

**TEACHERS' ATTITUDES AND KNOWLEDGE TOWARDS
IMPLEMENTATION OF INCLUSIVE EDUCATION IN PRIMARY SCHOOLS
IN KAKAMEGA COUNTY, KENYA**

BY

ANDREW E. KUYA MAKACHIA

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF
PHILOSOPHY IN EDUCATIONAL PSYCHOLOGY, DEPARTMENT OF
EDUCATIONAL PSYCHOLOGY, SCHOOL OF EDUCATION
MOI UNIVERSITY**

2018

DECLARATION

DECLARATION BY THE CANDIDATE

I declare that this thesis is my original work and has not been presented for the award of any degree in any university.

Signature: -.....

Date:

ANDREW MAKACHIA

Reg.: EDU/D.PHIL/PGP/1003/14

DECLARATION BY SUPERVISORS

This research thesis has been submitted with our approval as University Supervisors.

Signature:

Date.....

PROF. MULAMBULA SHIKUKU

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

MOI UNIVERSITY

Signature:

Date:

DR. NJERI KIARITHA

SCHOOL OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

MOI UNIVERSITY

DEDICATION

To Papa Makachia, Mama Rita and Senje Akanda, I posthumously dedicate this research thesis to you all.

ABSTRACT

Education is the foundation of all the developments that take place in any country and an investment any Government should bequeath its citizens. In line with Millennium Development Goals, Kenya put forward an Agenda to achieve Education for all by 2015. According to this agenda, learners with special needs and disabilities who had no access to education were to access it in inclusive settings and teachers had to be prepared in terms of attitudes and knowledge in handling these learners in inclusive schools. The purpose therefore of the present study was to determine teachers' attitudes and knowledge towards implementation of inclusive education in primary schools in Kakamega County. The objectives of the study included determining the teachers' attitudes, teachers' knowledge of teaching strategies, teachers' knowledge of adapting the curriculum and examinations, teachers' knowledge of providing suitable resources and environment, teaching experience towards implementation of inclusive education and how it had been implemented in primary schools. The study adopted descriptive survey research design and was based on social learning theory by Albert Bandura and social model of disability by Mike Carson. The conceptual framework involved teachers' attitudes toward inclusive education, knowledge of curriculum and examinations adaptations, knowledge of suitable resources and environment for all learners in inclusive schools as independent variables and implementation of inclusive education as dependent variables. There were 6989 teachers in primary schools in Kakamega County and out of this 2500 were in schools that practiced inclusive education and/ or integrated education. In this respect the researcher carried out the research in inclusive schools thus the population of this study was 2500 teachers. Published statistics with a population of between 2000 and 3000, the sample size allowed is 400. Data was collected by researcher made questionnaire, an observation checklist and an interview schedule that were adapted from the expert consensus model that identified teacher competencies needed to support inclusive education in schools. The instruments were validated by experts in the Educational Psychology department at Moi University. The reliability was estimated on a sample of 33 teachers of the sampled population in the pilot study and the aggregate overall correlation coefficient index for the five scales was 0.86 using Pearson product moment formula. The respondents who participated in the pilot study did not participate in the main study. Data was analyzed using descriptive statistics such as percentages and frequency counts. The study found out that teachers who were handling inclusive classes had positive attitudes and 50% of them had knowledge of relevant teaching strategies but they did not adapt the curriculum and examinations adequately and also they did not provide adequate suitable resources and environment that could suit all learners thus implementation of inclusive education was not effective in Kakamega County. Further analysis using Chi-square and ANOVA on the influence of teachers' gender, teaching experience and qualification showed that they were significant on implementation of inclusive. The study recommended that teachers should be trained on inclusive education knowledge and that the Government of Kenya should formulate a specific policy on implementation of inclusive education program in primary schools. The findings are also useful to other stakeholders including headteachers of primary schools for planning how to sensitize stakeholders of primary schools for effective implementation of inclusive education programmes in primary schools in Kakamega County.

ACKNOWLEDGEMENT

This work would not have been successful had it not been for my two University supervisors namely Prof, Mulambula Shikuku and Dr. Esther Njeri Kiaritha of Educational psychology department- Moi University who tirelessly guided me from time to time. Since the time of conceptualizing the title of the research project throughout the whole period of writing the thesis, my supervisors were on hand to give their much needed input. I most sincerely thank them for their professional support and work. I pray that God gives them long live so that they can continue molding other budding scholars.

The other gratitude goes to my family-my wife Beatrice Makachia and children Chiluba, Nambu, Senje, Tom and Nick for the moral and financial support I received from them and especially My son Nambute who assisted me type the thesis. To them all be blessed.

Others that deserve special thanks are my colleagues the Doctor of Philosophy students (2013 Educational psychology Town campus class) at Moi University, my present colleagues at Masinde Muliro University of science and Technology and previous colleagues at Maseno school for the deaf, Ebukuya school for the deaf and Mumias school for the deaf and at Kenya Institute of Special Education. I can't mention all my friends and relatives who encouraged and assisted me in one way or the other because of space but to them all 'EMBWO.'

Last but not least I owe all the gratitude's to the Almighty God Who gave me strength and life to soldier on my education journey despite the many challenges I had to overcome during my childhood and middle adulthood.

God Bless all. Amen

TABLE OF CONTENTS

DECLARATION.....	ii
DEDICATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	v
ABBREVIATION AND ACROWNYMS	xii
LIST OF TABLES	xiii
LIST OF FIGURES.....	xv
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.1 Introduction	1
1.2 Background to the study.....	1
1.3 Statement of the problem	8
1.4 Purpose of the study	9
1.5 Objectives of the study	10
1.6 Research questions	10
1.7 Hypotheses	11
1.8 Justification of the study.....	12
1.9 Significance of the study	13
1.10 Scope	13
1.11 Limitations.....	14
1.12 Assumptions of the study	15
1.13 Theoretical framework	15

1.13.1 Social Learning Theory and Social Model of Disability.....	15
1.13 Conceptual framework	18
1.14 Definition of operational Terms	22
CHAPTER TWO.....	26
LITERATURE REVIEW.....	26
2.1 Introduction	26
2.2 Concept of education.....	26
2.3 Development of education of persons with special needs worldwide.....	27
2.4 Education of persons with special needs in Kenya before Independence	29
2.5 Concept of inclusive education	30
2.6 Development of inclusive education worldwide	34
2.7 Inclusive education in the Kenyan context after independence	37
2.8 Attitudes of teachers towards implementation of inclusive education.....	40
2.9 Teachers knowledge towards implementation of inclusive education.....	43
2.9.1 Teachers knowledge of Teaching strategies towards implementation of inclusive education	44
2.9.2. Teachers’ knowledge of Curriculum and Examinations adaptation towards implementation of inclusive education.....	50
2.9.3. Teachers’ knowledge of Suitable resources and environment towards implementation of inclusive education.....	53
2.9.4 The Teachers’ attitudes on how inclusive education had been implemented in primary schools.	56
2.9.5 Summary	60

CHAPTER THREE	62
RESEARCH METHODOLOGY	62
3.1 Introduction	62
3.2 Research Design	62
3.3 Research Paradigm	64
3.4 Area of the study	65
3.5 Population of the study.....	66
3.6 Sampling procedures and sample size.....	66
3.7.1 Instrumentation.....	68
3.7.2 Teachers Questionnaire	69
3.7.3 An observation Checklist	69
3.7.4 An Interview schedule.....	70
3.8 Data collection procedures	70
3.9 Scoring of Instruments	71
3.10 Pilot Study	72
3.10.1 Validity of the instruments	72
3.10.2 Reliability of the instruments	73
3.11 Data Analysis	74
3.12 Ethical issues	74
CHAPTER FOUR	76
DATA PRESENTATION, ANALYSIS AND INTERPRETATION	76
4.0 Introduction	76
4.1 The influence of teachers’ demographic data towards implementation of inclusive education	77
4.1.1 Teachers’ Gender	77

4.1.2 Teachers' general professional qualification.....	78
4.1.3 Teachers' professional qualification in special needs education.....	79
4.1.4 Teachers' experience.....	81
4.1.5 Type of special need learners included in regular classes.....	83
4.2 Teachers' attitudes towards implementation of inclusive education.....	85
4.2.1 Teachers' Gender and Teachers' attitudes.....	91
4.2.2 Teachers' experience and Teachers' Attitudes.....	94
4.2.3 Teachers' professional Qualification and Attitudes.....	96
4.3 Teachers' knowledge of Teaching strategies used in inclusive classes towards implementation of inclusive education.....	99
4.3.1 Teachers' Experience and Teaching Strategies.....	110
4.3.2 Teachers' professional Qualification and Teaching Strategies.....	112
4.3.3 Teachers' Gender and Teaching Strategies.....	113
4.4 Teachers' knowledge of curriculum and examinations adaptation towards implementation of inclusive education.....	114
4.4.1 Teachers' gender and curriculum/ examination adaptation towards implementation of inclusive education.....	123
4.4.2 Teachers' experience and curriculum/examination adaptation towards implementation of inclusive education.....	124
4.4.3 Teachers' professional qualification and curriculum and examination adaptation.....	126
4.5 Teachers' knowledge of Suitable resources and school environment towards implementation of inclusive education.....	128
4.6 Teachers' attitudes on how inclusive education had been implemented in primary schools.....	132
4.6.1 Teachers' professional qualification in Special Need Education and Implementation of Inclusive Education.....	139

4.6.2 The Teachers' experience and Implementation of Inclusive Education	142
4.6.3 The Teachers' Gender and Implementation of Inclusive Education	144
4.6.4 Summary	147
CHAPTER FIVE.....	150
SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS.....	150
5.1 Introduction	150
5.2 Summary	150
5.2.1 Influence of the demographic data (teachers' gender, teaching experience and teachers' qualification) towards implementation of inclusive education	150
5.2.2 The attitudes of teachers towards implementation of inclusive education in primary schools	151
5.2.3 Teachers' knowledge and use of teaching strategies towards implementation of inclusive education in primary schools	151
5.2.4 The teachers' knowledge of adapting the curriculum and examinations towards implementation of inclusive education in primary schools.....	152
5.2.5 Teachers' knowledge of the provision and use of suitable resources and environment towards implementation of inclusive education in primary schools...	152
5.2.6 Teachers' attitudes on how inclusive education had been implemented in primary schools	153
5.3 Discussion	153
5.3.1 The influence of Demographic data towards implementation of Inclusive education	153
5.3.2 Teachers' attitudes towards implementation of inclusive education.....	159
5.3.3 Teachers' knowledge of Teaching strategies used towards implementation of inclusive education	161

5.3.4 Teachers’ knowledge of curriculum and examinations adaptation towards implementation of inclusive education.....	164
5.3.5 Teachers’ knowledge of Suitable resources and environment towards implementation of inclusive education.....	168
5.3.6 Teachers’ attitudes of how inclusive education had been implemented in schools.....	171
5.4 Conclusions	173
5.4 Recommendations	174
5.5 Recommendations for further study	175
REFERENCES	176
APPENDICES	186
Appendix A: This is a questionnaire on Teachers Attitudes and Knowledge Towards Inclusive Education Implementation.....	187
Appendix B: Observational Checklist.....	196
Appendix C : Interview schedule for headteachers.....	198
Appendix D: Map of Kakamega County.....	199
Appendix E: Statistics Tables.....	200
Appendix F: Permit(PASSPORT-NACOST)	201
Appendix G: Permit NACOST.....	202
Appendix H: Research Permit.....	203
Appendix I: Kakamega County Commissioners Authority	204
Appendix J: Examples of some of the reports of the interviews held with headteachers of inclusive schools.....	205

ABBREVIATION AND ACROWNYMS

DEO	- District Education Office
EARS	- Educational Assessment and Resource Centre Service
EFA	- Education for All
I.E	- Inclusive Education
K.I.S.E	- Kenya Institute of Special Education
K.S.S.P	- Kenya Sector Support Programme
MDGs	- Millennium Development Goals
MOE	- Ministry of Education
SNE	- Special needs Education
SPSS	- Statistical Package for Social Science
TIQUET	- Totally Integrated Quality Education and Training
UN	- United Nations
UNESCO	- United Education Science and Culture Organization

LIST OF TABLES

Table: 2.1 Mean Grades K.C.P.E Results for sampled deaf primary schools.....	59
Table 2.2: Included learners.....	59
Table 3.1: Sampling frame of the study.....	68
Table 4.1: Teachers’ gender.....	78
Table 4.2 Teachers’ general professional qualification	79
Table 4.3: Teachers’ professional qualification in special needs education.....	80
Table 4.4 Teachers’ experience	83
Table 4.6 Teachers’ attitudes towards implementation of inclusive education	87
Table 4.7 Mean analysis of scores of teachers’ attitudes towards implementation of inclusive education.....	88
Table 4.8: Teachers’ gender and Teachers’ attitudes.....	93
Table 4.9 Teachers’ Experience and Teachers’ Attitudes	96
Table 4.10 Teachers’ qualification (SNE) and Teachers’ attitudes	99
Table 4.11 Teaching strategies used in inclusive classes	102
Table 4.12 Mean analysis of teaching strategies used in inclusive classes	109
Table 4.13 Teachers’ Experience and Teaching Strategies	111
Table 4.14 Teachers’ professional Qualification and Teaching Strategies.....	113
Table 4.15 Teachers’ Gender and Teaching Strategies	114
Table 4.16 Curriculum and Examinations adaptation.....	116
Table 4.17 Mean analysis of Curriculum and examination adaptation	122
Table 4.18 The teachers’ gender and curriculum and examination adaptation	124
Table 4.19 Teachers’ experience and curriculum and examinations adaptation	126
Table 4.20 The teachers’ professional qualification and curriculum and examination adaptation.....	128
Table 4.22 Attitudes of teachers on how inclusive education had been implemented	136

Table 4.23 Mean analysis of teachers' attitudes on how inclusive education had been implemented.....	138
Table 4.24 Teachers' professional qualification in special needs education and implementation	141
Table 4.25 Teachers' qualification and Implementation of inclusive education	141
Implementation	141
Table 4.26 One Way ANOVA for Influence of Teachers' qualification on Inclusive Education	141
Table 4.27 Mean analysis of Teachers' experience and Implementation of Inclusive Education	143
Table 4.28 The teachers' experience and Implementation of Inclusive Education.....	143
Implementation	143
Table 4.29 One Way ANOVA for Influence of Teachers' Experience and Implementation of Inclusive Education	144
Table 4. 30 gender versus implementation	146
Table 4.31 The teachers' gender and implementation of inclusive education.....	146
Table 4.32 One Way ANOVA for influence of Gender on Implementation Inclusive Education	146

LIST OF FIGURES

FIGURE 1.1: Conceptual Framework on teachers' attitudes and knowledge towards implementation of inclusive education.	21
---	----

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The present study was focused on implementation of inclusive education in regular primary schools which was proclaimed at a world conference on special needs education in Spain (UNESCO, 1994). In this section, background information of the study was discussed, statement of the problem highlighted and also the purpose of the study. In addition, the objectives of the study including research questions were mentioned. Other aspects that were also highlighted included justification of the study, the scope of the study, limitations of the study, assumptions of the study, definitions of terms, theoretical framework and conceptual framework.

1.2 Background to the study

Education is considered an important social pillar by governments. All governments are expected to ensure that their citizens access it in the least restrictive environment. Education enables people to live in dignity, develop capacity, participate in development and lead quality life (UNESCO, 1994). Further education promotes the ideals of peace, freedom and social justice (UNESCO, 1996). Thus all children must access education in the least restrictive environment for future informed citizenship, promotion of a peaceful society while equipped with necessary capacities and knowledge for the country's development. The EFA agenda and Salamanca statement advocated for the rights of all children including the right for learners with special needs to access education in inclusive settings.

Inclusive education has been defined differently by various scholars depending on where they come from in terms of how their countries have implemented inclusive education. Lipsky and Gartner (2006) defined inclusive education as a process where learners with special needs have full membership in age appropriate classes in their neighbourhood schools with appropriate supplementary aids and support. Ainscow and Booth (2011) suggested that inclusive education is a process that increases the participation of all learners in all aspects of school life irrespective of their conditions. The schools should become more responsive to the diverse needs of learners and barriers to the education of learners with special needs should be eradicated in regular settings. Inclusive education has emerged as a new worldwide trend and it is envisioned to replace the old special need education system that was characterized by confining learners with special needs to special schools and Special Units that were attached to regular primary schools (Hergaty, 2001). The earlier education system of special need learners enhanced segregation of learners with special needs from both general education system and wider social life.

