectives of teaching reading skills in lower primary school is to enable the learner to acquire reading skills. In light of this, children require help from their teachers to develop appropriate reading skills to be able to engage successfully in the reading necessary for them to learn in later years.

A review of literature reveals that various factors are perceived to influence the success in learning to read although the findings tend to have contradicting findings about the

extent to which the various factors tend to influence reading abilities. These factors include school factors, family factors, pupil factors, peer factors (Crosnoe, Johnson and Elder, 2004) and reading instructional challenges faced by teachers (Snow, Griffin, and Burns, 2005) among others. Some of the school factors influencing learning to read may include availability of teaching and learning materials, and teacher-pupil ratio among others.

In an annual study to evaluate education systems worldwide by the OECD (2012), it was noted that reading problems are prevalent in many countries. Despite repeated attempts to improve reading outcomes in the United States, on the 2007 NAEP study, only 34 percent of eighth graders scored at or above the proficient level, while 42 percent scored at the "basic" level, and 26 percent scored below the basic level (Lee, Grigg and Donahue, 2007). This means that in the United States about a third of eighth graders demonstrate competency in the area of reading on standardized measures.

Despite the United States efforts towards improving the country's Education standards, more than 17.5% of children (roughly ten million) experiences reading difficulty in their first three years of schooling and this has been a concern to majority of parents and teachers since studies have consistently indicated that successful reading begins in early grades (National Reading Panel, 2006). Despite the fact that there is a body of evidence indicating that reading abilities are influenced by family, child, school and environmental characteristics, there is limited research examining the impact of school factors on reading ability among lower primary school children (Jessica, 2008).

Consistent with this finding, the current study examined school factors influencing reading achievement levels in Kenyenya Sub-county, Kenya,

Studies from Europe indicate that more than 10% of pupils annually do not reach the required standards in class reading levels (Rosebrock, 2006; Strickland and Riley-Ayers, 2006). These findings are further supported by a study by Queensland Authority (2005) that shows that 3% of year three learners, 16.6% of year five learners and 5.5% of year seven learners in the State of Queensland are achieving below the benchmark for reading. This is a clear indication that low reading achievement among pupils is widespread.

Similarly, studies done in Africa have shown dismal reading ability among primary school pupils, with over 92% not able to read at various class levels (National Assessment System for Monitoring Learner Achievement (NASMLA), 2010). According to a report by Southern and Eastern Africa Consortium for Monitoring Education (SACMEQIII 2007), there is low reading achievement across many parts of Africa. In Malawi, more than half of standard three pupils could not read common words in textbooks and 50 percent could not identify letters in the alphabet (Kadzamira and Rose, 2003).

In South Africa, reading problems are prevalent and most learners still cannot read or write hence overall low performance in lower primary grades (Department of Basic Education, DBE, 2010). There has also been a report of cases in which learners in higher grades continue to battle to read and write, even to write their names (Barone,

2005). The frustration shared by many Senior Phase teachers suggests problems at the Foundation Phase, with the inability to read and write identified as one of the major causes of poor academic performance of learners across the country (Johnson, 2006).

In Zambia, there is an extremely low reading literacy level in primary schools (Mubanga, 2010). This is a matter of concern to the Government and other stakeholders including parents of school children in the country. This shared concern has led to the establishment of the National Language Committee and later the formulation of the national language policy which directed that initial literacy instructions were to begin in a child's local language preferably the mother tongue, although this has not been the practical experience and the governments' efforts have not had impressive academic performance in the area of language and especially reading owing to the fact that only 25% of Grade 6 pupils could read at a minimum level of proficiency and only 3% read at a specified desirable level (Liow and Lau,2006; Downer and Pianta, 2006).

In Uganda, government aided schools reading outcomes decreased significantly after the introduction of FPE (NSO and ORC Macro, 2003). According to a study by EGRA(2010), the average score for literacy at Grade three, and Grade 6 in 2010 was at a low of 47% and 40% respectively. In addition, 60% of the learners in Grade 3 and about 70% in Grade 6 were below the 50% proficiency level for literacy for their respective grades. In spite of the huge investments of government in enhancing quality in its education system, this literacy scores are low.

Kenyan pupils reading competency across counties indicated that only a small percentage of the standard three pupils had acquired basic reading skills (Uwezo, 2011). According to the report, 2.8% of standard three pupils could not even identify letter sounds, 15.7% were able to read letters only, 28.5% could not read beyond single words, 25.8% could not read paragraphs and only 27.5% could read and understand a standard two level story. The report indicates that the average of standard three pupils' reading competency level in Kisii County was 24.83%. Within this county, research was conducted in five out of nine Sub-Counties. The resultant reading competencies in the five sub-counties were as follows: Gucha had 28.10%, Gucha South had 8.06%, Kisii South had 21.00%, Kisii central had 28.07% and Masaba had 38.93%. The expected reading competency level is the story level. In light of the above percentages in reading competency, it was realized that many standard three pupils in Kisii County had low reading achievement levels. Therefore, there was need to conduct a research to establish reading achievement levels of standard three pupils in Kenyenya Sub-county which is one of the Sub-Counties in Kisii County.

If these factors are not established, then it would be difficult to solve the reading problems among children. It was particularly important to establish the factors at the lower primary school level because reading success in upper primary classes is determined by the reading foundation that children develop at this level. If this is not done, children may continue to fail in reading and this will affect performance in all other subjects in upper primary when they are expected to learn much by reading independently.

1.2 Problem Statement

Despite the fact that the Kenyan government provided free primary school education in the year 2003 and promulgated the Kenyan constitution (2010) providing for free and compulsory basic education as a human right for every Kenyan child, a number of studies conducted nationally and internationally to establish reading literacy levels have shown dismall performances in Kenya. The efforts by the government, teachers and the general public to improve the early childhood education have not been impressive, the outcry over reading levels in the recent years has become of great concern. Majority of the standard three pupils who were sampled from some sub-counties in Kisii County were not able to engage in reading activities successfully. They had not reached the expected reading competency level. The available studies had mainly looked at pupils' reading achievement levels of standard three primary school pupils in the sampled sub-counties. They had not investigated the reading achievement levels in Kenyenya Sub-County and any other perceived factors that could have contributed to the resultant reading achievement levels. Hence the study sought to investigate the reading achievement levels and perceived factors that could be influencing the reading achievement levels among standard three primary school pupils in Kenyenya Sub-county, Kisii County. Specifically, the study focused on factors such as pupil-teacher ratio, availability of reading materials in terms of English textbooks-pupil ratio, story book-pupil ratio and charts-pupil ratio.

1.3 Purpose of the Study

The purpose of the study was to investigate the influence of teacher-pupil ratio and availability of reading materials on reading achievement levels of standard three primary school pupils in Kenyenya Sub-County, Kisii County, Kenya.

1.4 Research Objectives

i. To establish reading achievement levels of standard three primary school pupils.
ii. To establish the relationship between teacher-pupil ratio and reading achievement levels of standard three primary school pupils.
iii. To establish the relationship between textbooks-pupils ratios and reading achievement levels of standard three primary school pupils.
iv. To establish the relationship between the story books-pupils ratios and reading achievement levels of standard three primary school pupils.
v. To establish the relationship between the charts-pupils ratios and the reading achievement levels of standard three primary school pupils.
vi. To find out the extent to which teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio and charts-pupil ratio predict reading achievement levels of standard three primary school pupils.

1.5 Research Hypothesis

H_O1: There is no significant variability on standard three primary school pupil's reading achievement levels.

H_O2: There is no significant relationship between teacher-pupil ratio and reading achievement levels.

H_O3: There is no significant relationship between the availability of textbook and the reading achievement levels.

H_O4: There is no significant relationship between the availability of story book and the reading achievement levels.

H_O5: There is no significant relationship between the availability of charts and the reading achievement levels.

Ho6: There is no significant contribution among teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio and charts-pupil ratio towards reading achievement levels of standard three primary school pupils.

1.6 Significance of the Study

The study will shed light on the factors associated with poor reading in primary schools especially standard three. The findings of the study will help the ministry of education to formulate and implement ideal policies to enhance early intervention for learners experiencing reading problems, enhance reading among lower primary school pupils and to equip teacher trainees with relevant knowledge and skills to enable them to handle lower primary school pupils with reading problems

1.7 Limitations and Delimitations of the Study

1.7.1 Limitations of the Study

The limitations of the study included covering a sample of public primary schools and focusing only on standard three pupils rather than the whole primary classes however enough sample was used to provide a broader picture of pupils' reading achievement levels in Kenyenya Sub-county, Kisii County.

1.7.2 Delimitations of the Study

A wide range of factors could potentially affect the reading achievement levels. However, this study limited itself to pupil-teacher ratio, availability of reading materials such as English text books, story books and charts. The study was carried out among standard three pupils because it is internationally agreed that, after completing two years of schooling, a pupil is expected to have acquired basic competencies in literacy and the basic concepts, upon which other higher level skills are built on, are all introduced by end of class two. Factors influencing reading development among standard three primary school pupils vary from one geographical region to another. This study was conducted in only one Sub-county in Kenya. The results cannot be generalized to the entire country but can be restricted to only those areas that have similar characteristics to the study Sub-county.

1.8 Assumptions of the Study

It was assumed that all public primary schools used the same primary school curriculum. Therefore, the pupils' reading achievement would be comparable if they had similar learning experiences. Also, it was assumed that all the pupils were being taught by p1 trained teachers who were employing appropriate reading instructional strategies while teaching reading. Therefore, the pupils' reading achievement would be comparable if they had similar learning experiences.

1.9 Theoretical Framework and Conceptual Framework

1.9.1 Theoretical Framework

This study was guided by the Socio-cultural Theory. Vygotsky's sociocultural theory of human learning describes learning as a social process and the origination of human intelligence in society or culture. Vygotsky saw a direct relationship between humans and objects of the cultural environment. The major theme of Vygotsky's theoretical framework is that social interaction plays a fundamental role in the development of cognition. Vygotsky believed everything is learned on two levels.

First, through interaction with others, and then integrated into the individual's mental structure. Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary

attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals. (Vygotsky, 1978)

A second aspect of Vygotsky's theory is the idea that the potential for cognitive development is limited to a "zone of proximal development" (ZPD). This 'zone' is the area of exploration for which the pupil is cognitively prepared, but requires help and social interaction to fully develop. A teacher or more experienced peer is able to provide the learner with "scaffolding" to support the pupil's evolving understanding of knowledge domains or development of complex skills. Collaborative learning, discourse, modelling, and scaffolding are strategies for supporting the intellectual knowledge and skills of learners and facilitating intentional learning. In scaffolding, pupils need learning materials to assist their learning. These can be textbooks, story books, photographs, drawings or charts.

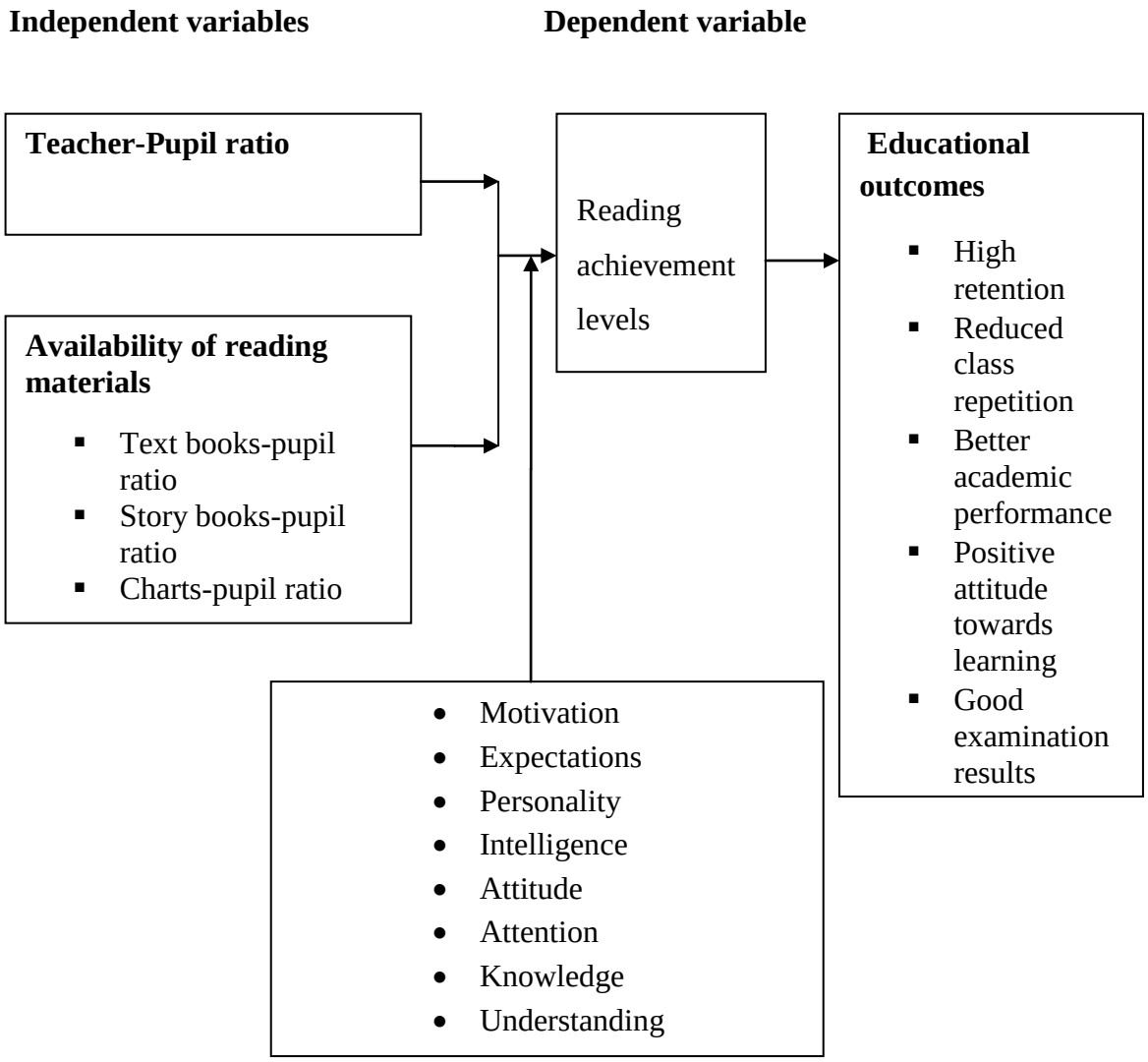
According to the Social Cultural Theory, reading is best practised socially. According to (Vgotsky, 1978), pupils extract meaning from text based on their cultural and social background. To him reading is best practised socially, that is in groups. This theory posits that when one reads a variety of texts that celebrate a variety of cultures one develops a better social and cultural understanding of what one is reading. The texts can only be obtained by reading textbooks, story books and charts. Culturally diverse pupils need materials that reflect and celebrate their cultures. Readers need opportunities to share their perspectives. Therefore this reading model caters for the reading interests of pupils from various cultures where readers have different cultural backgrounds.

It is clear that learners construct their own knowledge hence they need appropriate environments especially the class environment. This study also finds a clear application of the socio-cultural theory because its principles are task oriented. Hence, pupils should be in small groups and be provide with a variety of reading materials such as textbooks, story books and charts. This gives emphasis to the significance of social and mutual aspects of skill development and learning. Vygotsky's socio-cultural theory (1978) has an important contribution in studying the environments essential for learning to read. Vygotsky's theory advocates for modification of varied pupils' learning to read contexts. In this case, the class environment should offer pupils with opportunities to experience reading activities that contribute development of reading abilities. Changing class environment enhances pupils' range of experiences and stimulates their learning to read.

1.9.2 Conceptual Framework

The figure below shows the perceived variables influencing pupils' reading achievement. These include pupil-teacher ratio and availability of reading materials Pupils' reading achievement levels becomes the dependent variable while pupil-teacher ratio and availability of reading materials the independent variables for this study. The intervening variables for this study were pupil's motivation, learner expectations, and personality of the learner, intelligence, learner attitude towards reading, paying attention, knowledge and ability to understand. These intervening variables are likely to provide a causal link between the independent and dependent variables in this study. If these intervening variables are factored, learning to read is likely to be improved.

The conceptual framework below shows the relationship of the variables and how they are interrelated.



Source: Author

Figure 1.1: Conceptual Framework

1.10 Operational Definition of Terms

Charts-pupils ratio -the number of English reading charts in relation to the number of standard three pupils.

Orange book- approved list of school textbooks and other instructional materials for early childhood development education, primary and teacher training colleges. Revised 12th edition. Volume One. January 2013.

Reading ability test – this is a class two English reading test used to test standard three pupils' reading proficiency.

Reading achievement levels- reading competency level at which standard three pupils will achieve and will be categorized as " story level", "paragraph level", "word level" and 'start' level (can not read four letters) depending on reading ability of the pupil.

Reading materials- this included standard three text books (JKF), standard three story books (as in orange book) and English reading charts made by the teacher**.**

Story books-pupils ratio -the ratio of the KIE approved standard three English story books in relation to the number of pupils.

Teacher-Pupil ratio-The pupil-teacher ratio will take ordinal measurement with high when standard three pupils are above 40, average when pupils are between 30 and 40 and low when they are below 30.

Text book-pupils ratio -the ratio of the KIE approved standard three English text books in relation to the number of pupils.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

In this chapter a detailed review of the literature related to this study is presented. This presents empirical studies on reading achievement levels in lower primary schools, and perceived factors influencing reading achievement levels such as pupil-teacher ratio and availability of reading materials. Also, summary of the literature was reviewed.

2.1 Reading Achievement Levels in Lower Primary Schools

Reading difficulties are common in our schools. In fact, in a national assessment, about one-third of the pupils in the United States failed to demonstrate even partial mastery of prerequisite knowledge and skills necessary to read and understand grade-level text in their first four years of schooling (Lee, Grigg and Donahue, 2007). In schools that served minority populations and many students who lived in poverty, this percentage was even higher and more than half of the students in these groups could not read and understand grade-level text (Lee et al., 2007). This was a clear indication that low reading literacy levels do not only affect Kenyan pupils but also pupils in other countries outside Africa.

SACMEQ, a regional research project involving 14 countries in sub-Saharan Africa, whose main objective is to monitor learning achievement at primary school level, was started in 1998 and so far produced three reports. The SACMEQ III project followed

the general research direction of the first two SACMEQ Projects by focusing on an examination of the conditions of schooling in relation to achievement levels of learners and their teachers in reading, and mathematics. SACMEQ II (2007) indicated that standard three pupils reading percentage competency level in Namibia was 25.1%, Uganda was 25.5%, Tanzania was 6.6% and Kenya was 11.8%. It was realized that there was low reading achievement levels across many parts of Africa and Kenya inclusive.

The SACMEQ III (2012) project focussed on an examination of the conditions of schooling in relation to achievement levels of learners and their teachers in reading, and mathematics. The sample comprised of 4436 standard six pupils in 193 public and private schools, 733 teachers and 193 head teachers in Kenya's eight provinces. English, Mathematics, and HIV and AIDS knowledge tests, and questionnaires were administered to the pupils and their teachers. School heads filled the questionnaires about themselves and the school. A school observation schedule was also administered. It was realized that the reading achievement levels across Nyanza province among the standard six pupils was 21.6%. Contrary, the current study studied standard three primary school pupils in Kenyenya Sub-County focussing on reading achievement only.

Studies have reported poor reading levels among primary school pupils in Kenya (UNICEF and World Bank, 2009). Uwezo (2011) reported that children in Kenya are graduating from primary school without adequate reading skills. Only one third of children in standard three have acquired the reading competence expected at class two and reading achievement level of standard three primary school pupils in Kisii County

is 24.83 %. This report comes barely after a few years after the inception of Free Primary Education in January 2003. Thus, this study sought to find out the factors related to the poor reading performance among standard three pupils in Kenyenya Sub-county.

2.2 Teacher- Pupil Ratio and Reading achievement levels

The available studies provide mixed evidence on the impact of class size on pupils' test scores. Different scholars have conducted studies on the impact of different class sizes on pupils' performance.

An experimental study was conducted in the United States to examine the effects of class size on reading achievement in kindergarten (Milesi and Gamoran, 2006). The data was obtained from a nationwide survey which constituted of the early childhood longitudinal study of the 1998-99 kindergarten class. To distinguish class level from individual level effects, this analysis utilized hierarchical linear models. In an effort to understand the inconsistent findings of the past, the study examined classroom conditions that may have affected the link between class size and academic achievement, and also consider whether class size had different effects for different groups of learners. The study found no evidence of class size effects on learners' achievement in either reading or mathematics hence the study concluded that class size was insignificant in predicting pupils' reading achievement and academic achievement. This study is similar to current study in that it focussed on the effect of class size on academic achievement of the learners and both used survey research designs. Contrary,

the current study's population was standard three primary school pupils in one Sub-County and not kindergarten learners in the whole county. Also this study utilised hierarchical linear models to analyse data, but, the current study utilized chi-square, simple regression and multiple regression to analyse data. Lastly, the current study was not longitudinal.

Further, Hanushek (2003) conducted a study to explore the failure of input-based schooling policies in the United States. It was also found out that school inputs, including small class sizes had little effect on pupil academic achievement since reading in public schools did not decline due to the influx of pupils in schools. Similar to the current study, it investigated the influence of teacher-pupil ratio on reading achievement levels. This study was conducted in the United States, but the current study was conducted in Kenyenya Sub-County, Kenya.

In the United States, Ehrenberg, Brewer, Gamoran and Willms (2001) conducted a study on the impact of class size on students' achievement. They found out that small class benefited student learning when they occurred in combination with particular methods of instruction. When the teacher carried out group instruction, the time he or she devoted to each pupil did not change with size of the group. In contrast, when the teacher carried out instruction with small groups or individuals, the time he/she spent to work with each pupils was no larger a constant but a function of class size, that is, as the number of pupils in the class decreased, the teacher devoted more time to each pupils. This study differed with the current study in terms of geographical location.

An effect of class size on classroom interactions and pupil behavior research study was conducted in United Kingdom (Blatchford, Bassett and Brown, 2011). This study extended research by comparing effects on pupil classroom engagement and teacher pupil interaction, and examined if the effects varied by pupil attainment level and between primary and secondary schools. Systematic observations were carried out on 686 pupils in 49 schools. Multilevel regression methods were used to examine relationships between class size and observation measures, controlling for potentially confounding factors like pupil attainment. At primary and secondary levels smaller classes led to pupils receiving more individual attention from teachers, and having more active interactions with them. Classroom engagement decreased in larger classes, but, contrary to expectation, this was particularly marked for lower attaining pupils at secondary level. Therefore, low attaining pupils can benefit from smaller classes at secondary level in terms of more individual attention and facilitating engagement in learning. This study differs with the current study in terms of sample size used, levels of investigation and data analysis technique. The current study used a pupil sample of 355 from 65 sampled schools. Also, the study was conducted in primary school level only and used chi-square, simple and multiple regressions to analyse data.

An empirical research study on the effects of class size on academic achievement of university students in South was conducted (Bakasa, 2011). The Student/Teacher Achievement Ratio (STAR) project defined a small class size as 13-17 students and a regular class as 22-25 students. While the majority of classes under investigation in this study constituted more than 100 students, the majority of students felt that a class size

of 50 students would result in effective communication. However, the university lecturers reported that larger classes did not necessarily perform any worse than the smaller ones. It was found that most students and lecturers alike rather preferred smaller classes to larger ones. Most lecturers believed that student achievement and improved student behaviour was linked to decreased class size. This study was similar to the current study in relation to establishing the effect of class size on performance. Contrary, the current study was not conducted in a university, but was conducted among standard three primary school pupils.

To investigate the challenges of big class size on learning of pupils in Kampala, Uganda' Central Municipality, a research study was conducted (Kewaza and Welch, 2013). The purpose of this study was to investigate challenges encountered with reading pedagogy, teaching materials, and teachers' attitudes towards teaching reading in crowded primary classes. The methods used to collect quantitative and qualitative data were surveys, interviews, and questionnaires. Data were collected from 48 teachers of reading skills in lower primary classes, 16 primary head teachers, and 16 heads of the lower sections in the 16 primary schools selected for the study. Most responders tended to show that the commonest teaching methods used by the teachers of reading in the crowded classes were those that tended to raise chorus reading. Also, it was concluded that the teaching-learning process of reading in the lower classes was substantially affected negatively by the large classes. Similar to this study, the current study focused on reading and was conducted in primary school level. Contrary, the current study investigated the effect of teacher-pupil ratio on reading achievement levels, used observation schedule to collect data, collected only quantitative data and collected data

from pupils on reading achievement levels. Also, the current study collected a large sample of schools, that is, 65 primary schools as compared to 16 primary schools used in Uganda.

An experimental research was conducted in Kenya to investigate the effects of peer influences, class size, and teacher incentives on academic achievement (Duflo, Dupas, Michael and Kremer, 2007). This research was designed to provide evidence on several questions regarding resource allocation in primary education, the impact of pupil-teacher ratios, tracking, and the institutional environment (teacher contracts and beneficiary control). The study involved 210 primary schools in Western Kenya. It was found out that reducing the pupil-teacher ratio (from 80 to an average of 46), in the absence of any other reform, lead to reduced teacher effort, and to small and insignificant increases in test scores. Also, the study found that pupils with a reduced class size in upper classes scored somewhat higher on both mathematics and language tests compared to pupils in full classes in lower grades. This study is similar to the current study because both investigated the effect of class size on test scores. However, the current study used a smaller sample of schools, which are 65 primary schools unlike the study conducted by Duflo, Dupas, Michael and Kremer who sampled 210 primary schools.

A research study to investigate the conclusions and implications of education policy in Kenya was conducted (Oduol, 2006). This research used the SACMEQ II data to carry out an analysis of classroom context factors that accounted for student scores in reading and mathematics. Also, the study reviewed of methods used to derive policies in Kenya

in order to emphasise the need for evidence-based research for the derivation of policies for the leadership and management of primary education in Kenya. The study found that classroom characteristic influencing student achievement is teacher-pupil ratio. The study further indicated that a high teacher- pupil ratio had a significant negative effect on learner scores in reading and mathematics. This study was not similar to the current study because it only focussed on reading achievement.

The above studies show that class size may or may not influence learners' performance. Therefore, the researcher intended to establish whether there was any significant relationship between teacher-pupil ratios on reading achievement levels of standard three primary school pupils in Kenyenya Sub-county.

2.3 Textbooks-pupil Ratio and Reading Achievement Levels

A study was conducted investigating the perspectives on educational quality focussing the outcomes of primary and secondary schooling in Netherlands (Scheerens, Ruyten and van Ravens, 2011). They established that increasing the amount of school resources increases the quality of education which is measured by student achievement data as one indicator. Consequently, the relationship between school resources such as textbooks and computers, as input and student achievement as output is of particular interest to policy-makers who are responsible for the allocation of school resources. However, the current study differed with this study in terms of geographical locations and the current study is not investigating the relationship between computers as a school resource and reading achievements of standard three primary school pupils.

A comparative study of Palestinian Authority, Israeli Hebrew and Israeli Arab schools in TIMSS 2007 to establish the relationship between school resources and standard eight mathematics achievements was conducted (Afana, Lietz and Tobin, 2013). The extent to which instruction was affected by a shortage or inadequacy of school resources for mathematics instruction was determined using simple regression analyses. The results of the regression analyse between mathematics performance and availability of teaching resources (For example, shortage in textbooks, instructional materials, student-teacher ratio, equipment for demonstration and exercises) indicated that students in schools that report adequate availability of resources performed slightly better than students in schools where there was such shortage. Similar to the current study, it focussed on the textbooks as a school resource. However, it differed with the current study in that it is not a comparative study. Also the current study specifically focused on scores of reading test.

Scholars in Malawi conducted a study to investigate the relationship between school and pupil characteristics and learners' achievement at the basic education levels (Ogawa, Kunje and Selemani-Meke, 2009). Specifically, this study sought to establish how school, classroom and pupil factors influenced performance in mathematics, English and Chichewa. Tests in the three subjects were administered to 6,000 pupils in 100 primary schools. The results indicated that pupils in classes where there were adequate textbooks performed relatively better than their counterparts who were in schools where textbooks were inadequate or without textbooks. Similarly in the case of textbook-pupil ratios the differences in performance between classes with low and high

ratios were slight though those with low ratios tended to perform better in English and Chichewa but this was not the case with Mathematics. However classrooms where there were no textbooks performed much poorer than classes with textbooks in whatever ratio to pupils. The academic attainment of learners was measured through multiple-choice tests in Chichewa, mathematics and English. Step-wise regression analyses were carried out to see how textbook-pupil ratios influenced achievement in the three. Similar to this study, the current study investigated the influence of textbook-pupil ratio on pupils' performance. Contrary, the current study used a sample size of 65 primary schools and 355 pupils to establish the reading achievement of the standard three primary school pupils by the use a standard two benchmark reading test. Also, the chi-square, simple and multiple regression analysis were used to determine the relationship between the availability of textbooks and the reading achievement.

Education for all provided an overview of progress towards four of the Dakar goals in 127 countries (UNESCO, 2004). It was reported that although many schools were trying to meet government targets for universal primary education (UPE), there was an acute lack of textbooks and supplementary reading materials. Also, it was established that it was common for one textbook to be shared between six or more pupils, and often there were no textbooks at all in some school. The study further indicated that apart from the textbooks, pupils also lacked supplementary reading books. The current study was similar to this study in terms of investigating the textbook-pupil ratio. However, the current study was conducted in only one African country, Kenya to establish the relationship between textbook-pupil ratio and reading achievement.

In Botswana, Tella and Akande (2007) conducted a study to establish the relationship between children reading performance and accessibility of textbooks in primary schools. In this study, 150 primary school learners were selected randomly from ten primary schools and ten teachers, one from each of the selected schools were interviewed. The participants were selected from classes six and seven. Their age range was from ten to thirteen years with a mean of eleven and a half years. A questionnaire on reading textbooks availability and reading habits was used to collect data. The results pointed out that too little book accessibility, lack of appealing children's literature, and television watching are recognized as factors deterring learners from developing reading satisfactory habits. The current study is similar to this study in terms of investigating availability of textbooks. However, the study differs with the current study which investigated reading achievement levels, sampled 355 standard three pupils irrespective of their age from 65 primary schools.

The Ugandan Ministry of Education conducted an educational a survey (Grogan, 2006). The survey found out that pupil-textbook ratio of 40:1 for science, 55:1 for math, 49:1 for English, and 44:1 for social studies. The study gave evidence showing that it was the government's effort to improve production and disbursement of textbooks that was low that had lead to low reading literacy levels among pupils. The current study used survey research design and established English textbook-pupils ratio's effect on reading literacy. However, it differs with this study in terms of geographical location.

A baseline survey was conducted to collect data under a three-year collaborative Education Project between the Economic Policy Research Centre (EPRC), Uganda and

the Centre for the Study of African Economies (CSAE) by University of Oxford, United Kingdom (Guloba, Wokadala and Bategeka, 2010). The study was conducted in four Ugandan districts to establish the relationship between teaching methods and availability of teaching resources on pupils' performance. In each district, 25 schools were randomly sampled bringing the total to 100. Specifically, only schools in a rural setting and government aided were sampled in order to control for heterogeneity. Information was gathered at school level, and at individual level. The individual level data collected included that on head teachers, teachers, parents and School Management Committee members. The teacher questionnaire gathered information on class size, teacher characteristics such as teacher's age, gender, years of teaching, qualification, distance of residence from school, tenure within school. Methods of teaching such as frequency of tests, homework, checking class work, pupils working in groups, use of textbooks in classroom, visual aids were also captured. The teaching resources that were available at the time of the interview such as chalk, desks, wall charts, homework assignments, textbooks and chairs were recorded. In each of the sampled district, about 20 pupils for primary three (P3) and about 20 pupils for P6 sat for the standardized National Assessment of Progress in Education(NAPE) assessment tests and in turn derived the test scores. These tests were administered by the Uganda National Examinations Board (UNEB). Specifically, about 2,000 P3 pupils and about 2,000 P6 pupils sat for the tests in Literacy and Numeracy in August 2008. It was found that the availability of textbooks had a significant effect on numeracy and reading literacy. Similarly, supply of charts (by the Ministry of Education and Sports) had a significant impact on numeracy both in classes and on reading literacy for standard three.

The study above by Guloba, Wokadala and Bategeka (2010) is similar to the current study in terms of investigating relationship between textbooks availability to standard three primary school pupils and reading achievement. However, it differs with the current study in that the researcher made test was administered by the researcher with the assistance of the class teacher. Also, all 355 standard three pupils were sampled from 65 primary schools from one sub-county in Kenya.

To establish the reality of the state of universal primary education in East Africa, a case study to review experiences, challenges and lessons was conducted (Alubisia, 2005). The research targeted education officials, development partners, civil society organisations and local communities, that is, four main groups. This research employed desk review and interviews with stakeholders to collect data. Case studies were carried out at community level to strengthen the quality of the research. To obtain in-depth information regarding access and equity, quality, governance and community involvement amongst other issues, a semi structured interview schedule was used. The analysis revealed that Kenyan and Ugandan students often found it difficult to finish homework when they shared books. Despite official reports of 3:1 pupil-textbook ratio in Kenya, the situation on the ground revealed ratios of 8:1 or 9:1. The study further noted that pupils in lower primary schools were exposed to large class size, shortage of learning materials or absence of books which posed a great challenge towards achievement of high academic standards in Kenya and Uganda. This study is similar to the current study in terms of investigating the textbook-pupil ratio. However, it differs with the current study which used standard three primary school pupils, reading test and

observation schedule to collect data and conducted the study in only one Sub-County in Kenya.

A study was conducted in Kenya on the availability and utilization of educational resources in influencing students performance in secondary schools in Mbeere South, Embu County, Kenya (Mucai, 2013). The objectives of this study were to find out the status of material and physical resources in secondary schools, to determine how effectively students and teachers utilize the available textbooks, laboratories and libraries in influencing students' performance. A survey design was used. The target population for the study comprised of 34 secondary schools with a total population of 6403 students, 34 principals 68 heads of languages and sciences departments. Stratified sampling was used to sample public schools in girls, boys boarding and mixed day to avoid bias of sampling one type of school and to determine whether there are variations in availability and utilization of educational resources in the different categories of schools. The study sample comprised of three boys (100%), four girls (67%) boarding and eight mixed (30.8%) day secondary schools. Purposive sampling was used to sample15 principals (45.5%), 30 heads of departments (45.5%), while simple random sampling technique using lottery was used to sample one form three English language class, and fifteen students in form three class in each category of schools. Questionnaires, lesson observation schedule and schedule were used to collect data. Content validity of the instruments was determined by employing the expertise of the supervisors and lecturers at the department, while reliability was determined through test-retest method. Qualitative data was analyzed thematically according to objectives

and presented in narration form according to objectives. Quantitative data were analyzed by use of descriptive statistics. The study found out that the text books were not sufficient but there was no acute shortage since a text book could be shared by a considerable number of students in all categories of schools. Inadequate educational resources may have contributed to poor performance especially in mixed day schools among other factors.