Inclusion in its broad term refers to more than inclusion of learners with special needs (UNESCO, 2000). It centers on the inclusion of marginalized groups on such grounds as religion, ethnic, linguistic minorities, immigrants, and girls, poor students with disabilities, HIV patients, street children and remote populations. In some places these people are not actively included in education and learning process (Republic of Kenya, 2008). Inclusion in education is an approach to educating learners with special needs in mainstream schools (Bowe, 2005).

Under inclusion model, learners with special needs spend most or all of their time with learners without special needs and disabilities in the same classes.

Jha (2002) described inclusion as a process by which schools attempt to respond to all learners as individuals by considering their curriculum organization and provision. Through this process, Jha noted that the school builds its capacity to accept all learners from the local community who wish to attend and in so doing reduces the need to exclude other learners. Both Bove and Jha argued that implementation of inclusion practice vary. Some schools select mild to severe special needs learners. Other schools practice integration where they focus on special needs of learners and not the schools themselves which should be transformed to be accommodative of learners with special needs.

The authors further noted Special needs education is considered a service and not places or schools for learners with special needs. The services are included in the daily routines and classroom structures, environment, curriculum, teaching strategies and brought to the child. Carey (1997) argued that inclusive education leads to a reduction of all forms of discrimination and fosters social cohesion as children who grow and learn together, live together. On the other hand Stainback and Jackton (1992) suggested that there are a wide range of learning needs, interest and capabilities that are provided in an inclusive setting. From the literature reviewed, teachers remain very important for effective implementation of inclusive education. In their study, Jelas, Mustapha and Ali (2006) stated that teachers' willingness to accept students with special needs was the hallmark of inclusive education. Lo, Chui and Wong (2003), noted that teachers' beliefs and perceptions serve as antecedents to teachers' commitments towards successful inclusive

education. The authors further argued that besides the beliefs and attitudes, teachers' knowledge in teaching strategies is essential. Fisher, Frey and Thousands (2003) suggested that teachers should be able to use collaborative team teaching, individualized educational plans, multigrade teaching, peer tutoring among other strategies.

According to Falvey, Dingle, Givner, and Haager (2004) teachers should be knowledgeable and skilled in core curriculum standards and assessment procedures in order to educate students with special needs in mainstream classes. Other areas teachers need to have knowledge for them to implement inclusive education include the ability to adapt the curriculum, examinations and to provide suitable learning, teaching, assistive aids and environment to enable all learners in inclusive classes achieve academically (Republic of Kenya, 2009). Teaching learning aids promotes the acquisition of cognitive abilities such as remembering, reasoning and imagination (KISE, 2007). Assistive devices such as Braille machine, hearing aids and talking computers on the other hand reduce the effect of disabilities and enable learners with special needs to function in inclusive classes.

In addition, teachers should have the ability to modify class and school environments such as ramps, paths, doorways, desks so as to enable learners with mobility problems to move around school compound easily (KISE, 2007; Ndonye, 2011 & Kochung, 2009).

Kenya government is a signatory to Education for All agenda and Salamanca statement (UNESCO, 1990 & 1994). The broad vision of EFA agenda lay in the EFA goals which included among others free primary education for all and promotion of learning and life skills (Miles, 2000). The EFA agenda was reflected in the eight Millennium Development

Goals (MDGs) which aimed at making the world a better place to live in the 21st century (UNESCO, 2000). The important MDG goal which was targeted by International community was the promotion of education to reduce poverty in the world.

Developed countries have implemented inclusive education compared to the developing countries (UNESCO, 2008). United States of America legalized Education for All by enacting Education for All handicapped children Act in 1975 which later was amended and became Individuals with Disability Act (IDEA) in 2004. Under IDEAs legislations, all states receiving federal funding must:

- i. Provide all students with disabilities between the ages of 3 to 21 years with access to an appropriate and free public education.
- ii. Identify, locate and evaluate children labeled with disabilities.
- iii. Develop individualized education programme (IEP) for each child;
- iv. Educate children with disabilities within least restrictive environment.
- v. Provide those students with disabilities enrolled in early intervention programmes with a positive and effective transition programme into appropriate preschool.
- vi. Provide special education service for those children enrolled in private Schools.
- vii. Ensure teachers are adequately trained and qualified and certified to teach special need learners.
- viii. Ensure that children with disabilities are not suspended or expelled at rate higher than their non-disabled peers.

In Britain, England enacted Disability Act (2001) which made the education of learners with special needs possible in mainstream schools. In South Africa, the white paper

number six of 2001 recognized the democratic value of equality and human rights. Since independence Kenya government had good intentions of educating learners with special needs in regular schools in order to address exclusionary practices. Immediately after independence Kenya government established an educational commission in 1964 that recommended that persons with disabilities be educated in regular schools while Education commission report (Republic of Kenya, 1976) recommended that integrating equipment be provided in regular school system for the integrated learners (Republic of Kenya, 1964 & 1976). The presidential working party on Education and man power Training commission report (1988) recommended the integration of learners with disabilities in regular schools and Koech in Republic of Kenya (1999) called for Equal treatment of the unequal. This treatment was to come in the way of curriculum adaptation to children with special needs in education. Children's Act (2001) and Disability Act (2003) emphasized the rights of persons with disabilities which included the rights to education. This Disability Act gave rise to National Council for Persons with Disabilities which is a state agency which is an oversight body that ensures that the rights of persons with disabilities are respected.

The Kenya government in 2003 introduced Free Primary education programme to all school age going children including those with disabilities (MOE, 2009). Under this programme, there were increased capitation for special need learners to enhance the implementation of inclusive protected. Education in regular report in Republic of Kenya (2003) was a landmark in the education of children with special needs. In this report, it was recommended that special needs education schools. Kochung in Kenya be funded

adequately at all levels including Early Childhood Development programmes, Primary Schools, Secondary Schools, Colleges and Universities. This report further emphasized early identification and assessment of children with disabilities, awareness creation, training of all teachers in special needs education and addressing educational needs of all learners in terms of curriculum differentiation, adaptations of examinations, learning aids and physical facilities.

Further in 2005, Kenya government developed sessional paper No. 1 (2005) which resulted in the development of Kenya Sector Support Programme (KSSP) document. As a result of KSSP document, all special schools, integrated programs and Assessment Centers started receiving funds for various activities including infrastructural development, tuition, and sports activities among others.

However, Kochung (2009) content that Kenya government still lacks a policy on inclusive education despite the efforts it has made in the development of special needs education. In order to respond to the identified needs in teacher knowledge and competencies, Kenya Institute of special Education (KISE) increased the training of teachers in inclusive education at diploma level to meet the demands of inclusive education in Kenya (KISE, 2002).

According to a Republic of Kenya report (2008), the training of teachers was being undertaken for the purpose of implementing inclusive education in Kenya. The trained teachers in special needs education were expected to be posted to regular schools. In addition, in vision 2030 (Republic, 2008), Kenya prioritized inclusive education for all

children including those with special needs. Funding of institutions and key programs for learners with special needs have been expanded by Kenya Government in order to achieve vision 2030 (Republic of Kenya, 2008). It is within this background that the present study examined teachers' attitudes and knowledge towards implementation of inclusive education implementation in primary schools in Kakamega County.

1.3 Statement of the problem

On the basis of disabilities and other conditions such as minority language groups, orphanage and health problems some persons are segregated and denied or given less quality education in special schools rather than in inclusive settings (UNESCO, 1994). In Kenya, policies are being put in place to ensure that all children including those with special needs access quality education in inclusive settings. World over about 130 million children with special needs were not attending school and 80% of these children were in Africa (Republic of Kenya, 2008). Various commissions and policies in Kenya had advocated for integration and or inclusive education (Republic of Kenya, 1964, 1976, 1980, 1988, 1999, 2009 & 2018). In Kakamega County there were quite a number of primary schools that had implemented inclusive education programs (EARCs of South, East and Central Kakamega, Mumias and Butere, 2014 & Kakamega County Education Director, 2013 & 2014). These were the primary schools where special units had been previously attached to.

According to Okutoyi (2011) in Kakamega County and other literature reviewed in other parts of the country (Mwaimba, 2014; Ndonge, 2011 and Keriongi, 2011) and educational authority in Kakamega county (2013), teachers were critical for the

implementation of inclusive education yet they were not well prepared in terms of attitudes, knowledge and experience on implementation of inclusive education in primary schools. It was on this premise that the present study was carried out to determine the teachers' attitudes and knowledge including qualification in special need education and teaching experience towards implementation of inclusive education in primary schools in Kakamega County. According to the literature reviewed cited above, there was no research base that had been conducted to determine the teachers' attitudes and knowledge towards implementation of inclusive education yet there were quite a large number of primary schools that had implemented the program. This created the need for the present study to be carried out.

1.4 Purpose of the study

The purpose of the present study therefore was to determine the teachers' attitudes and knowledge towards implementation of inclusive education in Primary schools in Kakamega County, Kenya. The variables of the study included teachers' attitudes toward implementation of inclusive education, teachers' knowledge of teaching strategies used in inclusive schools, teachers' knowledge of curriculum and examination adaptation, and teachers' knowledge of suitable resources including assistive aids, teaching/learning aids and environment towards implementation of inclusive education.

1.5 Objectives of the study

The study was guided by the following objectives:

1. To determine the influence of teachers' gender, teaching experience and qualification on implementation of inclusive education;
2. To determine the teachers' attitudes towards implementation of inclusive education;
3. To determine teachers' knowledge of teaching strategies used towards implementation of inclusive education;
4. To determine the teachers' knowledge of adapting the curriculum and examinations towards implementation of inclusive education;
5. To determine teachers' knowledge of suitable resources, environment and their provision towards implementation of inclusive education;
6. To determine teachers attitudes on how inclusive education had been implemented primary schools.

1.6 Research questions

The following were the research questions of the study:

1. What are the influences of teachers' gender, teaching experience and qualifications on implementation of inclusive education?
2. What are the teachers' attitudes towards implementation of inclusive education?

3. What is the teachers' knowledge of teaching strategies used towards implementation of inclusive education?
4. What are the curriculum and examination adaptations made by teachers towards implementation of inclusive education?
5. What resources and environment have teachers provided towards inclusive education implementation?
6. What are the teachers' attitudes on how inclusive education has been implemented?

1.7 Hypotheses

The following hypotheses were tested in the study:

H₀1: Teachers' gender has no significant influence on teachers' attitudes towards implementation of inclusive education;

H₀2: Teachers' teaching experience has no significant influence on teachers' attitudes towards implementation of inclusive education;

H₀3: Teachers' qualification has no significant influence on teachers' attitudes towards implementation of inclusive education;

H₀4: Teachers' gender has no significant influence on teaching strategies used in implementation of inclusive education;

H₀5: Teachers' experience has no significant influence on teaching strategies used in implementation of inclusive education;

H₀6: Teachers' qualification has no significant influence on teaching strategies used in implementation of inclusive education;

H₀7: Gender of the teachers has no significant influence on curriculum and examination adaptation in implementation of inclusive education;

H₀8: Teachers' teaching experience has no significant influence on curriculum and examination adaptation in implementation of inclusive education;

H₀9: Teachers' qualification has no significant influence on curriculum and examination adaptation in implementation of inclusive education;

H₀10: Teachers' gender has no significant influence on implementation of inclusive education;

H₀11: Teaching experience has no significant influence on implementation of inclusive education;

H₀12: Teachers' qualification has no significant influence on implementation of inclusive education.

1.8 Justification of the study

In Kenya inclusive movement is a recent phenomenon which picked momentum in early 2000s (Republic of Kenya, 2008). Several recommendations had been made for the implementation of inclusive education since independence by various Educational commissions in Kenya. These recommendations had led to the enactment of some legislations and policies which included Children's Act (2001), Disability Act (2003), Kenya education sector support program (2005) and Special needs policy (2009) and Vision 2030 (2008). These were important government legal framework documents and Kenya government presently has adopted some of the recommendations made in the cited documents including inclusive education programme in primary schools. The present study investigated the teachers' attitudes and knowledge towards inclusive education

programme being implemented in Kenya as part of systemic changes recommended in the policies cited. Further inclusive practice was a relatively new concept in education and thus the need for more research at system level such as schools to increase the repertoire of strategies that schools and teachers could use to effectively implement the practice.

1.9 Significance of the study

This study is significant because the new knowledge generated will lead to implementation of inclusive education in the whole county and the country. Learners with special needs may be integrated in the societal activities and the individuals and the country's development may be realized since there may be an informed citizenship. The findings may enable the ministry of education to formulate inclusive education policy which will guide its implementation.

1.10 Scope

The study was conducted in all the 8 Sub Counties in Kakamega County and all the teachers teaching in inclusive schools were the target of the study. However a few were sampled and they were the ones who gave data for the study. The variables for the study included attitudes of teachers towards inclusive education, knowledge of teaching strategies used in inclusive schools, knowledge of curriculum and examination adaptation suitable for all learners in an inclusive setting. In addition, the other variable was the knowledge of suitable resources and environment for all learners in an inclusive setting that included physical classroom and school compound, teaching aids, learning aids and

assistive aids. The knowledge constituted teacher's qualification both general and special need education. The teaching experience of teachers was also determined.

1.11 Limitations

The following limitations applied to the study:

- i) Literature on the level of implementation of inclusive education was scanty as inclusive education is a recent phenomenon in Kenya. The researcher had to utilize literature from those countries that had implemented inclusive education in other parts of Kenya.
- ii) The use of close ended questionnaires had a limiting effect since it does not allow respondents to give their opinion. This was minimized by the use of the interview schedule for the headteachers who gave in depth information about inclusive education.
- iii) The study was conducted in primary schools that had previously special units attached to them. The opinion got could have specifically come from the teachers who initially were in units and thus biased. The limitation was overcome through the information that came from those teachers who were handling inclusive education classes and were not previously in the special units.

1.12 Assumptions of the study

In the study, the following assumptions were made:

- i) All primary schools where special units were attached practiced inclusive education.
- ii) Some teachers who handled inclusive classes had some training in special needs education.
- iii) All types of special needs learners were included in mainstream classes.

1.13 Theoretical framework

1.13.1 Social Learning Theory and Social Model of Disability

This study was based on social learning theory by Albert Bandura and social model of disability that was founded in 1980 by Oliver Mike and Grant Carson. Social learning theory posits that learning is a cognitive process that takes place in a social context (Bandura, 1963 & 1997). Inclusive education is the provision of education to all children in a general class where brothers and peers learn together (UNESCO, 1994). The general class is the most appropriate social context where all learners including those with special needs including those with hearing impairments, visual impairments and mental disabilities among others should benefit from the teachers adapted instructions.

Various studies that were conducted in Malaysia indicate that learners with special needs in inclusive schools are taught using differentiated curriculum, assistive aids, different teaching strategies basing on individual needs of learners in one social context and thus

are better off academically compared to those in special schools (Jelas, Mustapha & Ali, 2006). Inclusive classes with large sizes of students have both social and intellectual impact on the growth of students (Mukhopadhyay, Nenty & Abosi, 2012). Teachers are able to guide all learners and ensure that social development in all learners is taking place. Teachers ensure that learners with severe disabilities who are included in regular classes acquire basic communication skills through interaction with peers who provide cues, prompts and consequences to the learners with disabilities.

Teachers trained in inclusive pedagogy argue that by the end of students' life in schools, students with special needs are able to produce independent targeted communication and motor responses (Hunt & Goetz, 1997). It is further argued that when teachers provide opportunities for learners with special needs to interact with their counterparts without special needs, support and motivation is given to those learners with special needs by those learners without special needs. Social learning theory posits that people learn from one another through observation, imitation and modeling (Bandura, 1997). In this theory human behavior is explained in terms of continuous reciprocal interaction among cognitive, behavior and environmental influences. In an inclusive setting, learners interact with one another and with teachers and through that process cognition, change of attitudes and behaviors are enhanced. Learning thus takes place in all the students including those with special needs and disabilities when they are taught together (Bandura, 1997). The philosophy of inclusive education states that children who learn together, learn to live together (Carey, 1997). In this respect, the current study fits in the social learning theory as the theory has implications in inclusive education.