The study above conducted by Mucai (2013) in Mbeere South, Embu County, Kenya is similar to the current study in terms of investigating textbook-pupil ratio, using content validity, test-retest reliability and observation schedule. However, the current study differs with the current study in terms of taking a sample from primary schools. Also, the current study collected only quantitative data.

A randomized evaluation in rural Kenya to assess the relationship between the access and utilization of textbooks and test scores in Kenyan primary schools was conducted (Glewwe, Kremer and Moulin (2009). The analysis indicated that the availability of textbooks did not raise class performance but it was only the utilization of class textbook that had a positive relationship with class performance. Further, the study noted that most of the available textbooks in schools were written in English and most students were not in position to use them effectively. More generally, the curriculum in Kenya, and in many other developing countries, tends to be oriented toward academically strong students, leaving many students behind in societies that combine a centralized educational system. Similar to this study, the current study investigated the

availability of textbooks in primary school level. However, the current study is dissimilar to this study in terms of utilisation of textbooks.

The available literature reveals mixed results on the impacts of the availability of textbooks on academic achievement. The current study attempted to investigate the relationship between the textbook-pupil ratio and reading achievement levels of standard three primary school pupils in Kenyenya Sub-county, Kisii County.

2.4 Story books-pupil Ratio and Reading Achievement Levels

In the United States, Evans and Saint-Aubin (2011) conducted a study involving studying and modifying young children's visual attention during book reading. The study comprised of sample of 62 kindergarten children aged between three and five years and 33 elementary school children aged between six and seven. The study findings indicated that majority of the children were able to read and write letters fluently when exposed to variety of story books. The study further recommended that in early childhood, children should be exposed to letters and story books despite their inability to read. Similar to this study, the current study investigated on reading ability of learners in relation the availability of story books. However, this study is different to the current study which focused on 355 standard three pupils from 65 primary schools.

A study on accelerating preschoolers' early literacy development through classroom-based teacher-child storybook reading and explicit print referencing was conducted in the United States (Justice, Kaderavek, Fan, Sofka and Hunt, 2009). This study examined the impact of teacher use of a print referencing style during classroom-based

storybook reading sessions conducted over an academic year. Impacts on preschoolers' early literacy development were examined, focusing specifically on the domain of print knowledge. This randomized, controlled trial examined the effects of a print referencing style on 106 preschool children attending 23 classrooms serving disadvantaged preschoolers. Following random assignment, teachers in 14 classrooms used a print referencing style during 120 large-group storybook reading sessions during a 30 week period. Teachers in 9 comparison classrooms read at the same frequency and with the same storybooks but used their normal style of reading. It was found that children whose teachers used a print referencing style showed larger gains on three standardized measures of print knowledge, that is, print concept knowledge, alphabet knowledge, and name writing, with medium-sized effects. This study is similar to the current study in terms of storybook reading performance of learners. However, this study was different from current study which examined the relationship between textbook-pupil ratio and reading achievement levels of 355 pupils in 65 primary schools.

Study on the use of electronic storybooks to promote print awareness in preschoolers who are living in poverty in the Unites States was conducted (Moody, 2014). Participants were 20 four to five year old children comprising of seven boys thirteen girls enrolled in four public preschool classrooms for children at-risk for academic difficulties due to poverty. Children were randomly assigned to either the control group or the intervention group. The study examined the extent to which teachers who provided print referencing strategies using electronic storybook (e-book) readings had students with greater emergent literacy skills compared to students who only had access

to traditional storybook reading sessions. Letter knowledge, early decoding and print concepts knowledge were examined in 20, four year old children living in poverty. In the control condition, ten children completed 15 minutes a day of traditional storybook reading instruction, using a direct instruction curriculum. The ten children in the intervention group completed an additional e-book reading paired with adult directed print referencing strategies twice a week over the course of six weeks. It was found that children exposed to e-books paired with adult directed print referencing strategies scored significantly higher on a measure of print concepts knowledge than those in the control group, although gains in letter knowledge and early decoding were equivalent across the two groups. Similar to this study, the current study used random sampling and also focussed on story books and reading of performance of learners. However, this study is dissimilar to the current study which utilises survey and correlation research design and involving standard three primary school pupils.

A randomized evaluation study of the SaAklat Sisikat (SAS) reading program was conducted in the Philippines (Abeberese, 2013).The research sample consisted of all fourth grade classrooms at 100 elementary schools in Tarlac province. A baseline survey was conducted in all 100 schools in July 2009. Following the survey, schools were assigned to the treatment and control groups using a matched-pair stratified randomization. Each survey round contained a reading skills assessment. The examination comprised sections covering six competencies. In the first part of the test referred to as the written test, students were asked to silently read a written passage and answer written multiple-choice questions relating to the passage. Next, students were

given one-on-one oral reading tests covering letter recognition, sound recognition, and word recognition. Finally, students were asked to read a passage aloud, referred to as the oral reading test and then to answer several questions about the passage orally. A simple difference specification was employed to directly compare the treatment and control groups. Most public schools lacked age appropriate reading material. SAS donated 60 Filipino storybooks to each classroom. The books were selected for literary value as well as student appeal. They also included in both of the country's official languages, English and Filipino, so that teachers can match the language of instruction. This study is similar to the current study whose English reading test constituted of both oral and written test. Also it is similar in the used of survey research design. However, this study is different from the current study which a correlation using 355 standard three pupils from 65 primary school.

A research study on children's early literacy practices at home and in early years settings in England was conducted (Formby, 2014). This study outlined findings from Pearson and the National Literacy Trust's second annual early year's literacy survey, conducted in May to July 2014. The sample consisted of 1,012 parents of children aged 3 to 5 and 567 early years' practitioners who worked with this age group. It was established that children who read daily were more likely to have above average vocabulary attainment than children who read less often, children who enjoyed stories a lot were more likely to have above average vocabulary attainment than children who enjoyed stories less. Also, children who looked at or read stories daily were four times more likely to enjoy stories a lot than their peers who did not look at or read stories in a typical week. This study was similar to the current study in terms of investigating the

availability of story books and their influence of reading competency of learners in early childhood years. However, this study is not similar to the current study which sampled 355 standard three pupils irrespective of their age from 65 primary schools to investigate the relationship between pupil-story book ratio and reading achievement. Also it differs with the current study which was conducted in schools without involving parents.

An evaluation research study on the differences between theory and practice in a shared reading program in Singapore was conducted (Ong, 2014). This study aimed at offering a descriptive account of shared reading program using an evaluative lens and to examine whether teachers' perceptions of the importance of phonological awareness, word decoding, and text comprehension in helping young learners develop their reading abilities were indeed emphasized during instruction in the program. Following a semi-structured interview with four teachers, a survey was conducted on twenty primary school teachers. Results from three sampled paired t-tests showed that although the teachers placed high importance on phonological awareness, word decoding, and text comprehension, their instruction of shared reading did not place an equivalent emphasis on the three aforementioned variables. This tension between theory and practice of teaching reading was attributed to a lack of harmonization of information between publishers of storybooks and classroom teachers. Similar to this study, the current study used a reading achievement test with phonological awareness, word decoding, and text comprehension items and the study utilised survey research design. However, the current study used an observation schedule and a reading test to collect data. Also the

current study used chi-square, simple regression and multiple regressions to analyse data.

An evaluation study on the ways to teach children to read was conducted in Mumbai, India (Linden and MacLeod, 2009). The study found out that the teachers' use of story books and flashcards played a significant role for word and letter recognition. The results further indicated that the utilisation of these resources further helps learners to cognitively attach meanings to words and take in whole words and ideas rather than focus on abstract chalkboard demonstrations. This three-year randomized control trial further found that the use of appropriate teaching methods and supplemented resource had greater positive effect on the academic achievement at preschool or first three grades than in higher grades. Similarly, the current study investigated the influence of the availability of story books on reading achievement levels among the levels investigated were word and letter recognition. Contrary, the current study focused on standard three primary school pupils. Also, the current study used survey and correlation research design.

A study on understanding interactive CD-ROM story books and their functions in reading comprehension was conducted (Ertem, 2011). The purposes of this study was to identify the potential benefits, functions and disadvantages of interactive story books and assess mixed results of previous studies related to interactive CD-ROM story books. The study findings indicated that interactive CD-ROM story books helped children develop visual recognition and increase reading comprehension. Similarly, the current study investigated on the benefits of story books on reading. However, the

current study investigated on the influence of the number of printed story books to pupil ratio on reading achievement levels of standard three primary school pupils.

A study to investigate beginning literacy with language of young children learning at home and school was conducted in the United States (Dickinson and Sprague, 2001) In this study, early childhood professionals, educators, and parents travelled into the homes and schools of more than 70 young children aged three, four and five years from diverse backgrounds and observed parent-child and teacher-child interactions. The study investigated how families talked to their young children during everyday activities like book reading, toy play, and mealtimes. It also examined children's conversations throughout the school day and considered how teachers strived to support children's development. It was found out that talks between teachers and their preschool children aged between three and five years around story books correlated with children's vocabulary and story comprehension skills. Contrary, the current study sampled 355 standard three primary schools pupils from 65 primary schools. Also the current study explored the relationship between story book-pupil ratio and pupils' reading achievement levels.

The use and textual effects of Spanish in Latino picture story books in English in multicultural issues in literacy research and practice was studied (Barrera, Quiroa and Valdivia, 2003). The study found that using different types of books ensured that the children found at least a few books that met their interests and preferences. Further the study established that story books were traditional favourites for many young children. The study also indicated that when story books were adequate in classes, the teachers

were in a position to reading books aloud to each child hence helping them acquire information and skills, such as the meaning of words, the content of a book, a variety of writing styles, facts about their world, differences between conversations and written language, and knowledge of printed letters and words along with the relationship between sound and print. Similar to this study, the current study focused on the influence of the availability of story books on reading achievement levels of pupils. Contrary, the current study was conducted on a different geographical location, Kenya without using picture story books.

A research study on existing reading materials to support Hausa Literacy Instruction, that is, Nigeria Reading and Access Research Activity (RARA) was conducted (RTI International, 2014). RARA aimed at investigating instructional materials that could contribute to improved literacy outcomes. Standard two pupils were allowed to learn to read through interactions with developmentally appropriate and engaging textbooks, big books, storybooks, and read aloud. The finding of the study indicated that children easily acquired reading skills through frequent interactions with developmentally appropriate materials, that is, textbooks, big books and story books. The study further indicated that the appropriateness for standard two reading materials was determined by textual elements such as sentence length and font size. In addition, the study recommended that for learners to acquire the basic reading skills, teachers must teach the foundational literacy skills which consist of print concepts, phonological awareness, phonemic awareness, vocabulary, alphabetic principle, fluency and comprehension in a systematic and explicit manner. Similar to this study, the current study investigated the role of story books on reading achievement levels in terms of phonological awareness,

phonemic awareness, vocabulary, alphabetic principle, fluency and comprehension. However, the current study used an English reading test.

A study was conducted in Kenya to investigate the state of children's literature in Kiswahili in primary schools in Kenya by examining the reading habits of pupils both in school and at home (Ngugi, 2009). The study highlighted the attitudes towards reading, the amount of reading materials available to pupils both at school and at home, the accessibility of the reading materials, the frequency of reading for pleasure, the reading environment that pupils are exposed to and any other activities that pupils engage in that contribute to enhancing and maintaining of reading habits. In addition, the study investigated the role played by head teachers, Kiswahili teachers and parents in developing and enhancing reading habits in pupils. The study applied Cognitive Development theory. Questionnaire, informal interviews and observation techniques were used to collect data. The study established that attitudes towards reading, the amount of reading materials available to pupils both at school and at home, the accessibility of the reading materials, the frequency of reading for pleasure, the reading environment that pupils are exposed to and any other activities that pupils engage contributed towards the acquirement of appropriate reading skills. This study is similar to the current study which investigated the influence of the available materials among them story books on reading achievement of reading skills. Also the current study used observation schedule to collect data. However, this study differed with the current study which used an observation schedule and reading test to collect data. Also, the current study was conducted in a school setting and used socio-cultural theory.

If the issue of availability of reading materials and reading achievement is not addressed well with the seriousness it deserves, the quality of primary school education will be hampered leading to negative implications of future schooling. Therefore, this study objective examined the influence of the story book-pupil ratio on pupils' reading achievement levels in public primary schools in Kenyenya Sub-County of Kisii County specifically focussing on standard three primary school pupils.

2.5 Charts-pupil Ratio and Reading Achievement Levels

A study to explore instructional materials commonly employed by foreign language teachers at elementary schools in Turkey was conducted (Ismail, 2015). This study aimed at determining the teachers' choices of instructional materials in teaching English at elementary schools. The reasons behind preferring or not preferring some certain instructional materials specified within the research were analysed. During the course of school experience, 68 prospective English teachers observed 38 teachers of English working at 14 elementary schools on a weekly basis, and they completed a questionnaire. A semi-structured interview was also conducted with five randomly selected teachers to identify their reasons for choosing certain traditional instructional material such as board, course-book, worksheet, chart, realia, flashcards, and teacher made materials among others. As for audio and visual materials, which were regarded as new for many teachers, were video players, audio materials, video cameras, computers and projection devices. The descriptive results revealed that most of the teachers were reluctant to use many of the highly beneficial materials due to reasons including overcrowded classes, limited technological knowledge, lack of time for

preparation, curricular time constraints, heavy work load and burnout. The current study is similar to this study in terms of establishing the availability and use of charts in teaching and by use of descriptive statistics. However, this study differs with the current study which sampled 355 pupils from 65 primary schools. Also, to establish the relationship between chart-pupil ratio and reading achievement levels, a reading test and an observation schedule were used to collect data.

To explore the effectiveness of elementary classroom literacy environment in the United States, a study was conducted (Hoffman, Sailors, Duffy and Beretvas, 2004). The instruments used the inventory, observation and interviews with both the teacher and the students in the classroom. The findings indicated that effective reading teachers treat classroom walls as creative palettes for designing aesthetically pleasing and instructionally useful displays for student work, instructional charts, and other information. The design and maintenance of a classroom library, the grouping and accessibility of reading and writing tools in the classroom, written invitations and encouragements displayed on walls, and directions on how to participate in upcoming literacy events are just a few of the many considerations for teachers to become accomplished environmental designers and managers. Like this study, the current study investigated the influence of the availability of literacy materials on reading achievement levels. Specifically, the studies focused on the charts among other materials. However, the current study examined the relationships between chart-pupil ratio and reading achievement levels, a reading test and an observation schedule were used to collect data.

A study on instructional media as a tool for ensuring quality teaching and learning for pupils in the junior high schools in selected schools in the Kumasi metropolis Ghana was conducted (Owusu, 2009). The study indicated that instructional media encompasses all the materials and physical means an instructor might use to implement instruction and facilitate students' achievement of instructional objectives. This may include traditional materials such as chalkboards, handouts, charts, slides, overheads, real objects, and videotape or film, as well newer materials and methods such as computers, DVDs, CD-ROMs, the Internet, and interactive video conferencing. Similar to this study, equally, the current study investigated the availability of charts. However, the current study was conducted in Kenya by sampling standard three primary school pupils in Kenyenya Sub-County.

To come up with implications for Visual Arts Education in Ghana, a study on instructional strategies, institutional support and student achievement in general knowledge in art was performed (Opoku-Asare, Agbenatoe and Kwamena, 2014). This study investigated of how the teaching methods, instructional strategies and resources employed by GKA teachers in Ghana’s senior high schools affected student achievement in the subject. Questionnaires were administered to 420 GKA students in four schools in Ashanti Region and nine GKA teachers were interviewed. Also, school librarians and storekeepers, as well as 14 lessons were observed. Both qualitative and quantitative data were analyzed. The study revealed a high student-teacher ratio which encouraged whole class teaching through the lecture method, and teacher use of verbal examples, textbook illustrations, chalkboard diagrams, and photographs as instructional

media. It emerged that lack of art studios, tools and materials, inadequate funding, and weak institutional support discouraged the teaching of practical lessons, including fieldtrips to derive aesthetic experiences from community resources. Also, lack of information communication technology and internet facilities discouraged research that could have supplemented teaching notes. Last, many Visual Arts students who were offered GKA made poor grades in both internal and external examinations. Contrary to this study, the current study specifically investigated the influence of chart-pupil ratio on reading achievement levels of standard three pupils in Kenyenya Sub-County, Kenya. Also, the current study used a reading test and an observation schedule in collecting data.

In Zimbabwe, a study was conducted to investigate the impact of instructional media on form three students' performance in Ruya high school (Garikayi, 2015). This research examined the impact of instructional media for effective communication, especially during teaching practice sessions in improving students' performance in Principles of Accounts. Quantitative Research Method were used with questionnaire, observation and personal interviews to collect data on how instructional media available in the sampled school were used in teaching Principles of Accounts and their impact on students' learning. It was realized that, instructional media were generally not available in the Secondary Schools in the Mount Darwin District. Also, lack of wall charts, models, and other conventional media to complement the use of chalkboards and textbooks in the schools made it difficult for teachers to offer quality teaching to promote high academic achievement for Secondary School pupils. The current study is similar to this study in

terms of investigating the availability of charts and collecting quantitative date using an observation schedule to collect data. However, this study differs with the current study which investigated the influence of chart-pupil ratio on reading achievement levels of standard three primary school pupils in Kenyenya Sub-County, Kenya. Also, the current study used a reading test and an observation schedule in collecting data.

A study was conducted to investigate the use of instructional materials for effective learning of Islamic Studies in Ekiti State University, Nigeria (Olawale, 2013). The aim of this study was to investigate the significance of instructional materials in the effective teaching and learning of Islamic Studies in Nigerian Schools. It also attempted to shed more light on the way teaching and learning of Islamic Studies should be made to benefit from the modern technological advancement at all levels of educational institutions. It also investigated the Islamic point of view on instructional materials in the teaching and learning process. The study revealed that teaching and learning with instructional materials was not a new phenomenon in Islam, it had been traced to the Prophet of Islam who used Instructional materials at several occasions in the process of imparting knowledge to his followers. It also discovered that, Instructional technology or instructional media was introduced into Nigerian educational system with a view of promoting effective teaching and learning. Instructional materials used included charts, maps, diagrams, comics, models, globes, slides, film strips, television and radio cassettes among others. This study like the current study investigated on the availability of instructional such as charts. However, this study differed with the current study which investigated the chart-pupil ratio and its influence of reading achievement levels of standard three pupils in Kenyenya Sub-County, Kenya.

Further, Okobia (2011) conducted a study to investigate the availability and teachers' use of instructional materials and resources in the implementation of Social Studies in junior secondary schools in Edo State, Nigeria. Three research questions were raised and one hypothesis was formulated. A sample of fifty social studies teachers were randomly selected from fifty junior secondary schools in five local government areas of Edo State. Data analysis was carried out using t-test for the hypothesis and simple percentages for questions one and two. The results showed that instructional materials and resources available were grossly inadequate. Also, it was observed that there was no difference in the use of instructional materials between specialist social studies teachers and non-specialist teachers. Contrary to this study, the current study investigated the chart-pupil ratio and its influence of reading achievement levels of standard three pupils in Kenyenya Sub-County, Kenya. Also, the sample for the current study involved 355 standard three pupils from 65 primary schools. Last, data from the current study was analysed by use of chi-square, simple and multiple regressions.

An experimental study was conducted to establish the relationship between utilization of instructional materials and students' performance in practical agriculture in Nigeria (Nsa, Ikot and Udo, 2013). The study was conducted among Junior High School students .The study used a quasi-experimental design with a pre and post-test non-randomized control group arrangement. A sample of 200 students was used for the study. To guide the study, four specific objectives and four null hypotheses were formulated. Students' achievement test in Practical Agriculture (SATPA) was developed to gather data for the study. The instruments were validated by research

experts. Data were analyzed and hypotheses were tested using t-test and Analysis of covariance (ANCOVA). The findings of the research indicated that there was a significant difference between the performance of students taught with instructional chart and those without. Similar to this study, the current study used a test to establish the relationship between instructional charts and performance. Contrary to this study, the current study was conducted among 355 standard three pupils from 65 primary schools. Also, the data collected in the current study was analysed by use of chi-square, simple and multiple regression.

In the Kenyan context, a study was conducted to investigate the adequacy of instructional materials and physical facilities and their effects on quality of teacher preparation in emerging private primary teacher training colleges in Bungoma County (Likokol, Mutsotso and Nasongo, 2013). The research was carried out in eight private teacher training colleges in Western Province in Kenya. The study sample was selected through simple random and purposive sampling techniques. The sample comprised of eight college principals, 43 tutors and 416 second year teacher trainees. Data was collected through questionnaires and observation schedules. The SPSS computer package was utilized in the analysis of descriptive statistics such as frequencies and percentages. The research findings were presented the results in form of frequency tables and pie-charts. The research established that the rapid emergence of private primary teacher training colleges had a negative impact on quality of teacher preparation. These institutions were faced with challenges such as; lack of adequate facilities like libraries and inadequate instructional materials. These factors continue to

have negative effect on the quality of graduates produced. Similar to this study, the current study investigated learners' performance. However, the current study was conducted among 355 standard three pupils from 65 primary schools. Also, the data collected in the current study was analysed by use of chi-square, simple and multiple regression.

2.7 Summary of the Literature Reviewed

Literature reviewed shows that children in different parts of the world are experiencing challenges in learning to read. In Kenya, studies are specifically showing low reading achievement levels. In Kisii County, Uwezo had established reading achievement levels of five out of nine sub-counties. Teacher-pupil ratio and availability of reading materials have not been adequately studied by other authors and cumulatively have not been tested to generate a relationship. In the local setting, very little research work has been conducted in Kenya as well as in Kenyenya Sub-county which made the current study very critical.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter discusses the research design, variables of the study, location, target population, sample and sampling procedures. Pilot study, data collection instruments and data collection procedures will be discussed. In addition, data analysis and logistical and ethical consideration in research are also described.

3.1 Research Design

The study used descriptive survey and correlation research designs. Descriptive survey research design was used to gather in-depth information through interviews and observations about the factors responsible for reading achievement levels among standard three primary school pupils. This kind of research design yielded comprehensive holistic, contextual and descriptive information on teacher-pupil ratio, availability of reading materials, that is, English text books-pupil ratio, story book-pupil ratio and chart-pupils ratio, and reading achievement levels. In addition, the researcher used descriptive survey because variables were not manipulated. Instead the researcher was only interested in studying the variables as they were. Also, correlation research design was used to discover the relationship between the variables under study. The choice of the design was based on its ability to explore the relationship among variable that cannot be manipulated experimentally (Orodho, 2009). The variables that cannot be

manipulated experimentally included teacher-pupil ratio, availability of reading materials, that is, English text books-pupil ratio, story book-pupil ratio and chart-pupils ratio, and pupils' reading achievement levels. Also, it was suitable because the study was attempting to compare standard three pupil's reading achievement levels with pupil-teacher ratio, availability of reading materials.

3.2 Variables

This section discussed the independent and dependent variables. They are shown in section 3.2.1 and 3.2.2 below.

3.2.1 Independent Variables

There were five independent variables namely: teacher-pupil ratio, text books-pupil ratio, story books- pupil ratio and charts-pupil ratio.

Pupil-teacher Ratio: The pupil-teacher ratio took the form of ratio scale of measurement. This variable comprised four levels namely: optimum ratio with a ratio of 1:21-40, high ratio with a ratio of 1:41-60, very high ratio with a ratio of 1:61-80 and extremely high ratio with a ratio of 1:81 and above.

Text books-pupil Ratio: The availability of text books established the ratio of KIE approved English text books (as in 'Orange book') to the standard three pupils. The availability of text books took ratio scale of measurement.

Story books- pupil Ratio: The availability of story books established the ratio of KIE approved standard three English story books (as in 'Orange book') to the standard three pupils. The availability of story books took ratio scale of measurement.

Charts-pupil Ratio: The availability of charts established the ratio of English reading charts to the standard three pupils. The availability of charts took ratio scale of measurement.

3.2.2 Dependent Variables

Reading achievement was the dependent variable. This variable took ordinal measurement whereby the researcher grouped the pupils into five different reading achievement levels namely: story, paragraph, word, letter and Start levels. A standard three pupil was classified to be a competent reader if only she/he was able to read letters, words, paragraph, read the story given and then answer the questions given in each part of the test appropriately. Each part of the test varied by increasing the level of difficulty from letters, words, paragraphs and lastly to a story (Uwezo, 2011). The test administered and its method of scoring is given in appendix III.

3.3 Location of the Study

The study was conducted in Kenyenya Sub-county, Kisii County. Kenyenya is one of the nine Sub-counties in Kisii County. Kenyenya Sub-county was purposefully sampled because studies by Uwezo (2011) on Annual Learning Assessment report shows that pupils in Kisii County recorded an average of 24.83% in reading achievement which is

below the national average of 27.2 %. This was apparently low reading level. The researcher therefore intended to investigate the factors responsible for this low reading achievement. Also, no such a study on influences of reading achievement levels has ever been conducted in Kenyenya Sub-county.

3.4 Target Populations

The population for this study was all standard three primary school teachers and all standard three primary school pupils in Kenyenya Sub-county of Kisii County. Standard three was purposefully sampled for this study because studies by Uwezo (2011) on annual learning assessment was carried assessment in standard three and reported that there was unsatisfactory reading achievement levels among standard three pupils in the County.

3.5 Sampling Techniques and Sample Size

The sampling techniques and sample size to be used in this study are described in the following sections.

3.5.1 Sampling Techniques

Kenyenya Sub-county is purposely selected because it is one of the Sub-counties in Kisii County which had reported low reading achievement level among standard three pupils. The Sub-county had five zones which formed five clusters. From each of the zones, schools were numbered and then only 10 % of schools were randomly sampled. Simple random sampling is preferable because it permits the researcher to apply

inferential statistics which can enable certain inferences about population value on the basis of obtained sample values (DeCaro, 2003).

3.5.2 Sample size

Kenyenya Sub-County had a total of 77 public primary schools with a population of 4,180 standard three primary school pupils. According to Krejcie & Morgan (1970) a sample size of 65 primary schools was required to achieve 95% confidence interval and 5% margin of error in generalizing to the 77 primary schools. While, a sample size of 355 standard three primary school pupils was required to achieve 95% confidence interval and 5% margin of error in generalizing to the 4,180 standard three primary school pupils.

Sample Size Formula for Finite Population

The formula below was used for determining sample size for the finite target population of the schools and the standard three primary school pupils. .

$$S = \frac{X^2NP(1-P)}{d^2(N-1)+X^2P(1-P)}$$

Where:

S = Sample size

X = Z value (e.g. 1.96 for 95% confidence level)

N = Population Size

P = Population proportion (expressed as decimal) (assumed to be 0.5 (50%) – this provides the maximum sample size).

d = Degree of accuracy (5%), expressed as a proportion (.05); It is margin of error

Note

To simplify the process of determining the sample size for a finite population, Krejcie and Morgan (1970), came up with a table which helped to come up with the sample size from a total population of 4180 standard three pupils and 77 primary schools. This sample size table is in appendix XII

Table3.1: Sampling Frame

Zones	Number of primary schools in each zone	Number of sampled primary schools	Total number of standard three pupils in each zone	Number of standard three pupils sampled from each zone
Kenyenya	12	10	650	55
Nyakoiba	11	9	598	50
Magena/ Emesa	21	18	1,139	98
Riokindo	11	9	602	51
Magenche/ Mokubo	22	19	1,191	101
Total	**77**	**65**	**4180**	**355**

Source: Kenyenya DEO'S Office, 2014

3.6 Research Instruments

Data was collected using observation schedule for observing of the reading instructional materials and a reading test for standard three primary school pupils.

3.6.1 Observation Schedule

The observation schedule was used for observing reading instructional materials in terms of their ratio to the pupils, and whether they were approved by KIE. The reading materials observed for their ratio and KIE approval included: Text books, story books

and charts were observed in terms of reading material-pupil ratio only. The observation schedule and the way of scoring is given in appendix I.

3.6.2 Reading Test

The researcher used an adapted Uwezo (2011) English reading achievement test for this study. Uwezo is an East African Initiative, with overall quality assurance and management support from Twaweza/Hivos. Uwezo focused on the basic ability to read and count. The Uwezo Reading achievement test comprised of items on phonemic awareness, phonics, reading fluency, comprehension and vocabulary. The test administrator asked the pupils to read letters, words, paragraphs, a story and then answer the questions based on the story.

The purpose of this test was to test the reading ability of the pupils and at the same time, enable the class teacher to give reliable responses based on actual learners' scores. Scores obtained from testing the learners enabled the teachers to give unbiased responses. This test was administered and marked by the researcher with the assistance of the class teacher. Reading test and way of scoring it are given in appendix II

3.7 Pilot Study

According to Lackey & Wingate (1998), sample size for pilot studies is 10% of the final study size. To test the validity of the research instruments, a pilot study was conducted with seven schools and involved 36 pupils in the seven schools. The primary schools involved in the pilot study were not part of the sample of the main study in the five

zones in Kenyenya Sub-County. The pilot study enabled the researcher to familiarize self with the administration of the research instruments. The research instruments were also piloted to test the appropriateness of the items to the standard three teachers and pupils in order to enhance validity and reliability of the instrument. To ensure validity and reliability of the research instruments the following techniques were used.

3.7.1 Validity of Instruments

To test the validity of the reading test, concurrent validity was used. Concurrent validity was used to measure the extent to which the results of the researcher's developed reading test corresponded to the reading tests previously administered by the teacher to establish measurement for the same construct. The correlation coefficient was computed after administering the test to the standard three pupils. The Examinees were known to be either masters or non-masters on the reading test after scoring the administered reading test to them under realistic examination conditions. The examinees were classified to be either at story level, paragraph level, word level, letter level or Start level based on the test.

Lastly the validity of the observation schedule was assured by item review. The researcher held a meeting with supervisors. During this meeting the items were reviewed. Decisions were made about item changes that were needed or even items that ought to be dropped from the observation schedule of reading materials.

3.7.2 Reliability of Instruments

Reliability of the observation schedule was established by having two trained independent observers recording information. Afterwards, they checked the extent to which they agreed using the inter-observer reliability (sometimes called inter-rater reliability) formulae (Cohen's Kappa). The result obtained was +0.95. The rule of thumb is that the agreement amongst or between observers should be at or above 85% with 90% as a better goal (Landis and Koch, 1977).

Also, the dependability of the observation schedule was achieved by carefully reporting methodology used in gathering data and also used double-coding as means of checking reliability, that is, two researchers coding same field data to ensure inter-rater reliability. Cohen's Kappa index was used to establish inter-rater reliability using Cohen's Kappa formulae.

The formula for Cohen's Kappa is:

$$K = \frac{Pr(a) - Pr(e)}{1 - Pr(e)}$$

Where:

Pr(a)=Observed percentage of agreement

Pr(e) = Expected percentage of agreement

From computation, the Cohen's Kappa index was 0.85. Generally, a Kappa > .70 is considered satisfactory (Landis and Koch, 1977).

To test the reliability of the reading test, test-retest reliability was used. To measure the reliability of the reading test, the researcher administered the same test twice over a period of two weeks to the same group of standard three pupils. The scores from Time 1 and Time 2 were correlated in order to evaluate stability of the test over the two weeks. The correlation coefficient obtained was +0.90.

Also, to test dependability of the research instruments during pilot stage, the researcher observed the subjects under study for two weeks to ensure stability of observations. Lastly, the researcher was guided by the supervisors and review on the views of the respondents.

3.8 Data Collection Procedures

After piloting and revising the research instruments, the researcher collected data in two stages. First, the researcher with the assistance of the standard three primary school teachers administered and scored the English reading test to the sampled standard three primary school pupils. It should be noted that the test was administered from any level of the test depending on the ability of the pupil. The pupils were categorized as paragraph, word, story or start readers level according to their reading ability. Secondly, the researcher and the trained observer filled the observation schedule on the availability of KICD approved reading materials.

3.9 Data Analysis Procedures

Quantitative data was collected data from reading test and observation schedule. These data was analysed using both descriptive and inferential statistic. The descriptive statistics used were frequencies and percentages. The inferential statistics was analysed using chi-square, linear regression analysis and multiple regression analysis. The quantitative data was coded and analysed using SPSS version 20 computer software. The data analysis matrix is shown in table 3.2 below.

Table 3.2 Data Analysis Matrix

Objectives	Hypothesis/Questions	Statistical Test
To establish reading achievement levels of standard three primary school pupils.	What are the reading achievement levels of standard three primary school pupils?	Descriptive statistics (Frequencies and percentages)
To establish the relationship between pupil-teacher ratio and reading achievement levels of standard three primary school pupils.	There is no significance relationship between teacher-pupil ratio and reading achievement levels of standard three primary school pupils.	Chi-square
To establish the relationship between the availability of test book and reading achievement levels of standard three primary school pupils.	There is no significance relationship between the textbooks-pupil ratios and the reading achievement levels of standard three primary school pupils.	Chi-square
To establish the relationship between the availability of story book and reading achievement levels of standard three primary school pupils.	There is no significance relationship between the story books-pupil ratios and the reading achievement levels of standard three primary school pupils.	Chi-square
To establish the relationship between the availability of charts and reading achievement levels of standard three primary school pupils.	There is no significance relationship between the charts-pupils ratios and the reading achievement levels of standard three primary school pupils.	Chi-square
To find out the extent to which teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio and charts-pupil ratio predict reading achievement levels of standard three primary school pupils.	There is no significant contribution among teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio and charts-pupil ratio towards reading achievement levels of standard three primary school pupils.	Simple regression Multiple regression

3.10 Logistical and Ethical considerations

On logistical considerations in research, researcher obtained an introductory letter from the Graduate School at Kenyatta University introducing the researcher to the Commission for Higher Education to get a research permit. After this, a letter from the sub-county education officer was obtained that allowed the researcher to carry out research in Kenyenya Sub-county. Permission was sought from the head teacher to allow the researcher to conduct research with pupils. After collecting the data from the standard three school pupils, the researcher wrote a note to thank all the participants involved in the study for their co-operation through their head teachers.