In support of the social learning theory, social model of disability focuses on equality among individuals, social support to the disabled, production of information and simplicity of language through such usage of sign language, Braille and flexible working hours for the people with disabilities. Social model of disability postulated that society has been the main contributing factor in disabling people and segregating learners with special needs as a result of disabilities such as mental disabilities and physical disabilities in education. This model was created by disabled people themselves after seeing how the society responded to them and their experience of the health and welfare systems.

These systems made persons with disabilities feel socially isolated and oppressed. The denial of opportunities, self-determination and the lack of control over the support systems in their lives led them question the assumption underlying the medical model. Medical model of disability looked at disability as an individual medical problem and if somebody had an impairment such as visual, mobility or hearing impairment then their inability to see, walk or hear was understood as their inability needing doctors attention. As a result of social model of disability identifying systemic barriers, negative attitudes and exclusion as being caused by society, it thus proposed that physical, intellectual or psychological limitations or impairments do not lead to disability unless society failed to take account of and included people in societal activities regardless of their individual differences.

The social model of disability posits that it was the society that disabled physically impaired people. The model alleged that the handicap was imposed on physically

disabled persons and because of that physically disabled persons were unnecessarily excluded from full participation in society (Mike, 1990).

From the foregoing, the social model of disability fitted the present study in that teachers were expected to provide opportunities to students with special needs so that they were to learn in mainstream classes where different opportunities exist among them being learners learning to share classroom materials, taking turns when speaking and control of emotions during small conflicts among others. Teachers were to adapt the physical classroom environments, adapt the curriculum, teaching resources and teaching styles and promote the use of assistive devices for maximum benefit of all learners socially and academically.

The availing of these different aspects of learning opportunities was equivalent to the society being accountable to those with special needs and thus enabling them function at classroom level. Classrooms no longer disabled learners with special needs and segregated them but made them part of the basic community which later would be translated to the larger community where they will live together as adults. As postulated in the social model of disability, learners with special needs should not be denied opportunities including education and other social services. The two theories advocated for social interactions if meaningful gains had to be made in education, community harmony and at individual level.

1.13 Conceptual framework

The conceptual framework for this study involved teacher's attitudes toward inclusive education implementation; knowledge of teaching strategies used in inclusive schools,

knowledge of curriculum and examinations adaptations, teachers knowledge of suitable teaching and learning resources and assistive devices in addition to modification of the physical environment as independent variables while learners participation in learning, social interactions and academic performance were dependent variables. The intervening variables included the type of special needs, teachers' gender, qualification and teaching experience.

Teachers' beliefs and knowledge influence their attitudes towards implementation of inclusive education. Teachers that enable learners with special needs to feel accommodated in the regular class by welcoming him or her and encourage other regular learners to be accepting and assisting those learners with special needs makes an inclusive class home for all learners. Further learners with special need would feel accommodated when they learn at their own pace, activities are adjusted, environment modified and there are provision of relevant teaching/learning materials and are given assistive devices which reduce the effects of disabilities. The learners will be able with these conditions as portrayed by the conceptual framework to develop social skills, will be able to participate in the class actively and will be able to perform well academically.

Kenya programme organization (KENPRO) (2010) reported that inclusive education focuses on those persons who had been excluded traditionally from educational opportunities such as learners with disabilities, children from ethnic and linguistic minorities. UNICEF (2007) suggested that inclusive education means that learners attending age appropriate class of the child's local school with individual tailored support. National report on education in Kenya noted that inclusive education was

understood as meaning the provision of education to all children, youth and adult through targeted support to specific or vulnerable groups moving away from the traditional view of providing education for children with special needs (Republic of Kenya, 2008). However the focus of the present study was the inclusion of learners with special needs and disabilities in regular primary schools where they attended normally with their peers and siblings. Learners with special needs were categorized into visual impairment, hearing impairment, low vision, learning difficulties, physically disabled and mentally challenged cerebral palsy and muscular Dystrophy (Republic of Kenya, 2008).

The conceptual framework of the study had variables that were related and fitted well in the framework. Teachers' attitudes and knowledge as independent variables determined the success of inclusive education implementation (See figure 1.1). Among the independent variables there were teachers' attitudes toward inclusive education, teachers' knowledge of teaching strategies used in inclusive schools, knowledge of curriculum and examinations adaptations, knowledge of suitable teaching, learning resources and environment. The assessment of implementation of inclusive education in primary schools in Kakamega County was the dependent variable.

The intervening variables in the conceptual framework included teachers' gender, teaching experience and qualification. According to Peters (2003), these variables had an influence on inclusive education implementation. A study conducted in South Africa showed that teachers who trained in inclusive education became experts on the usage of teaching resources and were more accommodative of special need learners (Republic of South Africa, 2002). On the other hand both teachers' gender and experience have an

influence on inclusive education implementation (Brownell, 2007; Mutungi and Nderitu, 2014). Brownell (2007) argued that studies carried out in America by the centre for personnel studies in special education showed that experienced teachers demonstrated more knowledge in handling inclusive classes. Further o, Mutungi and Nderitu (2014) in their studies in Eastern Kenya found that females were more tolerant to special need learners in inclusive classes compared to males. In another study in South Africa, females were found to handle learners with special need in inclusive classes more carefully and tenderly especially those who were crying and disruptive (Mashiya, 2003).

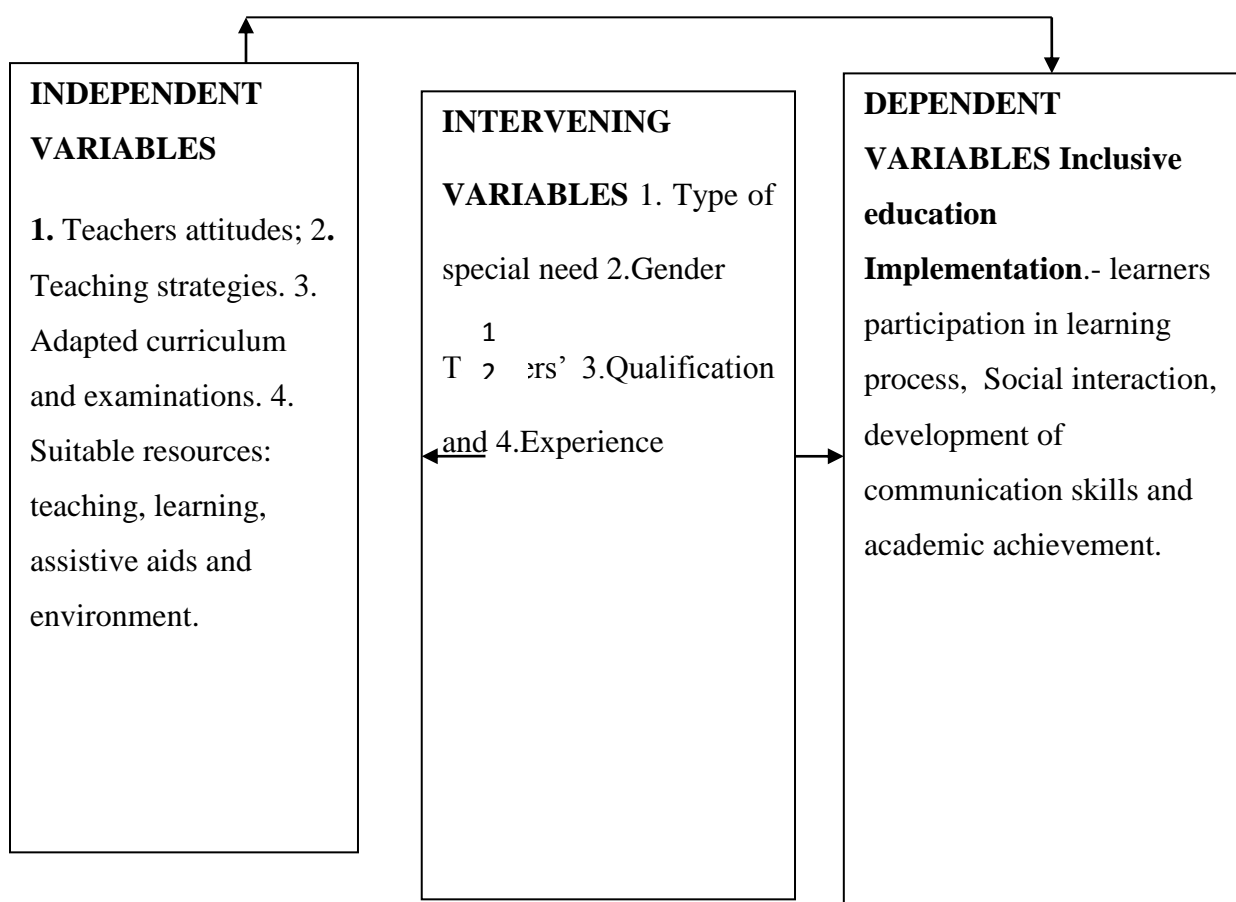


FIGURE 1.1: Conceptual Framework on teachers' attitudes and knowledge towards implementation of inclusive education.

1.14 Definition of operational Terms

The following were the operational terms that were used in the study:

Assistive Technology: These are machines that enable those learners with special feel normal and can function in the classroom and they include Talking computers, Braille machines, hearing aids, spectacles and wheel chairs among others.

Attitudes: According to the study teachers attitudes means their personal opinions towards implementation of inclusive education and how they feel it has been implemented. The study therefore was about teacher's attitudes generally and on knowledge, qualification and teaching experiences.

Curriculum adaptation: Ensuring that what is planned for average learners is changed to suit the needs of all learners in class especially those learners with special needs.

Demographic data: In this study, it refers to teacher characteristics such as experience, gender, qualification and the type of special needs among learners who are included and they constituted the intervening variables.

Disability: This is a loss or reduction of functional ability resulting from impairment. In this study Learners with disabilities were not able to learn in mainstream primary schools because the impairments which included sensory, neurological, cognitive, emotional, psychological and physical difficulties.

Education: In this study education meant learners going to school to acquire attitudes, knowledge and skills that will make them fit in the society, live and work together.

Environment: In the study it meant the physical classroom, school compound including desks, windows, doors, toilets, paths among others.

Examination adaptation: Refers to how an evaluation test can be designed to suit all learners in an inclusive class.

Gender: In the study gender referred to the sex of the teachers and their different feelings

Impairment-This is loss or damage to a part of the body through either accident, disease, genetic factors or other causes. One who is impaired either loses or the part affected become weak.

Implementation: In this study the term meant participation of all learners in classroom activities, academic achievement, development of social and communication skills.

Inclusive education: Provision of appropriate services and support to learners with special needs in regular settings including teachers being positive towards learners with special needs, being able to use appropriate teaching strategies, being able to adapt both curriculum and examination among others to suit all learners and especially those with special needs.

Integration: The term refers to the participation of learners with special needs in regular schools without demanding changes in the curricular provision, there is no support and learners are expected to adapt to the regular school system.

Knowledge of inclusive education: Teachers are aware and have skills of how to teach learners with special needs in an inclusive setting, are aware of suitable and appropriate curriculum for all learners in an inclusive setting. In addition teachers

should be aware of how to restructure physical school/classroom environment to suit learners with special needs in mainstream schools and provision of teaching materials and assistive technology. This meant also that teachers with this knowledge they were deemed to have special need education qualification

Special education- these were educational programmes designed specially to meet the unique needs of learners with special needs including those with disabilities.

Special educational needs (SENs)-These were educational needs each individual learner has and these needs differ from one individual to the other. They could be met with appropriate support in an inclusive setting.

Special needs education(SNE)-This is the terminology for special education which provides for appropriate modifications in curricular, teaching methods, educational resources, medium of communication or the learning environment to meet the needs of learners with special educational needs.

Special needs –These are conditions or factors that hinder an individual from developing and learning normally. These needs could be temporary or permanent. The conditions could be in the form of emotional, social, health or physical difficulties. These factors are also referred to as barriers to learning and development. The barriers can be within the learner or environment or combination of both.

Suitable resources: In this study, suitable resources refers to adapted and or modified teaching learning materials or materials that assist learners with special needs function in inclusive classes and they also included assistive technology.

Special units attached to primary schools- These were classes that were set aside for learners with special needs when they were being given specialized instructions or therapeutic services. They were usually manned by a teacher in charge who was a staff member of that primary school. Learners were usually taught in mainstream classes but withdrawn for specialized services in the unit. This was what was referred to as an integrated programme.

Teachers' Experience: In this study it meant how long a teacher had taught since leaving first training whether in that inclusive school or any other and not teaching experience of inclusive education special need training

Type of special needs: This refers to different categories of learners with impairments and they include learners with hearing impairment, mental retardation, physical disabilities, visual impairment, learning difficulties among others

Qualification: In the study it referred to general teacher professional training or special need training.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter the meanings of the concept of education and inclusive education were highlighted, development of education of persons with special needs worldwide, historical development of inclusive education and the Kenyan concept of inclusive education discussed. Other areas that were discussed included literature review on teachers' attitudes and knowledge towards inclusive education implementation. Teachers' knowledge included teachers' knowledge of teaching strategies used in inclusive schools, the adaptations of curriculum, examinations and use of suitable teaching, learning resources, assistive aids and the environment. In addition, literature review on teachers' attitudes on how inclusive education was implemented was also discussed.

2.2 Concept of education

The term Education refers to the development of the whole child in terms of skills, attitudes and knowledge necessary for successful integration into the society (Merriam, 1978). Students acquire education through provision of opportunities in the institution of learning where they discover, model experience and learn consequences (Katz & Mirenda, 2002). According to Katz and Mirenda, education is a process through which teachers using the findings of educational psychology impart knowledge, skills and attitudes to students. Inclusive education therefore implies the development of all learners

including those with special needs in mainstream classes to their fullest capacity by equipping them with necessary skills and knowledge. In most cases learners with special needs and disabilities have difficulties with social, emotional, communication, motor and behavioral development in addition to academic learning (Alper & Ryndak, 1992). Thus they would need to be educated in an inclusive setting where the skills they have difficulties in are developed and in that way they are able to integrate in the larger society well. Inclusive education is a philosophy where learners with disabilities learn together with those without disabilities. Pragmatists contend that any idea thought of and not practiced has no meaning. In education, there have been concerns about inclusive education since the Second World War. The time has come when pragmatists are saying that there should be no more noise but action. The action entails implementing inclusive education. All stakeholders have been sensitized on the importance of providing education to all learners in an inclusive setting. All learners develop socially, mentally and emotionally in schools which have been pragmatically created to serve such purpose thus teachers' attitudes and knowledge of teaching strategies, curriculum and examination adaptations, the use of resources appropriately and ability to modify the environment are very vital for inclusive education implementation.

2.3 Development of education of persons with special needs worldwide

Education of persons with special needs and disabilities before the 17th century was not considered important. These persons were treated inhumanly, considered as incapable, unworthy, discriminated and hidden away from the public (Ndurumo, 1996 in Sitienei & Mulambula, 2012). According to Oson (2003), persons with special needs and disabilities were never involved in community activities and their parents and relatives felt ashamed

of them. Wagithunu (2014) pointed out that traditional societies responded to persons with disabilities in different ways according to different cultures to present. For instance, there were four eras which persons with disabilities have travelled (Payne & Mercer 1975) in Ndurumo, 1993). The first era was known as extermination, the second era was ridicule, the third era was middle age and the 4th era was provision of education and vocation training.

In the first era of extermination, Greeks philosophers including Plato and Socrates considered persons with disabilities incapable of reasoning and learning and they were condemned to death. The infants who were born with deformities and severe mental retardation were killed. Mbui (2003) and Randiki (2002) in Kiaritha (2011) contended that most African societies viewed persons with disabilities as a curse and a punishment from supernatural powers to the parents of those persons with disabilities. Disability was further seen as contagious and thus persons with disabilities were avoided. They were thrown in the forest to die there.

In the second era of ridicule, persons with disabilities especially those with physical deformities were made to entertain rich persons and others were made court clowns. The third era marked the beginning of institutions for persons with disabilities. According to Mbui (2003) as cited by Kiaritha (2011), churches started placing persons with disabilities in asylums for care and rehabilitation. These persons were given food and spiritual guidance.