In considering ethics in research, the head teachers and standard three class teachers of the sampled primary schools were then contacted to give informed consent by explaining to them the nature and purpose of the study in order to conduct the study in their schools and with the standard three pupils. At the beginning of data collection all respondents were briefed on the purpose of the study. Confidentiality was assured by ensuring that all information collected during the study was kept confidential and was not available to anyone who was not directly involved in the study. Anonymity was assured by not making use of or mentioning the names of the respondents.

CHAPTER FOUR

PRESENTATION OF FINDINGS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents the data analysis and findings, their interpretation and discussion of the findings. The organization of the chapter is based on the objectives and hypothesis that guided the study. To reiterate, the objectives that guided the study were:

i. To establish reading achievement levels of standard three primary school pupils.
ii. To establish the relationship between teacher-pupil ratio and reading achievement levels of standard three primary school pupils.
iii. To establish the relationship between textbooks-pupils ratios and reading achievement levels of standard three primary school pupils.
iv. To establish the relationship between the story books-pupils ratios and reading achievement levels of standard three primary school pupils.
v. To establish the relationship between the charts-pupils ratios and the reading achievement levels of standard three primary school pupils.
vi. To establish the extent to which teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio and charts-pupil ratio contribute towards reading achievement levels of standard three primary school pupils.

4.2 General Information

Data was collected from 335 standard three primary school pupils and 65 standard three primary school teachers in Kenyenya Sub-county, Kisii County using English reading achievement test and interviews respectively. English reading achievement test was administered to determine pupil's reading achievement levels. Only quantitative data was collected during this study. Descriptive and inferential statistics were used to analyze the raw data. Quantitative data was first coded and entered into the computer for analysis using the Statistical Package for Social Sciences (SPSS**)** version 20.0**.** The quantitative data was presented by use of frequency tables

4.3 Proportion of Standard Three Pupils' at Different Reading Achievement Levels

The first objective for this study was to establish proportion of standard three pupils at various reading achievement levels after being subjected to an English reading test. The following research question was used to achieve the objective:

What are the reading achievement levels of standard three primary school pupils?

In order to answer the question, a standard two reading test was administered to 335 standard three pupils in Kenyenya Sub-county where letter awareness, reading for fluency and comprehension were assessed. The results on the pupils' English reading achievement levels were summarized in table 4.1 below.

Scoring of the reading achievement levels

Start Level -Not able to identify letter sounds, read words, paragraphs and comprehend a story

Letter sounds Level -Able to identify letter sounds but not able to read words, paragraphs and comprehend a story

Word Level -Able to identify letter sounds and read words but not able to read paragraphs and comprehend a story

Paragraph Level -Able to identify letter sounds, read words and paragraphs but not able to comprehend a story

Story Level -Able to identify letters, read words, read paragraph and comprehend a story

Table 4.1 Proportion of Standard Three Pupils at different Reading Achievement Levels

Reading Achievement Levels

	Reading Achievement Levels	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Start Level	42	12.5	11.6	12.5
	Letter Level	41	12.2	19.7	24.8
	Word Level	102	30.4	30.7	55.2
	Paragraph Level	54	16.1	20.3	71.3
	Story Level	96	28.7	17.6	100.0
	Total	335	100.0	100.0	

Table 4.1 above shows that majority (30.7%) of the children in standard three read at word level. They are able to identify letter sounds and read words but cannot read paragraphs or comprehend a story. The table also shows that 37.9% of the children can read at paragraph level and above. Only 17.6% of the children are able to comprehend a story. The table also indicates that 11.6% of the children read at the start level. The reading level expected at primary standard three is story comprehension.

From these finding we note that standard three pupils did not demonstrate the reading competency expected at standard two. This means that the standard three pupils struggle with the phonemic awareness skill competencies outlined in pre-primary and standard one which involves being unable to decode words. On reading fluency, they are not able to read class-appropriate words. On reading comprehension, they had a problem of recounting or describing key ideas or details from a text read. That is, were unable to answer such questions as *who* and *what* to demonstrate understanding of key details in a text.

Although reading abilities are vital for children for accessing information from reading materials at primary school and beyond, it is evident that majority of standard three pupils are struggling to read standard two level English test with only less than a quarter having mastered the standard two reading competencies. Internationally, it is established that, after finishing two years of primary level schooling, a learner is expected to have attained basic competencies in literacy and numeracy which are foundational for learning in all the other subjects (Uwezo, 2011). Stakeholders must be concerned about the numbers of primary school pupils who struggle with reading. Such concerns are warranted.

Pupils struggling to read are likely to encounter negative difficulties in their learning progress such as class repetition, assignment to special needs education classrooms, or involvement in long-term remedial services.

Struggling readers are more likely to raise the concern among teachers, parents and other stakeholders of as to why some pupils struggle with reading and what can be done to increase their success. Children with limited proficiency in English, those raised in poverty, those with hearing, speech, hearing and language handicaps, and those from homes where the parents reading levels and practices are low are at increased risk of struggling to read.

The current findings are similar to a study conducted in Kenya by Uwezo (2010) which found out that in Kenya, only twenty eight percent of standard three pupils achieved the reading competency expected at standard two. The findings of Uwezo in Kenya had almost the same percentage of learners struggling to read 72% just like the current study with 71.3% of standard three pupils struggling to read standard two reading test.

On the contrary, the current finding are inconsistent with the findings of the study done in East Africa (Uwezo, 2010) in Tanzania and Uganda, pass rates were lower than those in Kenya with only eight and four percent respectively. Further a study in Malawi shows that more than half of standard three pupils could not read common words in textbooks and 50 percent could not identify letters in the alphabet (Kadzamira and Rose, 2003). As compared to standard three pupils in Kenyenya Sub-county, slightly more than a half could not read common words given while around a quarter cannot identify letters given in the standard two English reading test.

Further, the current study is inconsistent with a study conducted in Europe which indicated that more than 10% of pupils annually did not reach the required class reading

levels standards (Rosebrock, 2006; Strickland and Riley-Ayers, 2006). Further, these findings are similar to a study by Queensland Authority (2005) that shows that three percent of year three pupils, in the State of Queensland are achieving below the benchmark for reading. This means that in these countries the proportion of pupils struggling to read is less than in Kenya.

4.4 Teacher-Pupil Ratio and Reading Achievement Levels

The study also intended to find out the relationship between teacher-pupil ratio and reading achievement levels among various standard three pupils. The results on pupils-teacher ratio are summarized in section 4.4.1 below.

4.4.1 Teacher-Pupil Ratios

The teacher-pupil ratios were categorised into optimum ratio with a ratio of 1:21-40, high ratio with a ratio of 1:41-60, very high ratio with a ratio of 1:61-80 and extremely high ratio with a ratio of 1:81 and above. The results on pupils-teacher ratios are summarized in table 4.2 below.

Table 4.2 Teacher-Pupil Ratio

Ratio of Teacher- Pupil to Reading Achievement Levels

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Optimum ratio	133	39.7	39.7	39.7
	High ratio	52	15.5	15.5	55.2
	Very High ratio	66	19.7	19.7	74.9
	Extremely High ratio	84	25.1	25.1	100.0
	Total	335	100.0	100.0	

An evaluation of the current teacher-pupil ratio in table 4.2 suggests that there is understaffing in most of the primary schools. Only 39.7% of the sampled schools had an optimum teacher-pupil ratio whereas a 25.1% of the pupils had an extremely high ratio. Actually around 60.3% of the sampled schools had disproportionately higher teacher-pupil ratio, that is, a sum of high, very high and extremely high ratios.

From these results we note that many schools had a high teacher-pupil ratio. The disproportionately high teacher-pupil ratios in government schools expose faulty learning policy. As per the government figures, the school education department should post one teacher for only forty pupils enrolled in a primary school in Kenya.

The overall proportion of pupils per teacher in relation to reading achievement levels are presented in section 4.4.2 below.

4.4.2 Proportion of Pupils per teacher in relation to Reading Achievement Levels

The number of pupils in each category of schools in relation to pupils' reading achievement levels was compared with the teacher-pupil ratio and the results are summarised as in table 4.3 below.

Table 4.3 Proportion of Pupils per Teacher and Reading Achievement Levels

Teacher-Pupil ratio * Reading Achievement Levels Crosstabulation

Count

		Reading Achievement Levels					Total
		Start Level	Letter Level	Word Level	Paragraph Level	Story Level	
Teacher-Pupil ratio	Optimum ratio	11	12	39	18	53	133
	High ratio	7	12	20	4	9	52
	Very High ratio	6	7	22	16	15	66
	Extremely High ratio	18	10	21	16	19	84
Total		42	41	102	54	96	335

From table 4.3 above, it was noted that out 335 pupils, 42 (12.5%) were at start level. Out of the 42 pupils, 26.2% were in schools with optimum teacher-pupil ratio, 16.7% from schools with high ratio, 14.3% from schools with very high ratio and 42.9% from schools with extremely high ratios. Majority of these pupils were in schools with extremely high teacher-pupil ratio, followed by those in optimum, then those in high and lastly, those in very high ratio.

The letter level had 41 (12.2%) pupils, that is, out of the 335 pupils who responded. Out of the 41 pupils in the letter level, 29.3% of the pupils were from schools with optimum teacher-pupil ratio, another 29.3% from schools with high ratio, and 17.1% from schools with very high ratios while 24.4% were from schools with extremely high ratios. Majority of the sampled pupils were in schools with optimum and high ratios, followed the pupils in extremely high and last, those from very high ratios.

The word level had 102 (30.4%) pupils out of the 335 pupils. Out of these, 38.2% were in the optimum ratio, 19.6% in the high ratio, 21.6% in the very high ratio and 20.6% in

the extremely high ratio. Majority of the pupils in this level, were in the optimum ratio, followed by those in the very high ratio, then those in the extremely high and last, those from high ratio.

The paragraph level had 54(16.1%) out of the 335 pupils. Majority of the pupils in this level were in the optimum teacher-pupil ratio (33.3%), followed by those in the very high and extremely high ratios with 29.6% each. Lastly, the minority of the pupils in this reading achievement level were from schools with high teacher-pupil ratio (7.4%).

The story level had 96 (28.7%) out of 335 pupils. Out of the 96 pupils, majority of the pupils were in schools with optimum teacher-pupil ratio (55.2%), followed by those who were in schools with extremely high ratio (19.6%), the pupils from schools with very high teacher-pupil ratio(15.6%) and lastly, the least number of pupils in this level were from schools with high teacher-pupil ratio (9.4%).

The optimum teacher-pupil ratio had 133 out of 335 pupils (39.7%). Out of the 133 pupils in this ratio, majority of them were in the story level (39.8%), followed by those in the word level (29.3%), then those in the paragraph level(13.5%), after paragraph level, were pupils in the letter level (9.0%) and last were pupils in the start level (8.3%). In the high teacher-pupil ratio, there were 52 pupils, that is, 15.5%. Out of the 52 pupils, majority of them were in the word level (38.5%), followed by those in the letter level (23.1%), then those in the start level (13.5%), next were pupils in the story level (17.3%) and last, were pupils in the paragraph level (7.7%).

In the very high teacher-pupil ratio, there were 66 pupils, that is, 19.7%. Out of the 66 pupils, majority of them were in the word level (33.3%), followed by those in the

paragraph level (24.2%), then those in the story level (22.7%) and last were those from letter and start levels with 10.6% and 9.1% respectively. Also, in the extremely high teacher-pupil ratio, there were 84 pupils, that is, 25.1%. Out of the 84 pupils, majority of them were in the word level (25.0%), followed by those in the story level (22.6%), then those in the start level (21.4%), and next were pupils in the paragraph and letter levels with 19.0% and 11.9% respectively.

In summary, out of the 335 pupils with different reading achievement levels, majority of them (39.7%) were in schools with optimum teacher-pupil ratio, followed by those with extremely high ratio (25.1%), then those in schools with very high ratio (19.7%) and lastly, the least number was from schools which had a high teacher-pupil ratio (15.5%).

The results reveal that reading achievement is a function of teacher-pupil ratio since as the number of pupils for every one teacher increases in class the percentage of pupils struggling to read tend to increase and the number of pupils who have adequately acquired the basic reading skill tend to decrease.

The lower teacher-pupil ratio allows for more effective communication between the pupils and their teacher. Small classes lead to higher pupil's achievement, more favourable teacher effects such as moral and attitude towards student; greater attempts in individual pupil, a better classroom climate and more favourable pupil effects such as self concept and participation (Bruhwiler and Blatchford, 2011).

To establish whether there was a significant relationship between teacher-pupil ratio and reading achievement levels across various standard three classes, the chi-square test was used to test the hypothesis "*H_O1: There is no significant relationship between teacher-pupil ratio and reading achievement levels of standard three pupils."* in section 4.4.3 below.

4.4.3 Relationship between Teacher-Pupil Ratio and Reading Achievement Levels

The study further sought to test the hypothesis:

H_O1: There is no significant relationship between teacher-pupil ratio and reading achievement levels of standard three pupils.

The hypothesis was tested at 0.05 significance level. The result is represented in table 4.4 below.

Table 4.4 Relationship between Teacher-Pupil Ratio and Reading Achievement Levels

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	32.327[a]	12	.001
Likelihood Ratio	30.861	12	.002
Linear-by-Linear Association	7.647	1	.006
N of Valid Cases	335		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.36.

Table 4.4 shows the result from the Pearson Chi-square test: the Chi-square statistic (32.327), degrees of freedom (12) and associated p-value (0.001). The p-value from the test is 0.001 which means that the test statistic is significant at the 5% level since P-value is less than 0.05. There is therefore evidence to state that there is a significant

relationship between pupil's reading achievement levels and pupil-teacher ratio hence we reject the null hypothesis. This suggests that pupils in smaller classes are likely to achieve better grades than those in bigger classes.

When teachers are few, they cannot give attention to individual learners (Blatchford, Bassett and Brown, 2011). Many standard three classes in Kenyenya Sub-County have big numbers of pupils and few teachers. This problem of lack of individual pupil attention is likely to accumulate right from class one where a teacher attends to so many pupils. It only manifests in standard eight when the pupils sit for the final exam.

The current finding indicates that there is a positive relationship between teacher-pupil ratio and pupils' competency in reading. As the teacher-pupil ratio increases the reading achievement tends to decrease. These findings are similar to a study in Kenya by Oduol (2006) on implication of education policy in Kenya that used the SACMEQ II data to carry out an analysis of classroom context factors that accounted for learners' competency in reading and mathematics. The study found that a high teacher- pupil ratio had a significant negative effect on learner scores in reading and mathematics.

On the contrary, the current findings are inconsistent with the findings of a study carried out in the United States by Milesi and Gamoran (2006) on the effects of class size on reading achievement in kindergarten. In an effort to understand the effect of class on academic achievement, the study examined classroom conditions that may affect the link between class size and academic achievement, and also consider whether class size had different effects for different groups of learners. The study found no evidence of

class-size effects on learners' achievement in either reading or mathematics hence the study finding provided evidence supporting that class size was insignificant in predicting pupils' reading achievement and academic achievement. Further, these findings are similar to a study by Hanushek (2003) on the failure of input-based schooling policies in the United States that also found that school inputs, including small class sizes had little effect on pupil academic achievement since public school reading achievement did not decline due to the influx of pupils in schools.

The current findings are not similar to a study in Kenya by Duflo, Dupas, Michael and Kremer (2007) on the effects of peer influences, class size, and teacher incentives on academic achievement. The study found that pupils with a reduced class size in upper classes performed relatively better on both mathematics and language when compared to pupils in lower grades. The results further gave evidence showing that reducing class size in lower primary school classes without any other change in instructional approaches did not lead to a significant improvement in performance.

Despite the fact that the available literature give inconsistent findings, a study in the United States by Ehrenberg, Brewer, Gamoran and Willms (2001) on class size and student academic achievement found out that small class benefited student when in combination with particular methods of instruction. The intuition behind this account was that when the teacher carries out group instruction, the time the teacher devotes to each pupil was less when compared with small-group or individual instruction. Hence the study gave evidence showing that the time devoted to each child had a greater influence on academic performance than class size although the same study further

indicated that as the number of pupils in the class decreases, the teacher devotes more time to each pupils.

Table 4.5 Proportion of Textbook-Pupil ratios and Reading Achievement levels

English Text books-Pupils ratio * Reading Achievement Levels Crosstabulation

Count

		Standard three Pupils' Reading Achievement Levels					Total
		Start	Letter	Word	Paragraph	Story	
English Text books-Pupil ratio	1:2	9	11	25	17	36	98
	1:3	16	17	53	30	43	159
	1:5	17	13	24	7	17	78
Total		42	41	102	54	96	335

From table 4.5 above, out of the 42 pupils in the letter level, majority of them were sampled from schools which had a text book-pupil ratio of 1:5 (40.5%), followed by those who were in schools with a ratio of 1:3(38.1%) and last, the least number was from schools which had a ratio of 1:2 (21.4%). Also, the letter level had 41 pupils. Out of the 41 pupils, majority of them were in schools which had a text book to pupil ratio of 1:3 (41.5%), followed by those with a ratio of 1:5 (31.7%) and least were from schools with a ratio of 1:2 (26.8%).

Also, it was noted that out of the 102 pupils in the word level, majority of them were in schools which had a text book to pupil ratio of 1:3 (52.0%), followed by those in schools with 1:2 (24.5%) and the least number was from schools which had a ratio of 1:5 (23.5%). The paragraph level had 54 pupils. Out of the 54 pupils in this level, majority of them were in schools which were having a text book-pupil ratio of 1:3

(55.6%) followed by those with a ratio of 1:2 (31.5%) and the least number was from schools which had a ratio of 1:5 (13.0%). Last, the story level had 96 pupils. Out of the 96 pupils in the story level, majority of them were from schools which had a text book pupil ratio of 1:3 (44.8%), then those with a ratio of 1:2 (37.5%) and the least number was from schools which had a text book to pupil ratio of 1:5 (17.7%).

The text book to pupils' ratio of 1:2 had 98 pupils, that is, 29.3%. Out of the 98 pupils in this ratio, majority of them were in the story level (36.7%), followed by those in the word level (25.5%), then those in the paragraph level (17.3%). The other reading levels after the paragraph level were the letter and the start with 11.2% and 9.2% respectively.

The text book to pupils' ratio of 1:3 had 159 pupils, that is, 47.5%. Out of the 159 pupils in this ratio, majority of them were in word level (33.3%), those in the story level followed (27.0%), and then, those in the paragraph, letter and start levels finished with 18.9%, 10.7% and 10.1% respectively.

The highest teacher text book to pupil ratio was 1:5 with 78 (23.3%) pupils falling in this category. Out of the 78 pupils, majority were in the word level (30.8%), those that followed were in the start and story levels with 21.8% each. The next levels after the story and start levels were pupils in the letter and paragraph levels with 16.7% and 9.0% respectively.

In summary, majority of the sampled pupils were in schools with a text book to pupil ratio of 1:3, that is, 159 (47.5%) pupils. They were followed by those who were in

schools with a ratio of 1:2, that is, 98 (29.3%) pupils. The least number of pupils were in schools which had a text book to pupil ratio of 1:5, that is, 78 (23.3%) pupils.

Although it is argued that availability of textbooks influences development of reading, it was realised that English textbook-pupil ratio, does not so much influence development of reading. In most cases, literacy depends as a matter of fact on the ability to familiarize with the book as a cultural object.

To establish whether there was a significant relationship in textbook-pupil ratio with the reading achievement levels across various standard three classes, a hypothesis was tested as shown in section 4.5.3 below.

4.5.3 Relationship between textbooks-pupil ratio and Reading Achievement Levels

The following hypothesis was tested using chi-square test at 0.05 significance level.

H_O2: There is no significant relationship between textbook- pupil ratio and reading achievement levels of standard three pupils.

The results are presented in table 4.6 below.

Table 4.6 Relationship between the Textbooks-pupil ratios and Reading Achievement levels

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.817[a]	8	.032
Likelihood Ratio	16.284	8	.038
Linear-by-Linear Association	10.941	1	.001
N of Valid Cases	335		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.55.

Table 4.6 shows the result from the Pearson Chi-square test: the Chi-square statistic (16.817), degrees of freedom (8) and associated p-value (0.032). The p-value from the test is 0.032 which means that the test statistic is significant at the 5% level since P-value is less than 0.05. This suggests that there is a significant relationship between pupil's reading achievement levels and Textbook-Pupil ratio hence we reject the hypothesis.

From the chi-square, it was noted that reading achievement is a function of textbook-pupil ratio since as the number of pupils sharing a textbook increased, in most cases the percentage of the pupils' reading achievement at every reading level tended to reduce. Book reading consistently has been found to have the power to create interactional contexts that nourish literacy development. Therefore, pupils need a good number of textbooks both at home and at school.

The current findings are similar to a study by Afana, Lietz and Tobin (2013) that was conducted on Palestinian, Israeli Hebrew and Israeli Arab schools in TIMSS of 2007. The study sought out to establish the relationship between school resources and academic achievements and assess the extent to which instruction was affected by a shortage or inadequacy of school resources. The results of the regression analysis between academic performance and availability of teaching resources (e.g., shortage in textbooks, instructional materials, student-teacher ratio, equipment for demonstration and exercises) indicated that students in schools that report adequate availability of resources performed slightly better than students in schools where there was such shortage.

The findings further concur to those of Montagnes's (2001) on a study that establish the relationship between the availability of textbooks and learning materials on academic achievement in South Africa. The findings indicated that classes with classroom libraries outperformed control school counterparts by as much as 189 percent, and were ahead by 187 months in the reading tests and two years in writing scores.

The current findings are similar to a study in Malawi by Ogawa, Kunje, and Selemani-Meke (2009). This study investigated the relationship between school and pupil characteristics and learners' achievement at the basic education levels. This study further sought to establish how school, classroom and pupil factors influenced performance in mathematics, English and Chichewa. Tests in the three subjects were administered to 6,000 pupils in 100 primary schools. The results indicated that pupils in classes where there were adequate textbooks performed relatively better than their counterparts who were in schools where textbooks were inadequate on not at all. Similarly classrooms where there were no textbooks performed much poorer than classes with textbooks in whatever ratio to pupils. Despite the fact that the current findings and those of Ogawa, Kunje, and Selemani-Meke have similar findings, the pupils' academic achievement in Malawi was measured through multiple-choice tests and step-wise regression analyses but the current relationship was established by using a reading test and administering a chi-squire test.

On the contrary, in Kenya, Glewwe, Kremer and Moulin (2009) had a randomized evaluation in rural Kenya to assess the access and utilization of textbooks in primary schools. The analysis indicated that the availability of textbooks did not raise class

performance but it was only the utilization of class textbook that had a positive relationship with class performance. The study further noted that most of the available textbooks in schools were written in English and most students were not in position to use them effectively due to their English deficiency.

4.6 Story books-pupil ratios and pupils' Reading Achievement Levels

The study also intended to find out if there was a significant relationship between the availability of story books and the reading achievement levels among various standard three pupils. The results on the story books-pupil ratio are summarized in section 4.6.1 below.

4.6.1 Number of Pupils per a Story Books

The reading achievement levels and story book-pupils ratios were compared. The data related to number of pupils per a story books were gathered using a schedule. The results on portions of story books-pupils ratios are summarized in table 4.7 below.

Table 4.7 Number of Story books per pupils

Story book-Pupil ratios

	Story book-Pupil ratios	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	There are no story books	51	15.2	15.2	15.2
	1:1	38	11.3	11.3	26.6
	1:2	70	20.9	20.9	47.5
	1:3	45	13.4	13.4	60.9
	1:4	131	39.1	39.1	100.0
	Total	335	100.0	100.0	

The availability of English story books was recorded by the actual number of the children who shared an English story book in class. Table 4.7 indicates that out of all the standard three pupils, 15.2% of them were in schools in which there was not even a single story book in class and 39.1% of the pupils were enrolled in schools where for every one story book there are four pupils. This is an indication that in more than half of the standard three pupils are enrolled in schools where there are inadequate story books and only 20.9% and 13.4% of the pupils are enrolled in classes where the story book-pupil ratio is of 1:2 and 1:3 respectively despite the fact that the government support all the primary schools with the funds to purchase the teaching/learning resources.

Ideally, the ratio of story book-pupil should be 1:1. It can be concluded that many schools do not have enough story books. This is likely to hinder development in reading. The importance of story books cannot be underscored, among others; interactive stories boosts pupil's reading level. The overall proportion of story books-pupil ratio in relation to reading achievement levels are presented in section 4.6.2 below.

4.6.2 Proportion of pupils per story books and Reading Achievement Levels

In order to establish the relationship between the proportion of pupils per a story and the reading achievement levels, a class two level reading test was administered to 355 standard three pupils where by both reading for fluency and for comprehension were assessed and the respective reading achievement level and story books-pupil ratios was compared. The results are summarized in table 4.8 below.

Table 4.8 Proportion of Story books-Pupil ratios and Reading Achievement levels

Story book-Pupil ratios * Reading Achievement Levels Crosstabulation

Count

		Standard three Pupils' Reading Achievement Levels					Total
		Start	Letter	Word	Paragraph	Story	
Ratio of Reading Story Books to Number of Pupils	None	9	4	19	5	14	51
	1:1	11	2	7	6	12	38
	1:2	1	11	16	13	29	70
	1:3	7	8	15	4	11	45
	1:4	14	16	45	26	30	131
Total		42	41	102	54	96	335

From table 4.8 above, it was noted that out of the 42 pupils in the start level, majority of them were in schools which were having a story book-to pupil ratio of 1:4 (33.3%), followed by those who were in schools with a ratio of 1:1 (26.2%), followed by those in schools without any story book (none), 1:3, and 1:2 with a percentage of 21.4%, 16.7% and 2.4% respectively. The letter level had 41 pupils. Out of the 41 pupils in this level, majority of the pupils were in schools with a story book-pupil ratio of 1:4 (39.0%), followed by those with a ratio of 1:2 (26.8%), then those of the ratio of 1:3, none and 1:1 with 19.5%, 9.8% and 4.9% respectively.

The word level had 102 pupils. Out of the 102 pupils in this level, majority of them were in schools with a story book-pupil ratio of 1:4 (44.1%), followed by those in schools without any story book (18.6%), then those in schools with a ratio of 1:2, 1:3 and 1:1 with a percentage of 15.7%, 14.7% and 6.9% respectively. The paragraph level had 54 pupils. Out of the 54 pupils, majority of them were in schools with a story book-pupil ratio of 1:(4 (48.1%), followed by those in schools with a ratio of 1:2 (24.1%),

then those with a ratio of 1:1 (11.1%) and those without a story book (9.3%) follows. Finally, that with a ratio of 1:3 (7.4%) came last.

Further, it was realised that the story level had 96 pupils. Out of the 96 pupils in the story level, majority of them were in schools which had a story book-pupil ratio of 1:4 (31.2%), followed by those in schools with ratio of 1:2 (30.2%), then followed by those in schools without any story book (none) ratio (14.6%). Those that were in schools with a ratio of 1:1 (12.5%) and 1:3 (11.5%) followed those without any story book respectively.

None ratio (those without any story book) had a total of 51 pupils. Majority of them were in word level (37.3%), followed by those in the story level (27.5%), then those in the start level (17.6%), and next are those in the paragraph level (9.8%) and letter level (7.8%). The ratio of 1:1 had 38 pupils. Out of the 38 pupils in this level, majority of them were in the story level, followed by those in the levels of start, word, paragraph and finally those in letter level with 28.9%, 18.4%, 15.8% and 5.3% respectively. The ratio of 1:2 had 70 pupils. Among the 70 pupils, majority of them were in the story level (41.4%), followed by those in the word level (22.9%). After the word level, follows the paragraph, letter and finally the start level with 18.6%, 15.7% and 1.4% respectively.

The story book-pupil ratio of 1:3 had 45 pupils. Out of the 45 pupils, majority of them were in the word level (33.3%), followed by those in the story level (24.4%), then those in the letter level, start level and last those in the paragraph level with 17.8%, 15.6% and 8.9% respectively. Lastly, story book-pupil ratio of 1:4 had 131 pupils. Out of the

131 pupils in the schools with 1:4 ratio, many of them were in the word level (34.4%), followed by those in the story level (22.9%), then those in the paragraph level (19.8%), letter level (12.2%) and last those in the start level (10.7%).

In summary, majority of the sampled pupils were in schools with a story book to pupil ratio of 1:4, that is, 131 (39.1%) pupils. They were followed by those who were in schools with a ratio of 1:2, that is, 70 (20.9%) pupils. Then followed by those without any story book (none) (15.2%) with 51 pupils, after which the ratio of 1:3 (13.4%) followed with 45 pupils. Then the last was the ratio of 1:1(11.3%) with 38 pupils.

Although it is argued (Barrera, Quiroa and Valdivia, 2002) that there is an influence of story books-pupils ratios with reading achievement levels. From the results above there is no such indication. For example, as compared to the ratios of 1:1 and 1:4, it was noted that around four percent and fourteen percent of pupils had attained the competency expected at standard two. To establish whether there was a significant relationship between story books-pupil ratio and reading achievement levels among various standard three pupils, the study sought to test the hypothesis as shown in section 4.6.3 below.

4.6.3 Relationship between Story books-pupil ratio and Reading Achievement Levels

The following hypothesis was tested at 0.05 significance level.

H_O3: There is no significant relationship between story books- pupil ratio and reading achievement levels of standard three pupils.

The results are represented in table 4.9 below.

Table 4.9 Chi-Square Tests of the relationship between the Reading Achievement Levels and Story book-Pupil

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	35.650[a]	16	.003
Likelihood Ratio	38.339	16	.001
Linear-by-Linear Association	.000	1	.993
N of Valid Cases	335		

a. 2 cells (8.0%) have expected count less than 5. The minimum expected count is 4.65.

Table 4.9 shows the result from the Pearson Chi-square test: the Chi-square statistic (35.650), degrees of freedom (16) and associated p-value (0.003). The p-value from the test is 0.003 which means that the test statistic is significant at the 5% level since P-value is less than 0.05. This suggests that there is a significant relationship between pupil's reading achievement levels and Story book-Pupil ratio hence we reject the null hypothesis.

Stories are a great way to introduce new words and ideas into a child's language story books expose children to many new words because they often include unfamiliar words, repeat the same words in a variety of sentences throughout the book, which helps children understand the words, offer opportunities for children to hear the same words over and over again with repeated readings and children have the opportunity to hear new words within the grammatical sentences of the story.

The current findings are consistent with those of Evans and Saint-Aubin (2011) in the united states, that found that majority of the children were able to read and write letters

fluently when exposed to variety of story books. These findings are also supported by an evidence-based assessment of the scientific research literature on reading and its implications for reading instruction conducted in the United States by National Reading Panel (2000) that found that the availability of story books was a key predictor of acquiring vocabulary, reading comprehension and word learning which are further linked to overall academic success.

Further, the findings are similar to the findings of Linden and MacLeod (2009) conducted to determine better way to teach children to read study in India. The study found that the teachers' use story books and flashcards played a significant role for word and letter recognition. The results further indicated that the utilisation of these resources further helps learners to cognitively attach meanings to words and take in whole words and ideas rather than focus on abstract chalkboard demonstrations. This three-year randomized control trial further found that the use of appropriate teaching methods and supplemented resource had greater positive effect on the academic achievement at preschool or first three grades than in higher grades.

The current findings are also similar to a study carried In Nigeria by RTI International (2014). It was a review of existing reading materials to support Hausa Literacy Instruction. The study was on: "Nigeria Reading and Access Research Activity (RARA). The finding of the study indicated that children easily acquired reading skills through frequent interactions with developmentally appropriate materials (textbooks, big books and story books).

4.7 Charts-Pupil Ratios and Reading Achievement Levels

The study also intended to find out if there was a significant relationship between charts-pupils ratios and reading achievement levels among various standard three pupils. The results on the charts-pupil ratio are summarized in section 4.7.1 below.

4.7.1 Number of pupils per Charts

In order to achieve these, the reading achievement levels of pupils and charts-pupil ratios were compared as follows. The study found the following from the schedule on the charts-pupil ratios. The results on number of charts-pupils ratios are summarized in table 4.10 below.

Table 4.10 Number of pupils per Chart

Chart-Pupils ratio

	Chart-Pupils ratio	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	150	44.8	44.8	44.8
	1-20	62	18.5	18.5	63.3
	41-60	45	13.4	13.4	76.7
	81 and above	78	23.3	23.3	100.0
	Total	335	100.0	100.0	

Despite the fact that reading charts are essential in the development of reading skills, the results in table 4.10 indicate that in all the visited schools 44.8% of the learners are enrolled in primary schools where there is not even one English reading chart in class. Further it was found that 23.3% of the standard three pupils are enrolled in schools

where for every one reading chart there were over 81 pupils enrolled in that class and only 18.5% of the pupils are enrolled in schools with adequate reading charts (for every one reading chart there are less than 20 pupils in class).

These results show a great disparity in the availability of charts in the schools. This was because some schools did not have any chart in class, others had adequate and others inadequate charts. Further it was found that most of the available reading charts were improvised by teachers, hence we can conclude that the availability of charts in schools to a greater extent depended on teacher's creativity to improvise teaching and learning materials depending on the resources available in the school and in the locality. The overall proportion of charts-pupil ratio in relation to reading achievement levels are presented in section 4.7.2 below.

4.7.2 Proportion of pupils per Charts and Reading Achievement Levels

In order to establish the proportion pupils per charts and the reading achievement levels, a class two level reading test was administered to 355 standard three pupils where by both reading for fluency and for comprehension were assessed and the respective reading achievement level and charts-pupil ratios was compared. The results are summarized in table 4.11 below.

Table 4.11 Proportions of Chart-Pupils ratio and Reading Achievement Levels

Ratio of Reading Charts to Number of Pupils * Reading Achievement Levels Crosstabulation

Count

		Standard three Pupils' Reading Achievement Levels					Total
		Start	Letter	Word	Paragraph	Story	
Charts-Pupils ratio	None	18	18	50	22	42	150
	(1:1-1:20)	4	2	16	12	28	62
	(1:41-1:60)	8	4	14	9	10	45
	(1:80 and above)	12	17	22	11	16	78
Total		42	41	102	54	96	335

From table 4.11 above, it was noted that out of the 42 pupils in the start level, majority of them were in schools which were not having any chart (42.9%). They were followed by those who were in schools with a chart pupil ratio of 1:80 and above (28.6%), then those with a ratio of 1:41-1:60 (19.0%) and last were in the schools with a ratio of 1:1-1:20 (9.5%). The letter level had 41 pupils. Out of the 41 pupils, majority of them were from schools without charts (43.9%), followed by those with a ratio of 1:80 and above (41.5%), then, those from schools with a ratio of 1:41-1:60 (9.8%) and last those from schools with a ratio of 1:1-1:20 (4.9%).