The fourth era of education and vocational training which runs up to present stated in 18th century where education of persons with disabilities was conducted in private institutions such as the education of the hearing impaired at ST Bervely, education of the visually impaired at Alexandria among others. The goal of providing education to persons with disabilities was to make them self reliant.

2.4 Education of persons with special needs in Kenya before Independence

In Africa just as in the rest of other communities, persons with disabilities were regarded as a curse from god, spirits or other magical powers (Waigithunu, 2014). Thus those persons with special needs in East Africa were considered incapable of engaging in gainful employment and being educated (Muchiri, 1982 in Kiaritha, 2011). It was after the Second World War around 1946, when Army veterans who had been maimed in that war caused the need for rehabilitating them and providing services to them that other persons with disabilities started being considered (Randiki, 2002 in Kiaritha, 2011).

Persons with physical difficulties, visual impairments and brain damage were offered rehabilitation and medical services (Ndurumo, 1993). Services for other impairments including mental retardation, autism commenced much later. The first churches that offered these services and special education included Lutherand and Salvation Army. Other organizations that also offered services included Red Cross of Kenya and Rotary club.

Ndurumo (1993), further noted that the first formal special need education started in Thika with the establishment of a training center for the visually impaired in 1946 followed by the education for the individuals with mental retardation in 1948 and in 1958, education for the individuals with hearing impairments followed. Education for individuals with physical impairments followed later.

2.5 Concept of inclusive education

Inclusive education is a move to provide education to learners with special needs in mainstream settings (Falvey *et al*, 2004). Inclusive education is a demonstration that a society and its culture value diversity and it accommodates all its persons in its activities irrespective of their conditions. In this sense inclusion start at family level as the basic unit of society and that is where transformation starts by families and schools responding to different learners in a constructive and positive ways (Heijnen, 2002). Inclusive schools must and should respond to the diverse needs of learners, accommodate both different styles and rates of learning through appropriate curricula, organizational arrangement, teaching strategies and resource use (UNESCO, 1994). The response by schools and the demonstration by the society to carter for diversity is a pragmatic stand that players in this field have to take to ensure that all children are receiving education in the least restrictive environment. Miles (2000) asserted that inclusive education was concerned with all learners with a particular focus on those learners with disabilities and children from ethnic and linguistic minorities. Internationally inclusive education is viewed as a system that caters for the needs of a diverse range of learners and support diversity and in the process it effectively eliminates all forms of discriminations

(UNESCO, 2001&2009). Stainback and Stainback (1996) and Alur and Bach (2010) defined inclusive education as the placement of all students including those with special needs in mainstream classes with support. Lipsky and Gartner (2006) contended that when learners with special needs learn in the same class with their peers in the neighbourhood schools with necessary support inclusive education is said to be taking place. Ainscow and Booth (2011) argue that inclusive education means that learners with special needs should be provided with all the opportunities to participate in all aspects of school life in regular schools while the schools should responds to their needs at the same time eradicating all barriers to their learning.

According to Walton, Nell, Hugo and Muller (2009), inclusive education was simply the taking back of learners who were being taught in separate education systems to mainstream schools. Schools that practice inclusive education have taken responsibilities to change and provide support to learners with special needs and disabilities in general classrooms. Inclusion should be seen as an intrinsic to the mission, philosophy, values, practices and activities of the school and not as an addition on to a conventional school (Levin, 1997).

Inclusion involves:

- i. Providing appropriate response to the broad spectrum of learning needs in formal and other educational settings.
- ii. A particular emphasis on those groups of learners who may be at risk of marginalization, exclusion or under achieving.
- iii. Identification and removal of attitudinal, environmental and institutional barriers to participation and learning.

- iv. Modification and change in strategy and plans in content and approaches to learning.
- v. Enabling teachers and learners to see diversity as an asset rather a problem.

Thus inclusion is:

- i. Recognition of the rights to education and its provision in non-discriminatory ways.
- ii. A common vision which covers all people.
- iii. A belief that schools and other places of learning have a responsibility to educate all children (and adults) in line with human rights principle.
- iv. A continuous process of addressing and responding to the diversity of needs of all learners regardless of factors such as disability, gender, age, ethnicity, language, HIV status, geographical location and sexuality- recognizing that all people can learn.

Adapted from UNESCO's Guidelines for inclusion: Ensuring Access to Education for All (2005) by Sight Savers (2011) policy paper- Making Inclusive education a reality

A school that practice inclusive education is considered the most effective means of combating discriminatory attitudes among teachers, pupils and the society. The school creates a welcoming community and built an inclusive society. In addition, it provides an effective education, improved efficiency and is cost effective of the entire education system (UNESCO, 1998). For a long time inclusive education and integration concepts have been used interchangeably especially in United States of America and United Kingdom. The term integration is used mostly in UK while mainstreaming instead of inclusive education is used in US America (Hossain, 2004). Long, Wood, Passenger and

Sheely (2011) noted that inclusive education is broader in meaning than integration and further argued that integration refers to an approach which enables children with special needs fit in the school system while inclusive education system is where practices are developed to support a diverse range of learners in the mainstream settings which make schools more flexible and child centered.

The World Program of Action concerning disabled persons of 1983 resolved that persons with disabilities should be educated in general school system under article 120. The school systems should be structured to ensure acceptance and effective implementation of inclusive education. Aspects to be considered by schools include teachers' attitudes towards inclusive education, adaptation of instructional methods, provision of teaching, learning aids and assistive aids. In addition, other aspects to be considered include adaptation of curriculum, examinations and modification of environment to suit the needs of learners with special needs.

Teachers teaching in inclusive schools should possess the necessary competencies including the knowledge to use different teaching styles, adaptation of the curriculum, modification of the physical environment, use of appropriate assessment procedures and appropriate resources to maximize educational achievement of all learners. The current research was about the examination of teachers' attitudes and knowledge towards inclusive education implementation and the concept of inclusive education were related.

2.6 Development of inclusive education worldwide

International efforts to recognize the right of persons with disabilities to education started way back after Second World War when UN formulated universal declaration of human rights of 1948 which culminated in the establishments of elementary care of children with disabilities and rehabilitation in institutions. This was as a result of neglect, ignorance, superstitions and fear of persons with disabilities. Over the years the UN Convention on the rights of the child of 1989 was declared to continue the recognition of the rights of persons with disabilities. The convention stated that children were to be guaranteed effective access to education where they were to achieve fullest possible social integration and individual development (UNESCO, 1990).

The Jomtien conference was a landmark in recognition and consolidation of the previous thinking about the rights of children to education dubbed Education for All (UNESCO, 1990). This declaration by the world summit on children that committed world governments to provide education to all children has impacted positively on national policy and practice. The thinking was further reinforced by UN standard rules on the equalization of opportunities for persons with disabilities' education (1993). The rule stated that all states should recognize the principle of equal primary, secondary and tertiary educational opportunities for the youths and adults with special needs in integrated settings. That states should ensure that the education of persons with special needs forms an integral part of the education system. Additionally, Salamanca statement and Framework for action on special needs education (UNESCO, 1994) embraced the thinking of inclusive education and proclaimed that:

- i. Every child has a fundamental right to education and must be given the opportunity to achieve and maintain an acceptable level of learning.
- ii. Every child has a unique characteristics, interests, abilities and learning needs.
- iii. Education systems should be designed and educational programmes implemented to take into account the wide diversity of these characteristics and needs.
- iv. Those learners with special educational needs must have access to regular schools which should accommodate them within a child centered pedagogue capable of meeting their needs.

Regular schools with this inclusion philosophy and practice are the most effective means of combating discriminative attitudes, creating welcoming communities, building an inclusive society and achieving education for all.

During the review of education for all Agenda in 2000 at a world education conference in Dakar, one of the challenges that faced National governments, included non- reflection on children with educational needs on account of disability and provision of education in regular classrooms (UNESCO, 2000). As a result, the United Nations organization committed itself to EFA goals by drafting the eight Millennium Development Goals (MDGs) which were to be achieved by the year 2015.

The goals were interpreted as a broader commitment towards a better world in the 21st Century. They included elimination of global poverty, promotion of gender equality, education and environmental sustainability among others. These were the measures the countries world over were to take for a better world. Education was one of the main

strategies to achieve these goals. All children were to be taught together irrespective of their condition in mainstream schools (UNESCO, 2000). In addition schools were to create necessary conditions including adaptation of curriculum and environment besides ensuring that teachers were competent in handling learners with special needs and disabilities. Also schools were to ensure that there were adequate resources to enhance learning and teaching.

Worldwide there have been efforts since 1990s to provide education to all learners including those with special needs in mainstream schools (UNESCO, 2000). The provision of education to learners with special needs in mainstream classes with tailored support was what was referred to as inclusive education. Teachers play a very crucial role in the implementation of inclusive education. The individual support required by learners with special needs in general schools was to be professional and demanded that teachers should be competent (KISE, 2007). The Kenya Government embraced inclusive education concept as envisaged by Salamanca statement (UNESCO, 1994) and demonstrated that through enactment of various legislations and policies. For instance, the persons with Disability Act, 2003 stated that learning institution shall admit all persons including those with special needs so long as the person has the ability to acquire substantial learning in that course. The Act also stated that all learning institutions should take into account the special needs of persons with disabilities with respect to the entry requirements, pass marks, curriculum, examinations and other auxiliary services. Kenya also enacted children's Act 2001 which committed the government to provision of education to all children.

In 2010, special need policy was adopted in Kenya beside it being a signatory to United Nations declaration of 1948, world conference on education for all(1990), world conference on special need education (UNESCO, 1994), Dakar framework of action (2000) and UN conventions on the rights of persons with disabilities (2006).

In line with the cited legal provisions, Kenya government embarked on massive training of teachers to implement inclusive education in the years 2000s at Kenya Institute of Special Education (KISE) and other training institutions (Republic of Kenya, 2008). The current study on teachers' attitudes and knowledge towards effective inclusive education implementation was in line with the development of inclusive education in the world and in Kenya.

2.7 Inclusive education in the Kenyan context after independence

According to Republic of Kenya (2008), inclusive education was understood by the government as the provision of quality education to all children, the youth and adults. This implied that wherever children were attending school be it in special schools, other formal primary schools or informal institutions, the aim of the government was to ensure that its citizens accessed education. On the other hand, according to KENPRO (2010), inclusive education concerned all learners but with special focus on those who had been traditionally excluded from educational opportunities according to EFA goals. They included learners with disabilities, children from ethnic and linguistic minority groups.

Since independence Kenya Government has articulated issues to do with inclusive education in different commissions, reports, legislations and conferences elaborately. Republic of Kenya (1964) commission that was chaired by Ominde Simeon was formed

to review education and make it foster national unity and create human resource for national development and it recommended that learners with special needs were to receive education and training in regular schools provided support services were available to cater for their needs. The Gachathi report of 1976 on the National Committee on educational objectives and policies recommended that a policy on integration of persons with special needs was to inform special needs education in Kenya provided that integrating equipment's and facilities were to be given to schools that practiced integration (Republic of Kenya, 1976). The presidential working party on education and manpower training of commission of 1988 recommended that visually impaired children of young age be integrated in regular pre-primary schools, examinations for visually impaired candidates to be adapted (Republic of Kenya, 1988).

Physical facilities and environment in schools were to be modified to allow those children with physical motor problems move and function safely in schools and preprimary schools were to be expanded to accommodate children with mental retardation. Education commission report (1999) called for equal treatment of the unequal (Republic of Kenya, 1999). This treatment was to come by way of adapting the curriculum which could suit the needs of children with special needs in education. Children Act (2001) and Disability Act (2003) emphasized the integration of learners with disabilities in regular schools. In line with these legislations and Millennium Development Goals (MDGs), Kenya government formulated six goals by which EFA goals were to be achieved by 2015. Among the six goals, Kenya Government committed itself to ensure that learning needs of all children and adults were met through equitable access to appropriate learning and life skills by 2010 (Republic of Kenya, 2008).

Persons with special needs in Kenya were estimated to be 10% of the total population of the forty million people in Kenya according to 2009 census and about 25% of these were children of school going age (Republic of Kenya, 2010). Out of 750,000 schools going age children with disabilities, only 90,000 had been assessed to establish their nature of special needs. About 26,885 children were receiving some form of education while 95% of 750,000 children were not receiving education (Republic of Kenya, 2008). Kochung (2009) put this figure at 90%. Sessional paper no. 1 of 2005 emphasized that relevant systems were to be put in place for the implementation of inclusive education. Kenya Government through the ministry of education in 2005 developed Kenya Education sector support program (KSSP) document to enable special schools, units and integrated program be funded for the improvement of physical facilities, sports activities and other curriculum areas. This was in recognition by Kenya Government of the special needs education and its importance for the economic growth for the country (Republic of Kenya, 2009).

In 2009 the Kenya Government further developed a special needs policy (Republic of Kenya, 2009) that emphasized inclusive education. According to this policy, learners with special needs and disabilities were to be educated in mainstream classes though those learners with severe special needs and disabilities were to remain in special schools and units. In the Kenyan context, primary schools, special schools and units were to be provided with funds to adapt physical structures, environment and teachers were to be trained in handling learners with special needs wherever they were, the curriculum was to be adapted and the examinations were to be designed according to individual needs of learners (Republic of Kenya, 2009).

The present study was in line with the development that had taken place in Kenya in as far as education of learners with special needs, funding of special need education and training of teachers to handle inclusive education was concerned. Quality education could only be provided if teachers were competent to handle all learners in an inclusive setting. According to Kenya government, if teachers were trained effectively then inclusive education could be implemented effectively (Republic of Kenya, 2008) and that was why more teachers were undergoing training in inclusive education at KISE, Kenyatta University, Moi University and Maseno. The teachers were being equipped with competences necessary for inclusive education implementation especially in regular primary schools. It was projected that by the year 2015 every primary school would be staffed by at least one trained special need teachers (Adoyo, 2007).

2.8 Attitudes of teachers towards implementation of inclusive education

Attitudes are considered to be one's thoughts or ideas regarding one's feelings which influence behaviour related to a particular issue (Triandis, 1971 in Long, 2011). Gall and Borg and Gall (1996) noted that attitudes are an individual's view point or disposition towards a particular object(a person, a thing or an idea) as cited by Long (2011) The author further suggested that attitudes are the ways individual see and react to a social phenomenon and differs from one person to another. The view points are influenced by such factors as individual's beliefs, knowledge, emotions and their participation in social activities... According to Feldmann (1990), attitudes are felt or manifest themselves through certain behaviors or thoughts of or beliefs. Attitudes are in three dimensions namely cognitive, conative and affective domains. According to Hayes (2000), cognitive

dimension refers to reasoning and explaining which people will give for holding particular attitudes while affective dimension consist of how people feel about their attitudes and behaviour. Conative dimension has to do with how likely we are to act on the attitudes we hold. These three dimensions of attitudes are related and for the case of inclusive education, teachers would give reasons and explanations why they hold either positive or negative attitudes.

In their study in Malasya, Jelas, Mustapha and Ali (2006) stated that teachers' willingness to accept students with special needs was the hallmark of inclusive education. Pearson, Lo, Chui and Wong (2003) noted that teacher's beliefs and perceptions were of utmost importance as they served as antecedents to teacher's commitment toward successful inclusion. For instance, the authors suggested that when teachers sent negative cues or messages especially indirect ones about the abilities of the students with disabilities, the self-esteem of the learners got affected. According to Forbes (2007), it is vital that teachers are adequately prepared to become inclusive education educators and display positive attitudes towards inclusive education. The authors further asserted that teachers should prompt learners without disabilities to play together with those with disabilities.

Heijnen (2002), Priestly and Rabiee (2002) in Jelas *et al* noted that teachers were concerned about academic, social, and behavioral adjustment of the students with disabilities in inclusive classes. Idol (2006) suggested that some teachers require tools and skills to be able to cope with the social and emotional problems that go with inclusive education. Other aspects that teachers sometimes were concerned with that made them raise objections about inclusive education included large number of students in classes,

teachers' workload, difficulties in standardizing examinations and school budget (Jelas *et al*, 2006). In addition, inclusive classes have diverse groups of learners and this occasionally make teaching complicated and demanding task. Teachers must therefore in all intents and purpose be extremely capable and dedicated (Deppler, Loreman, Sharma, 2005). These researchers concluded that teachers who display positive attitudes towards inclusive education adjust easily their ways of teaching and assist students with varying needs and they influence those students' attitudes towards inclusion.