The word level had 102 pupils. Out of the 102 pupils, majority of them were from schools without charts (49.0%), followed by those with a ratio of 1:80 and above (21.6%), then, those from schools with a ratio of 1:1-1:20 (15.7%) and last those from schools with a ratio of:41-1:60(13.7%). The paragraph level had 54 pupils. Out of the 54 pupils, majority of them were from schools without charts (40.7%), followed by

those with a ratio of 1:1-1:20 (22.2%), then, those from schools with a ratio of 1:80 and above (20.4%), and last were those from schools with a ratio of 1:41-1:60(16.7%).

The story level is the expected reading competency of the standard three pupils. The story level had 96 pupils. Out of the 96 pupils, majority of them were from schools without charts (43.8%), followed by those with a ratio of 1:1-1:20 (29.2%), then, those from schools with a ratio of 1:80 and above (16.7%), and last were those from schools with a ratio of 1:41-1:60(10.4%).

None ratio schools (schools without charts) had 150 pupils. Out of the 150 pupils, majority of them were in the word level (33.3%), followed by those in the story level (28.0%), then those from the start and letter levels with 12.0% each, and the last were those in the paragraph level (14.7%). The ratio of 1:1-1:20 had 62 pupils. Out of the 62 pupils, majority of them were in the story level (45.2%), followed by those in the word level (25.8%), then those from the paragraph level (19.4%), and last, were those in the start and letter levels with 6.5% and 3.2% respectively.

The chart-pupil ratio of 1:41-1:60 had 45 pupils. Out of the 45 pupils, majority of them were in the word level (31.1%), followed by those in the story level (22,2%), then those from the paragraph level (20.0%), and last, were those in the start and letter levels with 17.8% and 8.9% respectively. Last, the chart-pupil ratio of 1:80 and above had 78 pupils. Out of the 78 pupils, majority of them were in the word level (28.2%), followed by those in the letter level (21.8%), then those from the story level (20.5%), and last, were those in the start and paragraph levels with 15.4% and 14.1% respectively.

In summary, majority of the sampled pupils were in schools without a chart, that is, 150 (44.8%) pupils. They were followed by those who were in schools with a ratio of 1:80 and above, that is, 78 (23.3%) pupils. Then followed by those with a ratio of 1:1-1:20 (18.5%). Lastly, the least number of the sampled pupils were in schools with a chart-pupil ratio of 1:41-1:60 (13.4%) with 45 pupils.

The table above shows that reading achievement is not a function of charts-pupil ratio since the schools that did not have even one reading chart and where one chart was shared among above 80 pupils had recorded the reading abilities which did not have a significant difference.

To establish whether there was a significant relationship between charts-pupil ratio and the reading achievement levels among various standard three pupils, a hypothesis was tested as shown in section 4.7.3 below.

4.7.3 Relationship between charts-pupil ratio and Reading Achievement Levels

The hypothesis tested was:

H_O4: There is no significant relationship between charts- pupil ratio and reading achievement levels of standard three pupils.

The hypothesis was tested at 0.05 significance levels. The result is represented in table 4.12 below.

Table 4.12 Testing the Relationship between the of charts-pupils ratio and Reading Achievement Levels

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24.283[a]	12	.019
Likelihood Ratio	24.542	12	.017
Linear-by-Linear Association	5.460	1	.019
N of Valid Cases	335		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.51.

Table 4.12 shows the result from the Pearson Chi-square test: the Chi-square statistic (28.283), degrees of freedom (12) and associated p-value (0.019). The p-value from the test is 0.005 which means that the test statistic is significant at the 5% level since P-value is less than 0.05. Therefore, there is evidence to state that there is a significant relationship between pupil's reading achievement levels and charts-Pupil ratio hence we reject the null hypothesis.

It is evident that Charts help in activating pupil's preceding knowledge of a subject or topic and encourage investigation, active reading, and research. Charts are particularly supportive as a pre-reading strategy when reading expository text and may also provide an assessment of what pupils have learned throughout a unit of study.

The current findings concur with those of Adenyinka and Samson (2007) on a study conducted in Botswana primary schools that found that 60% of the teachers rarely used charts in classes. However the study further established that the use of magazines, journals and charts had a positive relationship with class performance. The findings are further similar to the results of Mokatsi (2005) which found that one of the conditions

for learning to read and for the acquirement of literacy skills is by providing learners with plentiful books and reading charts that are relevant and up to date. Other studies have also indicated that students need to be supplied with a lot of choices and materials that reflects their interests and more especially should be given the opportunity to read traditional books, magazine, charts, comic books, and e-books to enhance their reading competency and skills (Merisuo-Storm, 2006).

The current findings are also similar to a study In Uganda by Guloba, Wokadala and Bategeka (2009) in four districts that investigated whether teaching methods and availability of teaching resources influenced pupils' performance. The study found that the availability of instructional materials (class resources, chalk, wall charts and writing board) provides motivating conditions for pupil learning hence predicted academic achievements. The study further indicated that the relationship between the availability of teaching resources and learning outcomes were greater among learners in the early grades of schooling.

Further, the current finding are similar to the finding of a study by Evans (2003) on organizers for Japanese readers of expository texts in English Language that found that teaching materials that included charts as visual AID supported and elicited better comprehension in Japanese readers of expository texts in English. Similarly, Yi-Chun and Yi-Ching (2009) conducted an action research study on the effects of pictures on the reading comprehension of low-proficiency Taiwanese English foreign language college student. This study found that charts were effective in the teaching of reading and acquirement of the basic reading skills.

On the contrary, the current findings are inconsistent with those of Willishaw (2012) on an evaluation of the utilisation of teaching resources in forty six schools in Lincolnshire. The findings revealed that the amount of time the children spent reading, and their enjoyment of reading had a greater influence on the acquirement of reading skill than the availability of story book and reading charts. The study further noted that there were schools where the teaching/learning were available but were never fully utilised.

4.7 Relationship among teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio and charts-pupil ratio

The sixth hypothesis stated that there is no significant contribution among teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio and charts-pupil ratio towards reading achievement levels of standard three primary school pupils. Multiple regression analysis was performed to determine if the relationship was statistically significant and identify the contribution of each predictor variable towards the variation of the criterion variable.

Table 4.13: Teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio, charts-pupil ratio and reading achievement levels

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.268[a]	.072	.061	1.302

a. Predictors: (Constant), Charts-pupil ratio, Teacher-Pupil ratio, Story Books-pupil ratio, Textbook-pupil ratio

Table 4.13 above is a multiple regression analysis. The R-Square value of 0.072 indicates the teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio, charts-pupil ratio jointly explain 7.2% of the variations of the pupils reading achievement

levels and 92.8% of the variations can be explained by other factors. The 7.2% explains teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio and charts-pupil ratio jointly. To explain the percentage contribution of each, simple regression was performed. The results are shown in table 4.14 to table 4.17 below.

Table 4.14 Teacher-Pupil Ratio

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.151[a]	.023	.020	1.330

a. Predictors: (Constant), Teacher-Pupil Ratio

The R-Square value of 0.023 indicates the teacher-pupil ratio explain 2.3 % of the variations of the pupils reading achievement levels and 97.7% of the variations can be explained by other factors.

Table 4.15 Text book-Pupils Ratio

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.181[a]	.033	.030	1.324

a. Predictors: (Constant), Text Book-Pupil Ratio

The R-Square value of 0.033 indicates the text book-pupil ratio; explain 3.3% of the variations of the pupils reading achievement levels and 96.7% of the variations can be explained by other factors.

Table 4.16 Story Book-Pupil Ratio

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.000[a]	.000	-.003	1.346

a. Predictors: (Constant), Story Book-Pupil Ratio

The R-Square value of 0.00 indicates the story book-pupil ratio explain 0.00% of the variations of the pupils reading achievement levels and 100% of the variations can be explained by other factors.

Table 4.17 Chart-Pupil Ratio

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.128[a]	.016	.013	1.335

a. Predictors: (Constant), Chart-Pupil Ratio

The R-Square value of 0.016 indicates the charts-pupil ratio explain 1.6% of the variations of the pupils reading achievement levels and 98.4% of the variations can be explained by other factors.

Table 4.18 Anova[b] Analysis of Teacher-Pupil Ratio, Text Book-Pupil Ratio, Story Book-Pupil Ratio, Charts-Pupil Ratio and Reading Achievement Levels

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.487	4	10.872	6.409	.000[b]
	Residual	559.809	330	1.696		
	Total	603.296	334			

a. Dependent Variable: Standard three Pupils' Reading Achievement Levels

b. Predictors: (Constant), Charts-Pupil Ratio, Teacher-Pupil Ratio, Story Books-Pupil Ratio, Textbook-Pupil Ratio

The ANOVA assessment above indicates that the significant is .000and this means that P<.005. Hence we make a conclusion that teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio and charts-pupil ratio jointly make a significant contribution towards pupils' reading achievement levels. This shows that teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio and charts-pupil ratio have a joint effect on pupils' reading achievement levels.

Table 4.19: Coefficients[a] of teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio, charts-pupil ratio and reading achievement levels

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	4.766	.338		14.108	.000	4.101	5.430
	Teacher-Pupil Ratio	-.118	.061	-.108	-1.951	.052	-.238	.001
	Ratio of Reading Text book-pupil ratio	-.366	.105	-.197	-3.484	.001	-.572	-.159
	Story books-Pupil-Ratio	-.006	.051	-.006	-.109	.913	-.106	.095
	Chart-Pupil Ratio	-.103	.036	-.157	-2.884	.004	-.174	-.033

a. Dependent Variable: Standard three Pupils' Reading Achievement Levels

You can note from the "Sig**.**" column that all independent variable coefficients are statistically significantly different from 0 (zero) apart from ratio of reading story books to number of pupils. Although the intercept, B_0, is tested for statistical significance, this is rarely an important or interesting finding.

In general, a multiple regression was run to predict reading achievement levels from teacher-pupil ratio, text book-pupil ratio, story book-pupil ratio and charts-pupil ratio. These variables statistically significantly predicted reading achievement levels, $F(4, 330) = 10.872$, $p < .05$, $R^2 = .072$. All four variables added statistically significantly to the prediction, $p < .05$.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary of the major findings, conclusions drawn from the findings, recommendations and suggestions for additional research areas based on the study findings.

5.2 Summary

Most of the standard three pupils in Kenyenya Sub-county have not demonstrated the reading competency expected at standard two. Slightly over one-tenth of the sample are at start reading achievement level, slightly over one-tenth are at letter level, around three-tenths are at word level, less than two-tenths are at paragraph level and nearly three-tenths are at story level.

Majority of the schools in Kenyenya sub-county had disproportionately higher teacher-pupil ratios that were higher than 40. Around forty percent of the pupils at story level reading achievement levels were from a class of optimum ratio. The results reveal that reading achievement is a function of teacher-pupil ratio since as the number of pupils for every one teacher increases in class the percentage of pupils struggling to read tend to increase. The current finding indicates that there is a positive relationship between teacher-pupil ratio and pupils' competency in reading.

A number of standard three pupils in Kenyenya sub-county are in classes where one English textbook is shared among three pupils. It is clear that all English teachers had few English textbook for every pupil to use during a teaching reading lesson. Twenty five percent of pupils at story level only, had English textbook-ratio of 1:2, whereas, around thirty four and forty one percent had English textbook-ratio of 1:3 and 1:5 respectively. From the chi-square, it was noted that reading achievement is a function of textbook-pupil ratio since as the number of pupils sharing a textbook increase, in most cases the percentage of the pupils' reading achievement at every reading level tend to reduce respectively.

Most of standard three pupils in Kenyenya sub-county are enrolled in schools where there are inadequate story books and only less than one-quarter and around one-eighth of the pupils are enrolled in classes where the story book-pupil ratio is of 1:2 and 1:3 respectively. Less than three percent of the pupils in schools without story books had attained the proficiency level expected at class two. Although it is argued that there is an influence of story books-pupils ratios with reading achievement levels, the data did not indicate so. The chi-square test indicated that there was a significant relationship between pupil's reading achievement levels and story book-pupil ratio.

Many standard three pupils were enrolled in schools where the classes did not have any reading chart for English. Further it was found that around one-quarter of the standard three pupils are enrolled in schools where for every one reading chart there were over 80 pupils enrolled in that class. It seemed that reading achievement is not a function of charts-pupil ratio since the schools that did not have any reading chart and where one

chart was shared among above 80 pupils had recorded the reading abilities which did not have a significant difference with those learners with adequate charts in class. From chi-square, there is a significant relationship between charts-pupil ratio and reading achievement levels.

5.3 Conclusions

Results from this study have shown that majority of pupils were at word level while only less than a third of the standard three pupils were able to read and comprehend a class two story. On the influence of pupil-teacher ratio on reading achievement levels, there was a significant relationship between pupil's reading achievement levels and pupil-teacher ratio. Also, it was realised that, reading achievement was a function of textbook-pupil ratio, story book-pupil ratio and charts-pupil ratio since as the number of pupils sharing a textbook, story books and charts increase, in most cases the percentage of the pupils' reading achievement at every reading level tend to reduce respectively.

5.4 Recommendations

5.4.1 Policy Recommendations

The teaching and learning to read constitutes of many elements and factors. For pupils to engage reading successfully, all stakeholders in the primary school fraternity should be mobilized and supported to enhance development of quality reading. The policy makers at the ministry of education, teachers and parents should take up their

responsibilities in ensuring that children develop quality reading skills. Some of the recommendations for the various stakeholders are outlined in the subsequent sections.

(a) Recommendations for the Policy Maker (Ministry of Education)

i. Since there are low reading achievement levels among standard three primary school pupils, the ministry of education should organise refresher courses to equip teachers with reading literacy skills in order to assist pupils acquire reading competency. This reading programme for teachers will centre its attention on ways enhancing reading skills in pupils.

ii. Since the study indicates that schools with high teacher-pupil ratio had low reading achievement levels for standard primary school pupils, there is need for the government through Teacher Service Commission to increase the number of teachers in primary schools especially lower primary. This will lower teacher-pupil ratio hence improving reading pupils' reading literacy.

iii. The study indicates that many schools lacked adequate reading materials with some not having any material. Ministry of education should provide policy guidelines on the development of teaching and learning resources which will be used to enhance reading literacy among pupils.

(b) Recommendations for Teachers

i. This study indicates low reading achievement levels among standard three pupils. Teachers should improvise own ways of helping children to acquire

reading skills. This will be accompanied with a variety of reading activities for pupils.

ii. The teachers should initiate book harvesting programme where they will engage different stakeholders to collect new books for their schools. At the same time, teachers should develop reading charts from locally available materials. From the research study, it was noted that reading instructional resources such as English textbooks, story books and charts were not enough in many sampled schools and they resulted to low reading achievement levels among standard three primary school pupils.

5.4.2 Recommendation for Further Research

The study was conducted only in Kenyenya Sub-County. Further research is needed to find out reading achievement levels among standard three primary school level in the remaining three sub-counties apart from the five out of nine conducted by the Uwezo and the one conducted y the researcher. A research should be done to assess the effectiveness P1 teacher training programmes to establish how well they prepare teacher trainees to teach reading skills to pupils in the primary school level. Additional research should be conducted how teacher- pupil ratio influence reading achievement of pupils since the current study the existence of the relationship and now require a qualitative study. A research should be conducted at pre-primary school level which is a foundation for developing reading skills in the learners to unearth the possible challenges experienced at the pre-primary school level in Kenyenya Sub-County when the teaching of reading. A longitudinal research involving daycare children till they

reach standard three should be conducted to collect qualitative data on the perceived factors influencing reading literacy among pupils in Kenyenya Sub-County.

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APPENDICES

Appendix I: Observation Schedule for Accessibility of Reading Materials

1. School Serial Number……..
2. The number of pupils enrolled in standard three----------
3. The number of teachers teaching standard three.....

Reading materials for standard three	No. of each resource	Ratio of each reading resource to the pupils (**indicate the actual ratio**)
Text books Story books Charts		

Appendix II: Reading Test

Using the assessment tool (Class 2 level texts), reading of English is assessed at four distinct levels of difficulty. Levels: letters, words, paragraph and story. Test administrators (researcher and the standard three teachers) will begin at the paragraph level, and then move up to the story level or down to the words depending on the competence of the child. Both reading for fluency and for comprehension are assessed at the first 3 and last level respectively.

ENGLISH READING TEST

LETTERS

a	u
m	ɣ
f	c
g	j

WORDS

tree	leg
bean	sand
cup	rat
egg	home
sheep	milk

The child should attempt to read any five. At least four attempts must be correct.

PARAGRAPH

Look at my hair
It is short and black.
I like my hair.
I plait it on Saturday.

The child should select and read any of the two paragraphs

STORY

Osoro and Bochere live in Kenyenya. Kenyenya is a cold and windy place. They always wear heavy clothes. They like playing in the cold. They are happy when it rains. Last year it rained a heavily. They helped their father plant trees. Mother planted maize and beans. There was a lot of food. Mother took some maize to the nearby market. She sold it and got a lot of money. Mother used the money to buy clothes for us. We were all happy

Q1. Where does Osoro live?
Q2. What did mother sell?