Jelas *et al* (2006) in Malasya found that 66% of the respondents agreed that special needs students should be educated in mainstream classes and they had a right to be in those classes. As observed above the attitudes of teachers towards inclusive education had a profound effect on its success (KISE, 2007).

In Kenya, people with special needs have been neglected on the belief that the causes of disabilities were attributable to spirits or a curse from God or ancestors (Ndonye, 2011). The author argued that from the way persons with disabilities were perceived; many families isolated, neglected or overprotected their disabled children. In that study, the author found that basing on such perceptions, teachers who would accept to work with children with special needs in their classes were only 35% and learners who would accept a child with special needs to be their friends were only 1%. In that study, it was found that those Kenyans who associated disabilities with bad luck would not even visit special schools or those schools where children with special needs were integrated. This study was conducted in major towns namely Nairobi, Machakos and Eldoret. Pearson, Lo, Chui and Wong (2003) noted that teachers claimed that they spent too much time on those

students with special needs and wasted the time of other “normal” students. KENPRO (2010) reported that disabled people were believed to bring bad luck and therefore were viewed as not fully human beings or were possessed by evil spirits. If they were children they were always made fun of or ridiculed.

Keriongi (2011) in her study in Central Kenya about attitudes of teachers in special schools found that teachers in the units and special schools who were trained in special needs education were more positive towards inclusive education than those teachers who were not trained in special needs education. A study that was conducted in Elgeyo Marakwet revealed that teachers had negative attitudes towards inclusive education because of lack of skills and knowledge on inclusive education while the head teachers had no problems (Kurumei, 2012). The headteachers justified their position on the ground that it was immoral for learners with disabilities to be left behind while their brothers and sisters attended school in the neighborhood. These studies were conducted in central Kenya, Eldoret, Nairobi and Machakos. The concern of the present study was to determine the attitudes of teachers in inclusive schools towards implementation of inclusive education in primary schools in Kakamega County.

2.9 Teachers knowledge towards implementation of inclusive education

According to UNESCO (1994), Pre-service training teacher programs were to provide to all teacher trainees in primary and secondary schools a positive orientation toward disability, thereby developing an understanding of what can be achieved in schools with locally available support services. Teachers were to be provided with knowledge and skills necessary to handle all learners in an inclusive setting. The statement went further

to suggest that teachers were required to teach all learners and assess those with special needs, adapting curriculum content, utilizing assistive technology, individualize teaching procedures to suit a larger range of abilities among other strategies. In teacher-training practice schools, specific attention should be given to preparing all teachers to exercise their autonomy and apply their skills in adapting curricula. UNESCO (2001) suggested that teachers need to adapt instructions, use technology and develop appropriate curriculum suitable for learners with special needs. The 1997 amendments to Individuals with Disabilities Act require that special teachers and mainstream teachers are knowledgeable and skilled in the mainstream core curriculum standards and the use of accountability assessment system in order to educate students with disabilities in inclusive setting (Favey *et al*, 2004). Under this broad general objective the knowledge of the teacher in terms of teaching strategies, curriculum and examination adaptation and environmental modification were discussed. In addition suitable resources towards implementation of inclusive education were discussed.

2.9.1 Teachers knowledge of Teaching strategies towards implementation of inclusive education

Teaching strategies are styles or methods teachers use in schools to impart knowledge to learners. For the case of inclusive education these are specialized skills teachers use to teach all children in an inclusive setting where individual differences are catered for. Rodgers (1993, P.6) suggested that teachers in inclusive schools should be competent in handling all learners including those with special needs. The author asserted that competent teachers teach each individual student in an inclusive class addressing each child's needs at his own pace.

In inclusive setting teachers should not teach the class as if it consists of students with average intellectual ability. The teachers should be aware of the dynamics of their classrooms, should be versatile and comfortable using different teaching techniques. Burstein, Wilcoxon, Sears, Cabello and Pagana (2004) noted that teachers who teach in inclusive schools should undergo systematic and intensive training that involves research based practices. This would enable them to instill confidence and competence in inclusive schools. Further Pagana *et al* asserted that teachers should engage in professional training as an ongoing activity for their professional growth and competency.

In regular primary schools, teachers who were not trained in inclusive practices set their classrooms climate in such a way that they compare their learners in terms of academic performance and they predetermined standards to be achieved by learners. According to Falvey *et al* (2004), this climate would not make teachers succeed in inclusive settings. Priority areas that were to ensure competency at handling learners in an inclusive classroom included collaborative team teaching, individualization of educational plans, multigrade teaching, peer tutoring among others (Fisher, Frey, & Thousands, 2003). According to Jha (2002, P. 140), innovative practice that ensured participation of learners with special needs in an inclusive classroom and therefore successful implementation of inclusive education included whole class inclusive teaching, group /co-operative /collaborative teaching, peer tutoring /child to child learning , activity based learning and team approach.

In cooperative learning program, instructional methods such as direct instruction, small group instruction, individualization of roles and accountability and independent practice were combined in a team based approach (Katz & Mirenda, 2002). This cooperative learning was also referred to as collaborative learning where learners work with their peers towards a common goal. The approach promoted the skill of sharing responsibilities, listening to each other, control of emotions and making of decisions (KISE, 2007). This strategy had been found to enhance learning, improves good relations, develop problem solving skills, and improve academic and social skills of students with special needs in inclusive classrooms (Putnam, Handler, Ray, Leary & Zonarich, 2002). Peer tutoring was a specialized form of cooperative learning where students worked together in learning academic content and each one of them playing the role of the teacher to the rest of the students. Special needs learners' gains a lot in academic skills, self-help skills, communication and social skills when peer tutoring is used (King-Seers & Cummings, 1996; McDonell, 1998). Falvey *et al* (2004) noted that peer tutoring minimized behavior problems, increased opportunities to respond and enhance activity comprehension in such areas as math, reading and social interaction. A study on peer tutoring on reading skills and social interactions with autism children revealed that these skills improved among all learners (Kamp, Berbetta, Leonard & Dequadri, 1994).

Team teaching on the other hand refers to a situation where teachers conduct lessons together, share their expertise and learners get assisted to overcome their difficulties (KISE, 2007). For instance, in an inclusive class of 50 there was need for more than one teacher if those learners with special needs had to benefit and teachers were able to plan

together, teach together, evaluate results together and modify learning goals for each student.

Cook and Friend (1995, p.1) as cited by Rinaldo, Foote, Kilanowsk (2010) referred to team teaching as a model where two or more professionals deliver a substantive instruction to a diverse or blended group of learners in the same single classroom. In this model, special need trained teachers and general teachers engage in parallel teaching, station teaching and alternative teaching. The teachers may opt to rotate responsibilities throughout the day with other teachers serving in support capacity. These teachers in the process of teaching usually differentiate instructions and employ intervention techniques that are designed to benefit both regular and special need learners.

Rinaldo *et al* (2010) further contend that in co-teaching there is direct and indirect support to learners with special needs. Direct support in the general class would involve one to one instructions where specially designed individualized programmes are implemented. Indirect services are defined as consultation provided by a certified special education to general education teachers to assist them handle inclusive classes.

Ainscow, Booth and Dyson (2006) noted that teachers in inclusive classrooms should plan for the general class as well as for individual pupils. Literature on inclusion gave significant attention to strategies that ensured that learners with special needs accessed and participated in the general classes. For instance, in USA teachers prepared an Individualized Educational Programme (I.E.P) if they were handling inclusive classrooms.

An IEP is a document which describes a child's educational performance, annual goals and objectives to be achieved by the teacher, services the child require and description of instructional and assessment modification a child required (Individuals with Disability Education Act, 1999). Other strategies of handling students with disabilities in inclusive classes particularly the hearing impaired (Jossey-Bass (1993) in Kiaritha (2011) included:

- i. Teachers facing the class when they were speaking to learners with hearing impairments so as they were able to read the lips. If they were writing on the board or narrating a desktop demonstration, teachers should try to avoid talking when they are facing the board or the desktop.
- ii. In class discussion and conversation, teachers focused primarily on the student with the disability and not on the student's aide or interpreter. In talking to students with hearing impairments, some instructors tended to address the interpreter or to say things like, "Tell her she should ...". Instead, look at and speak directly to the student, with only occasional reference to the interpreter.
- iii. During the initial meeting, teachers should ask students with disabilities what they can do to help them participate in class. Students who cannot raise their hands to answer or ask questions, for example, may feel isolated or ignored. They should be asked how they wish to be recognized in the classroom. Some students would want the teacher to call them. Others may prefer to meet periodically with the teacher before or after class to discuss the course content.
- iv. Teachers should consider alternatives to oral presentations, if needed. Oral presentations may be difficult for students with speech, hearing and/or

specific learning disabilities. Some students may want to give their presentations with the help of interpreters. Others may want to write out their presentations and ask an interpreter or another student to read it to the class. Still others may wish to give their presentations without assistance and should be encouraged to do so. Teachers should ensure that students get the academic help they need to succeed in their class. Although a student may have an in-class aide such as a note taker or sign-language interpreter, these aides are not academic tutors. Students with learning disabilities may benefit from ongoing peer help after the teacher.

Roberts and Martha (1995) suggested that both trained and general teachers were not fully enthusiastic to serve students with disabilities in mainstream classes using styles that would make them benefit academically. The authors further observed that regular education teachers were not trained to provide diversified instructional methods that were tailored to suit learners with special needs.

Diversified instructional methods included and not limited to reading a task to a learner, allowing oral response instead of writing, using signs, use of Braille and assistive technology such as computers (Walton et al, 2009). Mwaura (2012) in his baseline study in south Sudan on inclusive education found that teachers were inadequate, poorly trained and thus unable to implement inclusive education. According to Agbenyega (2006), regular teachers felt fearful and were not prepared for inclusive education. Further the author suggested that teachers attributed the lower academic success of schools to inclusive education. Kurumei (2012) found that for inclusive education to be implemented effectively in Kenya there was need for teachers to be skilled and

knowledgeable in handling all learners including those with disabilities. Okuta (2011) in his study in Rachuonyo District in Kenya found that due to unpreparedness and poor attitude, teachers were using poor teaching methods.

Kenya Institute of Education (2012), in its situational analysis on the status of inclusive education in primary and secondary schools in Kenya, found that majority of teachers had no sufficient capacity to implement inclusive education in schools in spite of the fact that some of them had undergone training in special needs education. Ndonge (2011) found that teachers in the integrating schools in Nairobi, Machakos and Eldoret lacked training in special needs areas and thus suggested that for a meaningful inclusive education to be realized, capacity building among teachers and education officials must be undertaken by Kenyan Government through the ministry of education. The increased training of teachers in Kenya in special needs education at Kenya Institute of Special Education in mid 2000s and the development of a special needs policy (2009) was a response to the need for the development of capacity among teachers to implement inclusive education. From these developments in terms of teacher training and government commitment towards inclusive education implementation, the present study attempted to determine the teachers' knowledge of teaching strategies teachers and their use towards implementation of inclusive education in primary schools in Kakamega County.

2.9.2. Teachers' knowledge of Curriculum and Examinations adaptation towards implementation of inclusive education

Curriculum is the sum total of all that is planned for learners in any institution of learning and the assessment of the extent the changes have taken place (Oluoch, 2002). According

to Falvey *et al* (2004), one key competency teachers should demonstrate was the ability to plan, select, adapt or modify the curriculum and examinations to make them suitable to all learners. The author further contented that teachers should have the ability to spontaneously adapt the curriculum as he/she teaches in the inclusive classroom to respond to the needs of different learners as well as advocate for the overall curriculum adaptation to ensure that all learners in inclusive schools access it and changes should be seen in good examination performance and other indicators such as communication and social skills.

Falvey *et al* noted that teachers in Countries such as Japan, Taiwan and South Korea had restructured their curriculum and allowed schools to experiment with different curricular. For instance, Saturday's classes have been struck and students allowed to rest at home while in Taiwan University entrance exams system have been scrapped in favor of a more holistic approach that considers grades, essays and extracurricular activities (Beech, 2002). According to this author, South Korean college students are picked not because of their test scores but for their unique talents. In America, Students learn social skills and group work in environments that celebrate diversity (Elliot, 2002). This author maintained that exams make students drop out of school especially those students who were in the rural areas and those who were disadvantaged by disabilities. The purpose of exams was to filter the best students on academic grounds. Thus the author asserted that examinations were barriers to inclusive education.

UNESCO framework (1994) had highlighted the need for child centered pedagogy for addressing the educational needs of the disadvantaged and the disabled. The merit of

inclusive schools was not just the delivery of academic content but the development of all skills, attitudes and knowledge for successful integration in the society (Katz & Mirenda, 2002).

Jha (2002) stated that success and access to education by all learners lay in the curriculum, the pedagogy, the examinations and the schools approach. The author further suggested that if the unseen barriers were taken care of, access to education by all children would be possible. Republic of Kenya (2008) noted that curriculum had been restructured to respond to the needs of learners with special needs. For instance, specialized syllabus had been developed in the area of visual impairment and physical disabilities. The report went on to state that sign language had become official language in Kenya and KNEC had made special arrangements for learners with special needs. For instance extra time was allowed for candidates with special needs, some subjects like science had been adapted and scripts for learners with special needs were marked by examiners trained in special needs education.

Some of the recommendations that were made in the special needs policy (Republic of Kenya, 2009) included:

- i. Curriculum was to be adapted to cater for all specialized areas in special needs education.
- ii. Teacher training curriculum in all teacher training colleges was to include components of special needs education.
- iii. Kenya National examination Council (KNEC) was to design National Examinations for learners with special needs as individuals and provide

certificates to learners with special needs who would not sit for national exams due to their diverse learning needs.

- iv. KNEC was to ensure that time allocated to learners with special needs for examination papers was to be determined by the nature and severity of the special needs and disabilities.
- v. Ministry of Education was to seek copyrights from publishers so as to adapt regular curriculum and have mass production of teaching /learning materials for learners with special needs and disabilities.

The recommendations were made in view of the fact that teachers were very important component for successful implementation of inclusive education. Kumar (2004) suggested that teachers hold the primary responsibility of providing instructions that were characterized by students' diversity, development of appropriate curriculum, its interpretation and its deliverance. The present study attempted to find out teachers' knowledge and to what extent teachers had adapted the curriculum and examinations at class level and national level to meet the needs of all learners in inclusive schools in Kakamega County.

2.9.3. Teachers' knowledge of Suitable resources and environment towards implementation of inclusive education

Effective implementation of inclusive education depended on the ability of teachers to ensure that the teaching and learning aids and compensatory or assistive aids were suitable for all learners in inclusive classes (Republic of Kenya (SNP), 2009). In addition

the modification of the school environment was very crucial for learners with special needs and disabilities especially for those with mobility and visual problems.

An inclusive class was to be rich in teaching /learning resources that enhanced the learning environment which promoted the acquisition of cognitive abilities (KISE, 2007). The abilities included knowledge retention, remembering, thinking, reasoning, interaction and imagination. Specific learning resources included projectors, graphic aids, models, mock – up specimen and software resources. Compensatory devices on the other hand reduced the effect of disabilities that result from impairment and enabled learners with special needs to function in inclusive classes (KISE, 2007). The devices or the assistive aids included wheel chairs for learners with physical disabilities, hearing aids for learners with hearing impairment and magnifying glasses for those learners with low vision. Other assistive devices included Braille machines, speech kits, white canes, communication boards and computers. Teachers were to ensure that assistive aids and other specialized learning resources were given first priority when planning for any education programme for learners with special needs in the inclusive classes (Maryberry & Lazarus, 2002 & Muka, 2009). Lazarus and Mayberry (2002) and Muka (2009) contended that learners with special needs benefited greatly from using such assistive aids as word processors, digital personal organizers and mult-media (films and microphones).

The restructuring of the classrooms, construction of ramps, paths and leveling of the school compound was important if the inclusive education had to succeed (KISE, 2007). Ndonge (2011) and Kochung (2009) reported that learners with special needs and disabilities required barrier free environment to maximize their functional potential.

Republic of Kenya report on the special needs policy (2009) recommended that the environment in an inclusive setting was to be accessible and disability friendly. The policy further recommended that all primary schools were to be provided with funds to remove the existing barriers that made school environment unfriendly to learners with special needs and disabilities. The areas that were to be made disability friendly included libraries, toilets, furniture, steps (ramps) and pathways. The making of friendly environment for persons with disabilities was meant to benefit learners with low vision and motor problems to move around in the school environment easily and were to feel part and parcel of the school community (KISE, 2007).

Kenya programme organization (KENPRO, 2010) noted that issues to be addressed for successful implementation of inclusive education included the provision of adapted and specialized equipment, adaptation of buildings and any construction in the school that suited the needs of the learners with motor problems. In a study carried out by Mukhopadyay, Nenty and Abosi (2012) in Botswana on inclusive education, it was found out that for inclusive education to succeed there was need for improvement in the school infrastructure and provision of resources.

Kurumei (2012) in his study established that inclusive schools in Elgeiyo Marakwet County did not have adequate learning /teaching resources including assistive aids. Okuta (2011) also found that teachers in Rachuonyo District were using resources that had not been adapted to suit the needs of learners with special needs. These studies were conducted in Elgeyo Marakwet and Homa Bay counties and studies were conducted in different counties whereas the present study was conducted in Kakamega County. Thus

the present study sought to determine the status of implementation of inclusive education in primary schools in Kakamega County. Therefore the present study attempted to determine the teachers' knowledge of and provision of suitable teaching, learning, assistive aids and the environment that suited the learning needs of learners with special needs in primary schools in Kakamega County in light of special needs policy and other educational report's recommendations.

2.9.4 The Teachers' attitudes on how inclusive education had been implemented in primary schools.

Assessment information was very useful for the development of any educational program. The criteria used such as the use of both formal and informal tests, checklists and schedules determine the quality of the program (Mba, 1980). Inclusive education program as an educational program required assessment for future improvement and development. Reasons for including students with special needs in the mainstream classes were mainly for social and behavioral benefits other than academic achievement concerns (Putman et al, 2002). Most studies conducted on inclusive education were in the areas of attitudes, barriers to inclusive education and provision of facilities (Mukhopadyay *et al*, 2012 & Wanjiku, 2004). In Kenya there was little research that had been carried out on the assessment of on how effective or not inclusive education has been implemented in primary schools.

However, according to the literature reviewed from outside Kenya, studies that had been carried out on assessment of academic achievement by those learners with special needs in both inclusive schools and special schools indicated that the academic achievements

showed no significance difference (Katz & Merinda, 2002). Statistics in Kenya show that the performance of learners with special needs particularly hearing impaired learners at Mumias, Maseno and Kakamega school for the deaf have their mean Grade in the range of 130 to 200 marks (KNEC results for 2013, 2014, 2015, 2016). (See table 2.1). These scores were low and they implied that academic achievements in special schools were not impressive. There was no study that had been carried out to compare the performance of those learners in inclusive schools and special schools according to the literature reviewed. However, Whitbreadits (2012) suggested that there was little that was special about special education and that the negative effects of separating children with disabilities from their peers far outweigh any benefits of smaller classes in special schools.

In a study in Malaysia, it was found out that learners with special needs were academically better off in academic achievement in inclusive schools. In this study 50% of the respondents agreed that students with special needs who were included performed better while 32% of the respondents in the same study disagreed. In the same study 66% of the respondents were in favor of mainstreaming of students with special needs on the belief that they will perform better in academics compared to those in special schools (Jelas *et al*, 2006).

A study by Mukhopadhyay *et al* (2012) that was conducted in India asserted that an inclusive class with large size of students had a positive impact on both social and intellectual growth of students. However, reports by the department of education office of special education (2002) indicated that students in inclusive schools lag behind their

peers in mastery of state academic standards. It is on this background that some head teachers deny learners with special need opportunities to register for KCPE exams in Kenya (Kilei, 2014). The researcher made spot check at St. Ann Primary school that had inclusive education programme in Kakamega County and found that learners who were included were performing well. (See table 2.2).

In the Journal of special education, Hunt and Goetz (1997) suggested that learners with severe special needs achieved academically and acquired basic communication skills through interaction with peers without special needs. The peers provided cues, prompts and consequences to the learners with special needs and by the end of their studies in those schools they produced independent, targeted communication and motor responses. The opportunities for learners with special needs to interact with their counterpart without special needs provided support and motivation that was required. The study concluded that the opportunity for interaction of the learners in an inclusive classroom may influence inclusive education implementation in primary schools. One of the concerns of this study was to assess how inclusive education has been implemented in primary schools in Kakamega County.

Table: 2.1 Mean Grades K.C.P.E Results for sampled deaf primary schools

SCHOOL	YEAR	MEAN SCORE
Maseno	2013	162.73
	2014	153.45
	2015	153.19
Mumias	2013	146.8
	2014	147.45
	2016	155.63

Table 2.2: Included learners

No.	Name	Index No.	Type of special Need	Year	K.C.P.E Marks
1.	X	Y	Gifted & Talented	2014	425
2.	X	Y	Hearing impaired	2014	384
3.	X	Y	Hearing impaired	2014	369
4.	X	Y	Hearing impaired	2014	359
1	X	Y	Gifted & talented	2013	386
2	X	Y	Asthmatic	2013	388
3	X	Y	Visually impaired	2013	371
4	X	Y	Hearing impaired	2013	373
5	X	Y	Visually impaired	2013	364
6	X	Y	Visually impaired	2013	346
7	X	Y	Hearing impaired	2013	346
1	X	Y	Visually impaired	2010	398
2.	X	Y	Hearing impaired	2010	398
3	X	Y	Visually impaired	2010	388

Key: X represent different candidates who sat for KCPE in a school in different years while Y represent their indices

2.9.5 Summary

The literature reviewed revealed that the attitude of teachers towards learners with special needs was negative in Nairobi and Machakos (Ndonye, 2011). Teachers believed that learners with special needs added workload on their schedule and led their schools to perform poorly and thus non-effective implementation of inclusive education (KISE, 2007). However, a study by Keriongi (2011) revealed that teachers in central Kenya who were trained in special needs education had positive attitudes which implied that they influenced implementation of inclusive education. There had been no study that had been conducted in Kakamega County to determine the attitudes of teachers towards implementation of inclusive education in primary schools in the county. The study attempted to fill that gap.

Further, according to the literature reviewed, teachers' knowledge of teaching strategies, curriculum and examinations adaptations towards inclusive education implementation was very vital. In addition, the teachers' knowledge of suitable teaching, learning, assistive aids and environment towards inclusive education implementation was also very important (Fisher et al, 2003). Okutoyi (2011) carried out a study to find out coping strategies teachers used in inclusive schools for the hearing impaired. He did not investigate the general teaching strategies used in inclusive schools for all categories of learners with special needs. This study attempted to fill that gap.

The literature reviewed revealed that curriculum had to be adapted in a way that learners with special needs benefited maximally academically in an inclusive setting. Specialized syllabuses for different categories of special needs had to be provided and time allocated

to exams increased (Republic of Kenya, 2008). According to Special Needs policy in Kenya, National examination for learners with special needs had to be designed specially and certificates awarded basing on other school tests and criteria such as cleanliness and performance of non-exam activities (Republic of Kenya, 2009). The policy further suggested that curriculum in teacher training colleges had to be reorganized so that it contained components of special needs education. There was no study that had been carried out to determine the adaptation of both curriculum and examination. This study attempted to fill that gap. The concern of the present study overall was to determine the teachers' attitudes and knowledge towards implementation of inclusive education in Kakamega County as the teachers were the most important stakeholders in the implementation of any educational program.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research design and methodology is a plan and procedure which the researcher makes broad assumptions and detailed methods of data collection and analysis. In this section the areas that were highlighted included research design, the study area, population of the study, sampling procedure and sample size, instrumentation and data collection procedures. In addition, the pilot study, validity and reliability of the instruments and data analysis were also covered.

3.2 Research Design.

The study adopted descriptive research survey design. This design enabled the researcher to get information on teachers attitudes from teachers themselves, describing how they feel about learners who have special needs and were included in their classes learning alongside other learners without special needs and how they teach them using which strategies. According to Mugenda and Mugenda (2008), descriptive survey design enables the researcher to gather facts as par what presently exists about particular phenomena without manipulating variables or factors.

Thus this design was preferred because information was gathered from teachers in their natural usual place of work about their attitudes, knowledge of teaching strategies, knowledge of curriculum and examination adaptation, knowledge of teaching and learning /assistive aids and how they feel inclusive education had been implemented in

their schools. In this study the researcher used both quantitative and qualitative approach to gather information from teachers. This approach through the use of a questionnaire for all teachers and interview schedule for headteachers enabled the researcher to draw from the strengths and minimized the weaknesses of both quantitative and qualitative approach in a single research study and across studies (Johnson & Onwuegbuz, 2004, p. 244). The combined quantitative and qualitative approaches mix the rigor and precision of experimental design and quantitative data with the depth of understanding of qualitative methods and the data.

Previously studies on teachers' attitudes towards inclusive education were conducted using quantitative methods (Ali, Mustapha & Jelas, 2006; Chhabra, Srivastawa Srivastawa, 2008) while others were conducted to find out teachers knowledge towards inclusive education using qualitative methods (Harding & Darling, 2003; Lawson, Parker & Sikes, 2006; Mahbub, 2008). Further, other studies were carried out to find both teachers attitudes and knowledge using a single mixed approach (Kristensen, Omagor-Loican & Onen, 2003; Leung & Mak, 2010; Hodkinson, 2006). This was the rationale that made the present researcher adopt mixed research approach.

Quantitative research approach entails exploring trends and explaining the relationship among different variables (Creswell, 2008). This approach depends on quantitative data such as survey questionnaires or focuses on hypotheses testing for confirmation (Johnson & Christenson, 2000; Wiesma & Jurs, 2009). On the other hand, qualitative research refers to a collection, analysis and interpretation of comprehensive narrative and visual data in order to gain insights into particular phenomena of interest (Springer, 2010).

According to Bogdan and Bklen (2007), qualitative research is an umbrella term for other several research strategies.

3.3 Research Paradigm

The philosophical stand of this study was pragmatism where it was believed that the function of thought was an instrument or tool for prediction, action and problem solving. Pragmatists argue that concepts, ideas, knowledge and meanings are viewed in terms of their practical use and successes rather than in terms of reality or accuracy. Inclusive education was the idea or philosophy people world over were interested in and United Nations organization was keen to see it implemented (UNESCO, 1990). The participation of all stakeholders and their resolve to implement inclusive education is a pragmatic approach. According to the pragmatic maxim an object or a concept can fully be understood through its practical consequences. In the education context, it signifies the implementation of inclusive education which has a great impact and therefore facilitates the overall understanding of inclusive education concept. Schools have to ensure that learning environments and educational systems meet the diverse needs of all learners in the least restrictive environment irrespective of their special needs and disabilities (Mwaura, 2012). UNESCO (1994) noted that inclusive education was about educating learners regardless of their physical, intellectual, social, linguistic or other conditions in mainstream education.

3.4 Area of the study

The study was conducted in Kakamega County. The county is located on the western part of Kenya as seen in Appendix D on the map at longitudes $34^{\circ} 21' E$ and $35^{\circ} 09' E$, $0^{\circ} 54' N$ and $0^{\circ} 06' S$ of equator (Kakamega County strategic development plan 2010 – 2014). Kakamega County is bordered by Busia County to the West, Bungoma to the North West, Vihiga and Siaya counties to the South, Nandi County and Uasin Gishu to the East while Trans Nzoia is to the North. Kakamega County is a major rain catchment area in the region and the rivers that traverses it includes: Lusumu, Yala, Isulu and Nzoia.

The main economic activities in Kakamega County include sugar cane farming with factories in Mumias and Malava, tourism around Kakamega Forest and maize farming. The County was suitable for the study because it has twenty special schools and sixty inclusive schools which made the present researcher to want to know how inclusive education was being implemented given the many programmes (EARC Kakamega County, 2014). Also the presence of Kenya Institute of special education outreach training programme for inclusive education teachers at Sigalagala Polytechnic in Kakamega County made the researcher to also get interested to find out its impact of training on inclusive education implementation.

It was noted that perceptions towards persons with disabilities over the years vary from community to community in Africa. For instance, in Kenya, persons with disabilities were seen as hopeless and helpless (Desta, 1995 in Munyi, 2012). The author noted that communities living around Kakamega forest such as Tirikis and Nandi hide Persons with disabilities in their houses and those persons who were sick were taken to Kakamega

forest to die there (EARC-Kakamega, 2014). These persons were denied opportunities including education and were being hidden away from the rest of the family members. Munyi (2012) reported that in the field of education, perceptions towards children and adults with disabilities had changed significantly and the challenge to educators was to ensure that schools were readily and fully accessible to persons with special needs as well as to those without special needs.

3.5 Population of the study

In Kakamega County there were 536 primary schools with a population of 2900 female teachers and 4089 male teachers (County Directors office statistics, 2013). In schools that practiced inclusive education, there were 2500 teachers and out of this, 1300 were female teachers and 1200 male teachers and this constituted the research population. This population was chosen because the present study concerned itself with inclusive education in primary schools and these were the teachers who were teaching in those schools.

3.6 Sampling procedures and sample size

Teachers who were teaching in primary inclusive schools in Kakamega County were 2500 and out of this 1300 were females and 1200 were males (County Education statistics, 2013). According to Israel (2009), the target population of between 2000 and 3000, the sample size should be 333 at 95% confidence level and non response rate of 67 (20% of the sample size). In this respect, 400 teachers constituted the sample and they were spread in 8 sub counties in Kakamega County. Creswell (2003) reported that

published statistical tables were recommended for determining the size of randomly chosen sample from a given approximate population as presented in **appendix V**.

The researcher used multistage sampling procedure to identify schools where learners with special needs had been included and teachers who were teaching in classes where learners with special needs were included. He purposely selected those schools and teachers where learners with special needs had been included in Kakamega County. It was in these schools information about inclusive education was available and therefore the relevant places for the study. The researcher then randomly selected certain number of teachers from those schools in different Sub Counties that were handling inclusive classes as presented in table 3.1. The researcher also purposely selected headteachers of inclusive primary schools that were sampled by the researcher to participate in the study. The headteachers of those inclusive schools had the relevant information about inclusive education since they were in charge of those schools and were therefore aware of how learners with special needs who had been included were being handled by teachers in inclusive classes. Thus 400 teachers and 45 headteachers constituted the sample. Three hundred copies of questionnaire were returned.

Table 3.1: Sampling frame of the study

Sub County	Schools	Teachers in each Sub county	Inclusive schools	Teachers in inclusive schools	Sample size No of Teachers(N)
Khwisero	60	740	5	56	50
Butere	65	870	7	58	55
Kakamega Central	74	1048	3	50	40
Kakamega South	69	850	4	51	45
Kakamega East	67	890	6	59	65
Kakamega north	67	900	5	56	50
Mumias/Matungu	68	851	12	66	55
Lugari	66	840	3	53	40
TOTAL	536	6989	45	449	400

3.7.1 Instrumentation

The instruments that the present researcher used were a questionnaire for teachers, an interview schedule for headteachers and an observation checklist that was used by the researcher to observe resources in various inclusive classes in different schools. These instruments were researcher made and modeled along the context of “Expert Consensus Model of Validation” that were developed by Johnson (1977) and Defur and Taymans (1995) in Falvey *et al* (2004) to identify the teacher competencies needed to support

inclusive education in general schools. The use of these instruments enabled the researcher to gather large information in a short time and also enabled the researcher to observe what was really happening on the ground and was able to probe further the headteachers on their views as administrators on implementation of inclusive education. Thus he was able to confirm information given by the teachers in general

3.7.2 Teachers Questionnaire

The questionnaire that was teacher made had five sections. In the first section demographic information was sought from teachers that included teachers' gender, teaching experience, the type of special needs and qualification and had 8 items. In the second section information about teachers' attitudes toward inclusive education was sought and had 19 items (See appendix A). In the third section, information about teachers knowledge of teaching strategies used in inclusive classes was sought and had 23 items while in the fourth section information about teachers' ability to adapt curriculum and examinations was sought and had 21 items. In the fifth section information about how inclusive education had been implemented was sought and had 10 items.