The child should attempt the two questions

How to assess reading and what criteria to use to categorize children

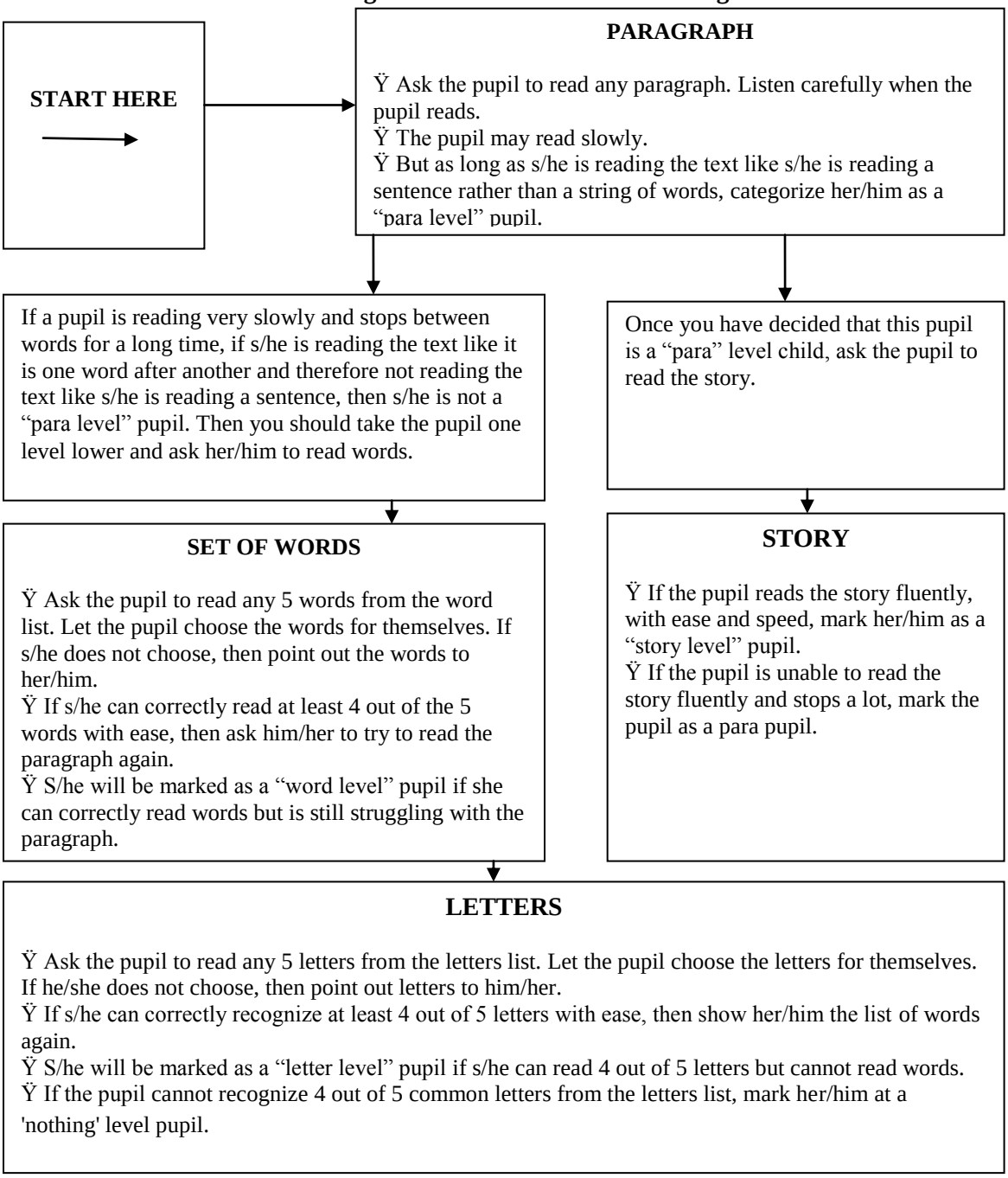
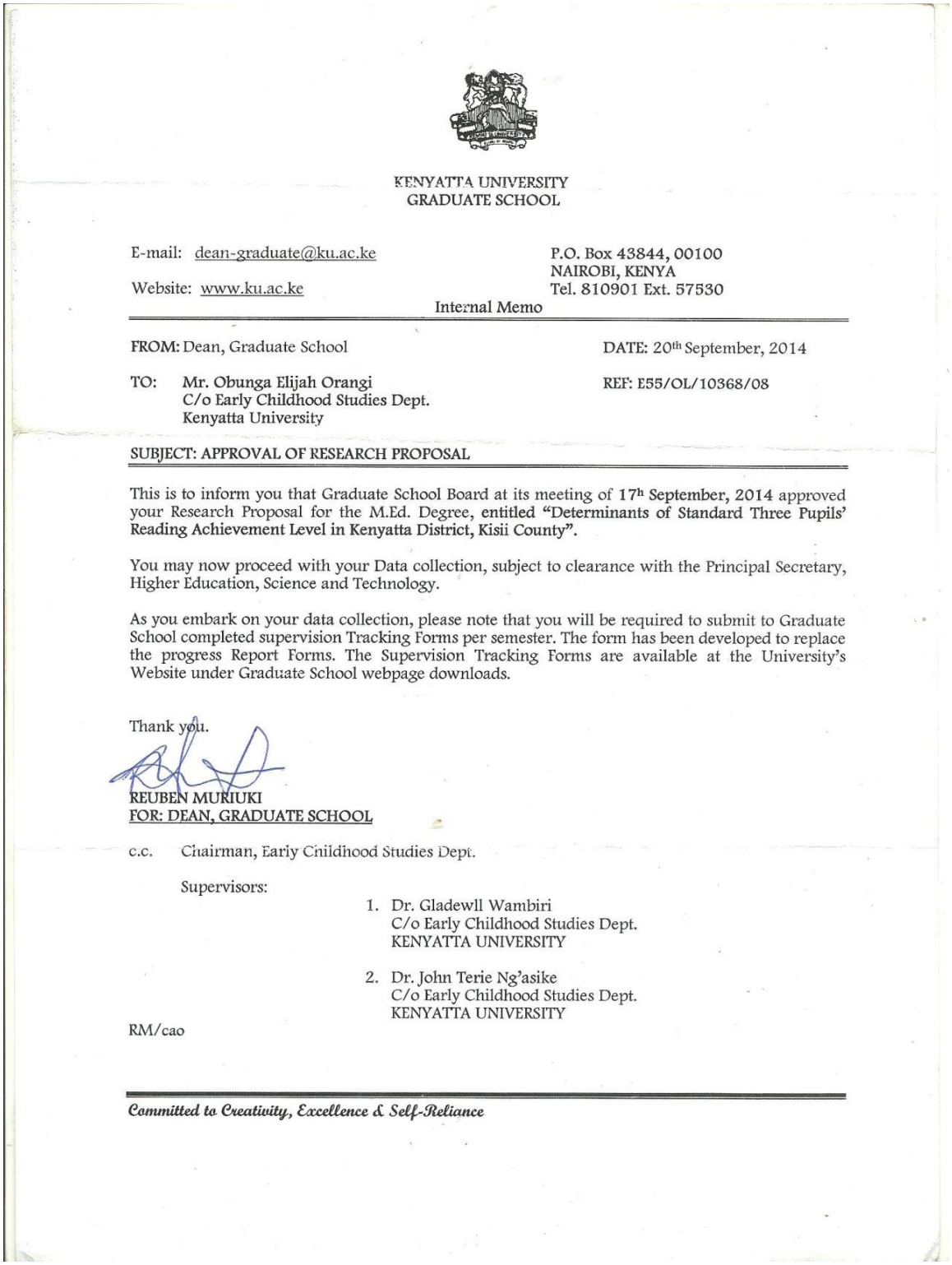


Figure 1.2: How to assess reading and what criteria to use to categorize pupils

Adapted from Uwezo (2011) Class Three English Reading Test

Appendix III: Approval of Research Proposal from Graduate School



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School

DATE: 20th September, 2014

TO: Mr. Obunga Elijah Orangi
C/o Early Childhood Studies Dept.
Kenyatta University

REF: E55/OL/10368/08

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that Graduate School Board at its meeting of 17h September, 2014 approved your Research Proposal for the M.Ed. Degree, entitled "Determinants of Standard Three Pupils' Reading Achievement Level in Kenyatta District, Kisii County".

You may now proceed with your Data collection, subject to clearance with the Principal Secretary, Higher Education, Science and Technology.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed supervision Tracking Forms per semester. The form has been developed to replace the progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

Thank you.

REUBEN MURIUKI
FOR: DEAN, GRADUATE SCHOOL

c.c. Chairman, Early Childhood Studies Dept.

Supervisors:

1. Dr. Gladewll Wambiri
   C/o Early Childhood Studies Dept.
   KENYATTA UNIVERSITY
2. Dr. John Terie Ng'asike
   C/o Early Childhood Studies Dept.
   KENYATTA UNIVERSITY

RM/cao

Committed to Creativity, Excellence & Self-Reliance

Appendix IV: Authorization Letter from Graduate School

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

OUR REF: E55/OL/10368/08

Date: 20th September, 2014

The Principal Secretary,
Higher Education, Science & Technology,
P.O. Box 30040,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MR. OBUNGA E. ORANGI REG. NO. E55/OL/10368/08

I write to introduce Mr. **Orangi** who is a Postgraduate Student of this University. He is registered for M.Ed. Degree programme in the **Department of Educational Management, Policy & Curriculum Studies in the School of Education.**

Mr. Orangi intends to conduct research for a proposal entitled, **"Determinants of Standard Three Pupils' Reading Achievement Level in Kenyatta District, Kisii County".**

Any assistance given will be highly appreciated.

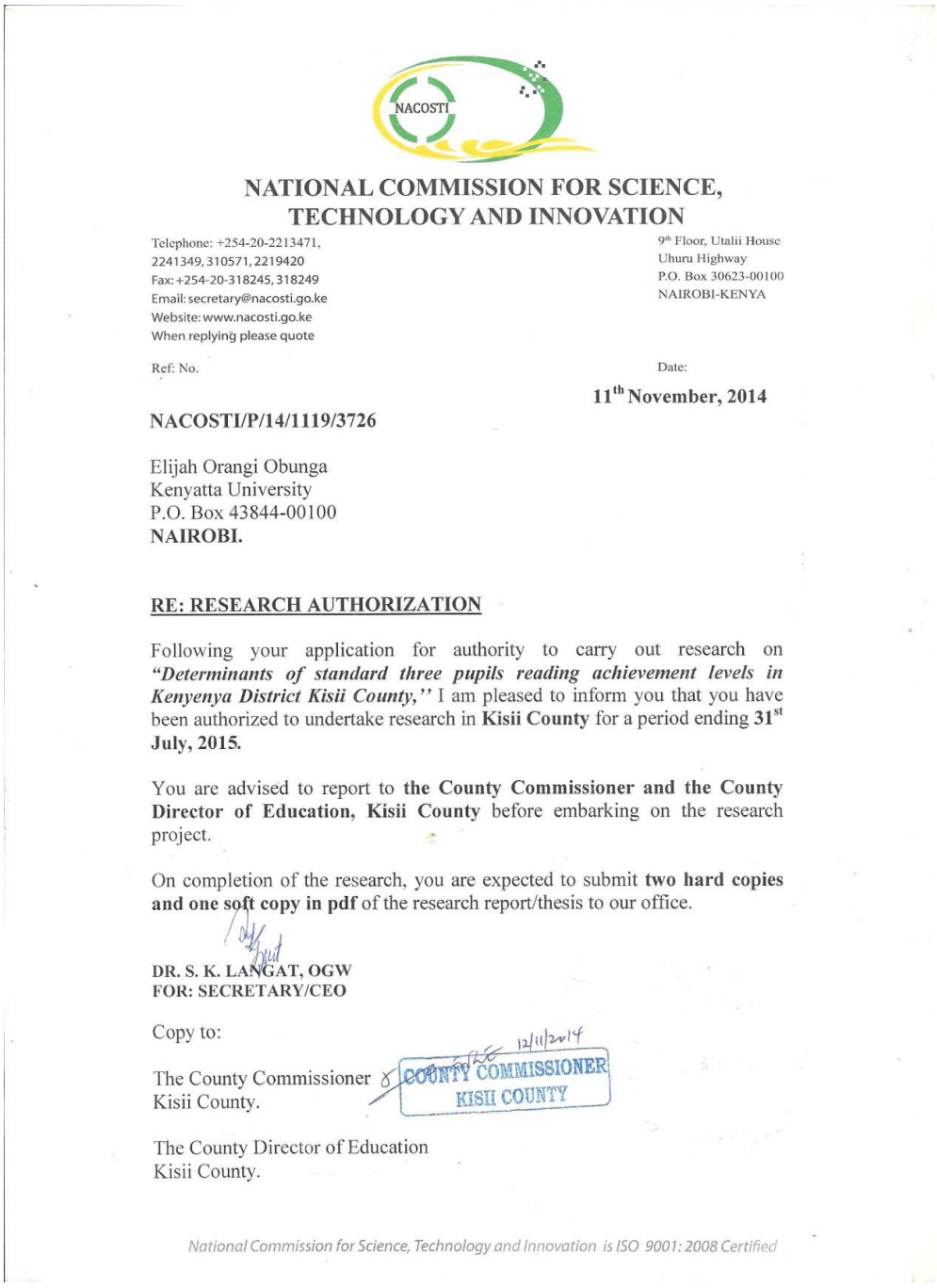
Yours faithfully,

MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

RM/cao

Committed to Creativity, Excellence & Self-Reliance

Appendix V: Authorization Letter from NACOSTI



NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

Date:

11th November, 2014

NACOSTI/P/14/1119/3726

Elijah Orangi Obunga
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Determinants of standard three pupils reading achievement levels in Kenyenya District Kisii County,"*** I am pleased to inform you that you have been authorized to undertake research in **Kisii County** for a period ending **31st July, 2015.**

You are advised to report to **the County Commissioner and the County Director of Education, Kisii County** before embarking on the research project.

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

DR. S. K. LANGAT, OGW
FOR: SECRETARY/CEO

Copy to:

The County Commissioner
Kisii County.

12/11/2014
COUNTY COMMISSIONER
KISII COUNTY

The County Director of Education
Kisii County.

National Commission for Science, Technology and Innovation is ISO 9001: 2008 Certified

Appendix VI Research Permit

THIS IS TO CERTIFY THAT:
MR. ELIJAH ORANGI OBUNGA
of KENYATTA UNIVERSITY, 75-40211
KENYENYA,has been permitted to
conduct research in *Kisii County*

on the topic: *DETERMINANTS OF STANDARD THREE PUPILS READING ACHIEVEMENT LEVELS IN KENYENYA DISTRICT KISII COUNTY*

for the period ending:
31st july,2015

.....
Applicant's Signature

Permit No : NACOSTI/P/14/1119/3726
Date Of Issue : 11th November,2014
Fee Recieved :Ksh 1,000

NACOSTI

.....
Secretary
National Commission for Science, Technology & Innovation

Appendix VII: Authorization Letter from County Director of Education

REPUBLIC OF KENYA
MINISTRY OF EDUCATION SCIENCE AND TECHNOLOGY.

Telegram: "EDUCATION"
Telephone: 058-30695
When replying please quote
cdekisii@gmail.com

COUNTY DIRECTOR OF EDUCATION
KISII COUNTY
P.O. BOX 4499 - 40200
KISII.

Ref: CDE/KSI/RECH/1/17

12TH November, 2014

STATE DEPARTMENT 0F EDUCATION

Elijah Orangi Obunga
Kenyatta University
P.O Box 43844-01000
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your Research Authorization vide your letter Ref.NACOSTI /P/14/1119/3726, to carry out research in Kisii County, this letter refers.

I am pleased to inform you that you have been granted authority to carry out your research in the County on" **Determinants of standard three pupils reading achievement levels in Kenyenya District Kisii County,**" for a period ending **31st July, 2015.**

Wish you a successful research.

COUNTY DIRECTOR OF EDUCATION
KISII COUNTY
P. O. BOX 4499-40200, KISII
Date .....
Sign .....

RICHARD L. CHEPKAWAI
COUNTY DIRECTOR OF EDUCATION
KISII COUNTY.

Appendix IX: Map of the Research Area (Kenyenya Sub-county)

Appendix X: Krejcie and Morgan (1970) and Sample Size Determinant

Required Sample Size†

Population Size	Confidence = 95% Margin of Error				Confidence = 99% Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1067	427	636	827	1119
1,500	306	515	759	1297	460	712	959	1376
2,000	322	563	869	1655	498	808	1141	1785
2,500	333	597	952	1984	524	879	1288	2173
3,500	346	641	1068	2565	558	977	1510	2890
5,000	357	678	1176	3288	586	1066	1734	3842
7,500	365	710	1275	4211	610	1147	1960	5165
10,000	370	727	1332	4899	622	1193	2098	6239
25,000	378	760	1448	6939	646	1285	2399	9972
50,000	381	772	1491	8056	655	1318	2520	12455
75,000	382	776	1506	8514	658	1330	2563	13583
100,000	383	778	1513	8762	659	1336	2585	14227
250,000	384	782	1527	9248	662	1347	2626	15555
500,000	384	783	1532	9423	663	1350	2640	16055
1,000,000	384	783	1534	9512	663	1352	2647	16317
2,500,000	384	784	1536	9567	663	1353	2651	16478
10,000,000	384	784	1536	9594	663	1354	2653	16560
100,000,000	384	784	1537	9603	663	1354	2654	16584
300,000,000	384	784	1537	9603	663	1354	2654	16586