3.7.3 An observation Checklist

There was an observation checklist which enabled the researcher to determine whether teachers had provided suitable resources in the classrooms and modified the environment to suit the needs of all learners and had 28 items(See appendix B).

3.7.4 An Interview schedule

There was an interview schedule for headteachers that consisted of 10 items and they were open ended. They sought in-depth information about the challenges teachers encounter while teaching inclusive classes, attitudes of teachers towards inclusive education and general information on inclusive education. The headteachers were also required to tell how the different stakeholders including the government they support inclusive education implementation in the schools (See Appendix C). Interviews are usually a source of information and they are commonly used methods in qualitative studies. They may be structured or open ended depending on the researcher's knowledge about the study and purpose of the interview and also the nature of the study (Drew, Herdman & Hosp, 2008). In the current study, open ended items were used only with the headteachers.

3.8 Data collection procedures

After the approval of the proposal and permission by the school of education, the researcher obtained research permit from National Council of Science and Technology to conduct the study. The researcher further obtained permission from the Kakamega County Commissioner and County Director of education to carry out the study in the primary schools in the county (See Appendices F, G, H, I). The researcher and his research assistant visited different schools and requested the sampled teachers to complete the questionnaire. The interviews with the headteachers were conducted by the principal researcher himself. He did the interviews first in the schools where he visited first and later on did the same in schools where the assistant researcher had gone initially.

Both the principal researcher and his assistant used the observational checklist to find out the resources that had been provided and what environment modifications had been done by teachers in different inclusive classes in different schools.

3.9 Scoring of Instruments

The items on Likert like scale on all subs – scales of Teachers Attitudes, Teaching Strategies, Adaptation of Curriculum and Examination and Attitudes of how inclusive education had been implemented ranged from Strongly Agree with a maximum of 5 points, Agree with 4 points, Undecided with 3 points, Disagree with 2 points and Strongly Disagree with 1 point. The likert like scale of attitudes on how inclusive education had been implemented had a maximum of 4 points and minimum of 1 point while the scale observation checklist had a maximum of 1 point and a minimum zero point. The attitude scale had a maximum score of 95 and a minimum score of 19, the scale of the teaching strategies had a maximum score of 115 and a minimum score of 23, the scale of knowledge of curriculum and examinations adaptation had a maximum score of 105 and a minimum score of 21 while the scale of how inclusive education had been implemented had a maximum score of 40 and a minimum score of 10. An observation checklist had a maximum of 28 points and a minimum of zero points.

The criteria for interpreting the first three scales for individual items which included the scale of attitude, teaching strategies and curriculum adaptation had a maximum of 5 points and a minimum of 1 point. Between 1 to 2.4 mean score meant negative attitude, 2.5 to 3.4 meant ambivalent attitudes and 3.5 to 5 meant positive attitudes. For the scale of suitability of resources the index of 60% was deemed suitable while the scale of

assessment 2.4 and below was considered poor, 2.5 to 3.4 was considered satisfactory while 3.5 to 4 was considered good. The responses from open ended items and interview schedules were categorized according to the themes that emerged. Mean scores for the subscales were calculated, analyzed and interpreted accordingly.

3.10 Pilot Study

A pilot study was conducted in Emuhaya Sub County which borders Kakamega County. The test was administered to the same respondents twice separately in a period of two weeks. The respondents that participated in the pilot study did not participate in the main study as these respondents did not come from Kakamega County.

3.10.1 Validity of the instruments

The degree to which the results obtained from data really represent the phenomena under study is what is referred to as validity (Kombo & Tromp, 2006). There are basically four different types of validity namely face, construct, content and criterion which are commonly used to estimate validity of data (Mugenda & Mugenda, 2008). Face validity refers to the degree to which a test appears to cover the relevant content it purport to cover (Oso & Onen, 2009). Construct validity is a measure of the degree to which data obtained from an instrument meaningfully and accurately reflects or represent a theoretical concept while criterion related validity implies that a measure is used to assess subjects behavior in specific situations. The present researcher preferred face validity and content validity as they were relevant to the nature and purpose of the questionnaire and interview schedule that were used. After constructing the items, the researcher consulted

with the experts in the Department of Educational Psychology at Moi University and after establishing the two validities and with their opinion the items were reviewed.

3.10.2 Reliability of the instruments

Reliability of the research instruments is the degree to which the instruments yields same results or data after several trials (Mugenda & Mugenda, 2008) while Orodho (2003) content that reliability is a measure of a theoretical concept that is stable or consistent across two or more attempts. Reliability coefficient of test items is affected by such factor as the length of the test, homogeneity of test items and groups, scoring reliability, item difficulty and the speed of the test (Ingule, Rono & Ndambuki, 1996).The authors asserted that when the items of the test are more the test increases potential variability and the greater the similarity of test item content the greater the reliability. Further the less error of scoring and when the item difficulty is average the higher the reliability. Methods of estimating reliability coefficient include test-retest method, parallel form method and internal consistency method. The present researcher used the test retest method in the study. A test re-test method was used to estimate the reliability of the instruments.

The results were correlated using Pearson product moment formula and the scales had the aggregate overall correlation coefficient index of 0.86. Kasomo (2007) suggested that any Pearson product correlation coefficient of between 0.8 and 1 was high and the instrument would be deemed reliable. For this study, 0.86 was good enough for the instruments to be considered reliable.

3.11 Data Analysis

Data analysis refers to categorizing, ordering, manipulating and summarizing data to obtain answers to research (Frankel & Wallen, 2008). The data was collected, sorted, edited, coded, classified and tabulated for analysis. Information from the questionnaire and interview schedule was analyzed using descriptive statistics such as percentage, and frequency counts. The responses from interview schedule for headteachers and other open ended items were categorized under themes and coded. The hypotheses were tested at the 0.05 level of significance using ONE way ANOVA for data that was continuous and chi-square for categorical data.. The analysis was done using computer software (statistical package for social science (SPSS) version 20. SPSS is designed especially for the analysis of social science data and contains most routines social scientist employ (Nachimias & Nachimias, 1996).

3.12 Ethical issues

In social sciences research, there is need for the researcher to take note of the ethical issues. They concern informed consent of the respondents, confidentiality and anonymity of the respondents. The researcher is supposed to hold high standards of personal and professional integrity. The welfare of the research participants and the environment where the study will be carried out must be taken into account. The necessary permits to conduct the study must be obtained. The present researcher obtained the necessary authorization including research permit from National Council for Science, Technology and Innovation, authority from County Commissioner Kakamega and County Director of Education.

It was only after the cited authorization, the researcher set out for exercise of data collection from various primary schools. The researcher requested teachers in different schools to voluntarily participate in the research. The researcher informed the respondents that the aim of the research was for academic purposes and there was no need to fear giving their views and the views would be confidential as no one was required to identify with which questionnaire he/she filled. Thus the respondents were supposed to give honest information to assist the researcher get the right data for development of education in the country. As a result teachers voluntarily gave the information without coercion from either headteachers or any other authority.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

The Chapter four focuses on data presentation, data interpretation and discussion. The topics that were covered in this Chapter were based on the following objectives:

- i. To determine the influence of demographic data that included teachers' gender, teaching experience, qualification towards implementation of inclusive education in Kakamega County.
- ii. To determine the teachers' attitudes towards implementation of inclusive education in primary schools in Kakamega County.
- iii. To determine teachers' knowledge and use of teaching strategies towards implementation of inclusive education in primary schools in Kakamega County.
- iv. To determine teachers' knowledge of and use of adapted curriculum and examination in towards implementation of inclusive education in primary schools in Kakamega County.
- v. To determine teachers' knowledge of and provision of suitable resources and environment towards implementation of inclusive education in primary schools in Kakamega County.

- vi. To determine teachers attitudes on how inclusive education had been implemented in primary schools in Kakamega County.

4.1 The influence of teachers' demographic data towards implementation of inclusive education

To achieve the first objective, the researcher sought information about general teacher qualification, teachers' qualification in special need education, gender and how they influence implementation of inclusive education. Also information about the type of special need learners that had been included in schools was sought. Further, information about experience for those teachers who were handling learners in the inclusive classes was also sought. The researcher and his assistant gave out copies of questionnaire to teachers in each school they visited and a total of 400 copies of questionnaire were given out to the teachers. However, only 300 copies of questionnaire were responded to (75% response rate).

4.1.1 Teachers' Gender

As it can be seen in Table 4.1 there were 52% of female teachers and 48% male teachers in inclusive schools. These results indicated that there were more female teachers in inclusive schools as compared to male teachers. The implications of female teachers being more than male teachers in inclusive schools could be that they were the ones with long experience and or they were the ones trained in special need education. It can also be argued that female teachers most of them being mothers naturally have tender feelings of children. Given that learners with special needs happen to require tender handling, female teachers usually empathize with them. The interview the researcher held with the

headteachers confirmed that female teachers handled learners with special needs the same way they could handle their own children and thus they could accept being posted to teach in inclusive schools. See the verbatim reports (Appendix J).

Table 4.1: Teachers gender

Gender	Frequency	Percentage
Male	144	48
Female	156	52
Total	300	100

4.1.2 Teachers' general professional qualification

As shown in Table 4.2, most teachers who were handling inclusive education were trained first in general education and specialized later. The teachers who had certificate qualification were 27%, while those teachers with Diploma qualification were 52.7% and those teachers with Bachelor's degrees qualification were 18.3% and those teachers with Masters' degree qualification were 1.3 %. These results implied that all teachers in primary schools that practiced inclusive education had received general teacher training and were skilled in general teaching methods including some aspects in special need education. In teacher education course there are some aspects on special need education.

The findings also revealed that in primary schools that practice inclusive education majority of teachers (52.7%) had Diploma qualification in special need education which implied that most of these teachers taught in inclusive classes. The interviews the

researcher held with the headteachers of inclusive schools revealed that those schools initially had special units attached to mainstream primary school before the government implemented inclusive education program policy. Thus initially these schools had at least one Diploma teacher trained in Special Needs Education. In addition, the headteachers reported that teachers who went for further training at Diploma level at Kenya Institute of special education had previously trained as general P1 primary teachers and these were the teachers in inclusive schools. The headteachers further reported that teachers who were qualified at Bachelor's degree from Universities had never been teachers before and had been prepared for secondary education and thus they did not prefer to teach in primary schools. See verbatim reports (Appendix J).

Table 4.2 Teachers' general professional qualification

Qualification	Frequency	Percentage
Certificate	83	27.7
Diploma	158	52.7
Degree	55	18.3
Masters and above	4	1.3
Total	300	100

4.1.3 Teachers' professional qualification in special needs education.

The researcher analyzed the data on teacher qualification in special need education and the result indicated that 36.3% and 18.3% of teachers were qualified at Diploma and Degrees levels respectively. About 45.4% of teachers had no training in special need

education as it can be seen in Table 4.3. This study showed that over 50% of teachers who were teaching in inclusive classes were trained in special need training. These results indicate that some teachers handling inclusive classes are yet to be trained in special needs education. It implies that some learners with special needs in education are not given necessary professional support as teachers who teach them are not trained (45.4%). This may defeat the purpose of inclusive education which advocates for provision of services and support including provision of facilities and individualized educational programme. The findings showed that inclusive primary schools were still being manned by teachers who had not specialized training (45.4%).

These findings can be interpreted to imply that the government has not fully committed itself on effective implementation of inclusive education despite the fact that it formulated a policy on special needs education in 2009 which emphasized implementation of inclusive education almost a decade ago.

Table 4.3: Teachers' professional qualification in special needs education

Qualification	Frequency	Percentage
Diploma	109	36.3
Degree	55	18.3
None.(General Certificate)	136	45.4
Total	300	100

4.1.4 Teachers' experience

As it can be seen in Table 4.4, teachers of experience between 1 to 5 were 36% while those with experience of between 6 to 10 years were 27% and those of experience of 11 years and above were 36.7%. These findings suggest that inclusive classes were manned by teachers who had taught for between 6 years and 11 years and over. As seen in figure 4.3 teachers who were staffed in inclusive classes had teaching experience of more than 6 years. It implies that these teachers had been in those schools for some time and had developed interest in learners with special need and or they had been sensitized by other teachers or had gone for training in special need education. This also implied that these teachers used the appropriate teaching methods and provided necessary support and services.

The other implication is that perhaps those teachers with long experience were those without special need training but because of their experience they were staffed in inclusive classes. For those with experience of between 1 to 5 years and were staffed in inclusive classes perhaps were those with training in special need education. Presently teachers training colleges admit fresh students from high school to train in special need education unlike in the past when teachers who went for training in special need education were supposed to have taught regular learners for at least 5 years before they could specialize in special need education. These were perhaps teachers with experience of 5 years and below who were handling inclusive classes as the study showed.

The other implication for teachers with little experience being found in inclusive classes could be attributed to the fact that these teachers might have been previously in the special units before they were transformed to inclusive programmes. These teachers could have been transferred to special units because of remuneration aspects as teachers in special units get some allowances. The interview the researcher held with the headteachers showed that some teachers got interested in special need education because teachers in special schools and units get special allowance for handling learners with special needs. From the interviews held with the headteachers, there were 4 special schools for the mentally retarded learners and non for the learners with learning difficulties in the county.

The headteachers mentioned that this was the more reason there were many learners with mental retardation and learning difficulties in inclusive schools. These were the learners who were initially in special units that were attached to those inclusive schools (regular schools). Further, learners with learning difficulties and mental retardation do not require sophisticated learning equipment such as hearing aids, Braille machine, and speech trainers among others. Thus they would easily be handled by teachers who are experienced and have had some sensitization courses. For inclusion of learners with hearing impairments or visual impairments teachers who handle them must be trained they cannot just depend on experience. These learners require specialized teachers and other assistive devices that cannot be easily obtained hence a few of them were included.

Table 4.4 Teachers' experience

Teacher's experience	Frequency	Percentage
1-5	109	36.3
6-10	81	27
11 and above	110	36.7
Total	300	100

4.1.5 Type of special need learners included in regular classes

As it can be seen in Table 4.5, the categories of learners who were included in regular classes included hearing impaired learners (6.5%), visual impairment (5.5%), learning difficulties (16.3%), emotional and behavioral difficulties (22.8%), mentally challenged (32.6%) and those learners with physical difficulties (16.3%).

The results as shown indicated that the categories of special need learners in most inclusive programmes were mentally challenged learners and emotionally/ behaviorally disordered learners. Learners who were hearing impaired and visually impaired were few in number compared to other categories. The implication here could be that learners with hearing impaired required specialized personnel and equipment. Learners with hearing impairment require teachers who can use sign language to communicate and also such facilities like hearing aids for individuals and group hearing aids for the whole class, audiometers for testing the hearing loss of individual learners and speech training

machines for training language to young hearing impaired learners. Most of these facilities cannot be found in ordinary primary schools because of the cost implications. These facilities can be found in few special schools where most parents prefer to take their children and thus these learners have not been taken to inclusive schools. As for visually impaired learners they require Braille machines for communication beside the specialized teachers who can use those machines. Learners with visual impairments use touch language to communicate which is enabled by the Braille machine.

Other types of special needs which included mentally challenged learners, emotionally disordered and learning difficulties were found to be in large numbers comparatively in inclusive schools. The implication was that these types of special need learners were the majority in the communities and they can be taught with experienced teachers not necessarily specialised as for teachers for the hearing impaired and visually impaired learners. That perhaps was the reason why learners with learning difficulties, mentally challenged, physical difficulties and emotional difficulties were found to be more than other type of special need learners as the result of the study indicated.

Table 4.5 Type of learners with special needs included in regular schools

Category	Frequency	Percentage
Physical disabilities	225	16.3
Learning difficulties	225	16.3
Mentally challenged	450	32.6
Emotionally and behavioral disordered	315	22.8
Hearing impaired	90	6.5
Visually impaired	77	5.5
Total	1382	100

4.2 Teachers' attitudes towards implementation of inclusive education

To achieve the second objective which sought to determine teacher's attitudes towards implementation of inclusive education, the respondents were provided with items on attitudes and as seen in Table 4.6, the responses were as presented. Majority of teachers (21.7%, 47.7%) strongly agreed and agreed respectively that they understood the meaning of inclusive education and (52.7%) and (31%) of teachers strongly agreed and agreed respectively that different learners were included in different classes. On the other hand, (30.3% and 36%) of teachers both strongly agreed that learners in inclusive classes interacted freely and (30.3% and 30%) of them reported that they covered the syllabus despite the presence of learners with special needs in their classes. However, 27% and 28.7% both strongly agreed and agreed that learners with special needs do not lag behind in class work, 20% and 44.7% of teachers strongly agreed and agreed that learners with

special needs were accepted in inclusive classes, 16.3% and 27.3% of them strongly agreed and agreed that all learners were given equal opportunities while 12% and 38.7% of them strongly agreed and disagreed respectively and that 39% and 29.3% strongly agreed and agreed respectively that inclusive education was not a burden to them. In addition, 21% and 25.7% of teachers strongly agreed and agreed that learners with special needs do not struggle painfully in inclusive classes while 59.3% and 19.3% of teachers strongly agreed and agreed that learners with special needs required education and not treatment and that 39% and 27.7% of them strongly agreed and agreed that education to special needs should be provided to them in mainstream classes and not special schools. Further, 60% and 26% of teachers reported that special needs and disabilities was not contagious and 48.3 % and 27.3% of teachers reported that they had time in class for special need learner's and inclusive education was being practiced in Kenya.

On the fact that teachers who teach in inclusive schools being given extra pay, 29.7% and 27.7% of teachers strongly agreed and agreed respectively that they do not get extra pay while 18.3% and 40.7% of teachers strongly agreed and agreed respectively that all learners in inclusive classes participate in games and that inclusive schools build a community in addition to the fact that learners in inclusive schools share learning materials (13.7% and 45.7%, 26 and 49 strongly agreed and agreed respectively). Teachers strongly agreed (23.3%) and agreed (33.3%) that they focus on individual strength of learners and that learners with special needs are not a curse in their families (66.3% and 12.35 strongly agreed and agreed respectively).

Table 4.6 Teachers' attitudes towards implementation of inclusive education

ITEM	SA		A		UN		SDA		DA	
	F	%	F	%	F	%	F	%	F	%
1.Meaning of inclusive education	65	21.7	143	47.7	13	4.3	22	7.3	45	15
2.SNE learners have rights to education	158	52.7	93	31	8	2.7	32	9	9	3
3.Learners interact freely in class	91	30.3	140	46.7	4	1.3	22	7.3	43	14.3
4.SNE learners delays syllabus coverage	91	30.3	140	46.7	9	3	25	8.3	62	20.7
5.Learners do not lag behind	81	27	86	28.7	18	6	31	10.3	84	28
6.Acceptance of inclusion	60	20	134	44.7	45	15	39	13	22	7.3
7.Equal opportunities to learners	49	16.3	82	27.3	17	5.7	36	12	116	38.7
8.SNE learners not a burden	117	39	88	29.3	23	7.7	13	4.3	59	19.3
9.No painful struggle by SNE learners	63	21	77	25.7	34	11.3	57	13	69	23
10.SNE learners belong to mainstream schools and not special schools	117	39	83	27.7	23	7.7	30	10	47	15.7
11.Learners with SNE are not patients	178	59.3	58	19.3	17	5.7	27	9	20	6.7
12.You cannot get SNE and disabilities through contact	180	60	80	26	13	4.3	14	4.7	13	4.3
13.Inclusive education can be practiced	145	48.3	82	27.3	18	6	21	7	34	11.3
14.SNE learners are taught normally and not because teachers get extra pay	89	29.7	83	27.7	18	6	55	8.3	55	8.3
15.All learners participate in games	55	18.3	122	40.7	26	8.7	35	11.7	62	20.7
16.All learners share class materials	78	26	147	49	4	1.3	31	10.3	40	13.3
17.Inclusive community	41	13.7	137	45.7	31	10.3	34	11.3	57	19
18.Focus on strength	70	23.3	100	33.3	23	7.7	42	14	65	21
19.Curse in the family	199	66.3	37	12.3	5	1.7	24	8	35	11.7

KEY: SA- Strongly Agree; A- Agree; UN-Undecided; DA- Disagree; SDA- Strongly Disagree

Table 4.7 Mean analysis of scores of teachers' attitudes towards implementation of inclusive education

	N	MIN	MAX	MEAN	STD DEV
1.Teachers understand the meaning of inclusive education	288	1.00	5.00	3.6389	1.20747
2.Learners with special needs are included in your class	292	1.00	5.00	4.1507	1.27811
3.Learners in your class interact freely and are friendly to those learners with special needs	300	1.00	5.00	3.7833	1.22804
4.Learners with special needs who are included in your class do not have effect on syllabus coverage	295	1.00	5.00	3.6033	1.33834
5.The government, community and parents accept the concept of inclusive education	300	1.00	5.00	3.5133	1.25768
6.Learners with special needs always lag behind the rest in academic achievement	300	1.00	5.00	3.3400	1.39675
7.All learners in an inclusive school are given equal opportunities in all school activities	300	1.00	5.00	2.9733	1.34113
8.Inclusive education is a burden to the school and other regular learners	300	1.00	5.00	3.79	1.26672
9.Learners with special needs struggle painfully to learn in inclusive classes	300	1.00	5.00	3.1333	1.44540
10.Learners with special needs do not belong to special schools and special teachers	300	1.00	5.00	3.7766	1.38192
11.Learners with special needs are not sick and they should not be taken to hospitals for treatment	300	1.00	5.00	4.02	1.30943
12.Special needs and disabilities are contagious to other learners	300	1.00	5.00	4.2433	1.06374
13.Inclusive education is simply practical in Kenya	300	1.00	5.00	3.8066	1.27747
14.Teachers in inclusive schools do not mind payment of special allowance for them to handle special needs learners	300	1.00	5.00	3.32	1.51169
15.Teachers ensure that all learners participate in games at their pace	300	1.00	5.00	3.3333	1.30687
16.Teachers teach all learners in inclusive classes to share teaching and learning materials	300	1.00	5.00	3.6700	1.27797
17.Classroom activities are assigned appropriately and they build inclusive community	300	1.00	5.00	3.3133	1.24646
18.Teachers focus on the strength of learners and not the special needs	300	1.00	5.00	3.3033	1.39923
19.Learners with special needs are not a curse	300	1.00	5.00	4.1733	1.36893
Total	300			3.7	

As it can be seen from these findings as presented in Table 4.6, the teachers had positive attitudes (attitude index 3.7) towards inclusive education while the fewer teachers had a negative attitude towards inclusive education. This difference of opinion among teachers could have been due to the fact that the present study was carried out in schools that were practicing inclusive education and that some teachers were trained in special need education while smaller proportion were not. Different teachers in inclusive schools as presented in Table 4.5 had varying responses on most attitude items. This implied that some teachers were aware of what was happening and others were not. This could be stemming from the fact that other teachers were teaching in inclusive classes because they were posted there and had no idea of what were the programme and had no training in special need education or others had been sensitized on inclusive education and or others were teaching in inclusive classes because of long experience in teaching in those schools.

These findings interpreted in terms of the theoretical framework, learning is a cognitive process and takes place in a social context where teachers and the community interact. It is in this kind of context that learners with special needs can benefit maximally academically. Studies done in Malaysia indicated that learners with special needs that were taught using differentiated curriculum, assistive aids, teaching strategies based in individual needs in the correct social context (inclusive classroom) benefitted academically than those in special schools (Jelas, Mustapha & Ali, 2006). Teachers who hold positive attitudes towards learners with special needs provide opportunities for learners to interact with those without special needs and ensure that support and motivation are given to all learners (Hunt & Goetz, 1997).

According to social learning theory, people learn from one another through observation, imitation and modeling hence the positive attitudes held by teachers. The teachers held positive attitudes perhaps because quite a number of them had undergone training (18.3% trained at degree and 36.3% trained at diploma level in special need training as presented in figure 4.2). In addition, the long experience of over 6 years' experience (63.7% of teachers) that some teachers had influenced them to have positive attitudes. During the interview with the headteachers, the headteachers noted that most teachers were of the view that inclusive education was important and the way forward for the education system. They reported that inclusive education made learners without special needs in education appreciate their counterparts with special needs. However, they observed that for these programmes to succeed teachers have to be in- serviced and adequate learning materials and other specialized equipment must be provided. See verbatim reports **(Appendix x)**.

Other teachers as reported by the headteachers during the interview did not like the idea of inclusive education. They were of the view that special need learners belong to special schools and not regular school. They complained of not completing the syllabus as they concentrate on special need learners or they concentrate on regular learners and waste the time for either of the learners. This led to low school performance. This made some teachers to have negative attitude towards inclusive education and some sought transfers to other schools. However, about two thirds (200) teachers who participated in the study as reported by the headteachers had positive attitudes and were willing to assist learners with special needs except that they had no training.

These findings were in agreement with the findings of Jelas *et al* (2006) which found that 66% of respondents reported that learners with special needs should be educated in mainstream schools. Also KISE (2007), observed that the attitudes of teachers had profound effect on inclusive education implementation. However, the finding of the current study differs with the finding of Ndonye (2011) which revealed that only 35% of teachers in Nairobi would work with learners with special needs.

The teachers who held negative attitudes towards inclusive education could be due to perhaps lack of training in special need education or had just been posted to those schools and had not been sensitized on inclusive education programme. The other headteachers who were interviewed reported that they had no problem with special need learners in their schools except that those teachers who had not received necessary training should be trained appropriately, classes equipped and schools staffed adequately for the overcrowded classes, inclusive education would be a success story.

4.2.1 Teachers' Gender and Teachers' attitudes

According to Table 4.8 presented, (96) 61% of female teachers and (34) 23.6 % of male teachers compared to 52% (156) of female teachers and 48% (144) of male teachers who participated in the study had positive attitudes towards inclusive education implementation in primary schools in Kakamega County. The cited finding indicates that female teachers had more positive attitudes towards inclusive education implementation than male teachers most of whom had ambivalent attitudes.

As presented in Table 4.7 overall teachers had positive attitudes towards inclusive education implementation with a mean index of 3.7. The hypothesis (HO1) that teachers' gender had no significant influence on teachers' attitudes towards implementation of inclusive education was tested using chi-square for independence. In Table 4.1, there were 52% of female teachers against 48% male teachers in inclusive schools. This can be interpreted to mean that more female teachers were allocated inclusive classes than male teachers. The reason perhaps could be due to the willingness of female teachers to handle those classes or female teachers had the experience and qualification.

The null hypothesis that was tested was rejected (Chi-square =53.15, df=2, c=0.388), because $p < 0.05$. Since the contingency coefficient was 0.388, it implied that gender could account for about 15.1% of variation of teachers attitudes towards implementation of inclusive education. Thus teachers gender had an influence on teachers attitude with female teachers having higher positive attitude (61%) compared to male teachers (23.6%) towards inclusive education implementation. See Table 4.8.

According to the literature reviewed, female teachers were able to handle learners with special needs effectively as compared to male teachers (Mwaimba, 2014). A study that was carried out in Georgia America by Tamar (2008) reported that teachers' gender had an influence on inclusive education implementation. Female teachers were found to have positive attitudes towards learners with special needs in inclusive classes as opposed to male teachers. Female teachers have tender care for children because they are also mothers. As for males, at time they are so preoccupied by other issues and tend to leave

the responsibility of children to their wives. This could also play a role when it comes to handling learners with special needs thus their attitudes.

However, findings from other studies in relation to gender have been consistent. Avramids (2000), Forlin, Loreman, Sharma and Earle (2009), Hodge and Jasnma (2000) revealed that pre-service female teachers displayed a more positive attitudes towards inclusive education than males. On the other hand, other studies found there was no gender difference in attitudes in regard to inclusive education (Al-Zyodi, 2006; Carroll *et al*, 2003; Miake *et al*, 1996; Van Reusen, Shohoh & Barker, 2000). Also studies done by Kumar and Dukmar (2013) in India and United Arab Emirates found that gender had no significant influence on inclusive education implementation. The difference in the findings could be due to the differences in the study area, differences in regional cultures like India, United Arab Emirates and Kenya. In addition, the level of training of gender, experience and the type of special need learners that were included.

Table 4.8: Teachers' gender and Teachers' attitudes

Teachers attitudes				
Gender	Negative	Ambivalent	Positive	Total
Male	40 (27.8%)	70(48.6%)	34 (23.6)	144(100)
Female	20(12.8%)	40(25.7%)	96(61.5%)	156(100%)
Total	60 (40.6%)	110(74.3%)	130(85.1%)	300(200%)

4.2.2 Teachers' experience and Teachers' Attitudes

Teaching experience as shown by the present study influenced the attitudes of teachers towards inclusive education implementation. Teachers with teaching experience of over 11 years were more positive (134) compared to teachers with teaching experience of between 6 to 10 years (39) and those teachers with experience of 1 to 5 years (86) as seen in Table 4.9. Teachers of experience between 1 and 5 years had slightly higher positive attitudes as compared to teachers with experience of 6 to 10 years. These results implied that some teachers of 5 years and below years were more enthusiastic to teach learners with special needs than those with 6 to 10 years' experience or and these teachers with less experience had just left college and were excited about special need learners and therefore expressed more opportunism compared to those teachers with 6 years' experience. These findings compare well with the studies that were conducted by Forlin (2009) though other studies showed that the experience of teachers had no significant difference towards teacher's attitudes towards inclusive education (Avramidis, 2000 & Carroll, 2003).

As for those teachers with 6 years to 10 experiences, they might have got bored and tired and were not willing to continue teaching special need learners in inclusive classes and thus their low morale. Teachers with over 11 years teaching experience perhaps had positive attitude because they had taken a stand and settled in their station and made a decision to be fully committed to learners with special needs. This is common trend among teachers when they have settled in a particular school they usually do not want to move from station to station. They usually become cooperative towards the success of the

school in whatever programme the school might be undertaking including inclusive education programme.

The hypothesis (H_02), that teaching experience had no significant influence on the teachers attitudes towards inclusive education implementation was tested using the chi-square for independence (chi-square=52.06, df=4 and $c=0.385$). Since p-value was less than (0.05), the null hypothesis was rejected. Teaching experience contribute about 14.8% of the variation in attitudes towards implementation of inclusive education. These results indicated that teachers' teaching experience had significant influence on teachers' attitudes towards inclusive education implementation. Also as presented in table 4.4, those teachers who were teaching inclusive classes, 36% of them had a minimum experience of at least 6 years.

As the results of the hypothesis testing showed, teaching experience is very important for inclusive education implementation to be effective. Those teachers who have been in the field of teaching both in regular schools and in inclusive schools for a long time have both the knowledge and hold positive attitudes as a result of their exposure to all aspects of teaching and the interactions with the learners. Teaching learners with special needs in an inclusive class thus do not present difficulties that usually teachers with less experience encounter in inclusive classes. Thus the present study showed that teaching experience of teachers impacted positively on inclusive education implementation. Alghazo and Gaad (2004) in their study in Dubai found that teachers with 10 years' experience and more had positive attitudes towards inclusive education implementation unlike those teachers with less experience. Mutisya (2010) in his study in Machakos Kenya found that teachers with long experience were more tolerant and confident

handling learners with special needs in an inclusive class as compared with those teachers with less experience.

Table 4.9 Teachers' Experience and Teachers' Attitudes

Teachers Experience	Teachers attitudes			Total
	Negative	Ambivalent	Positive	
1 to 5 years	3	3	84(93%)	92
6 to 10 years	2	8	39(79%)	49
11 + years	25	0	134(84%)	159
Total	30	11	259	300

4.2.3 Teachers' professional Qualification and Attitudes

As presented in Table 4.10, 89.7% (61) of teachers with first Degree qualification in special need education had higher positive attitudes compared to those 79 teachers (85.7%) with Diploma qualification and those 31 teachers (22.5%) without training in special need education towards inclusive education implementation. This finding suggested that among the teachers who were teaching in inclusive schools, those teachers with Degree qualification were more enthusiastic and interested as compared to those teachers with Diploma qualification in special need education and without special need qualification. Apparently as shown by the present study about teachers' qualification influence on their attitudes towards inclusive education, teachers who are qualified adequately handle learners with special needs in inclusive classes better compared to those teachers who are not qualified adequately. The findings implied that teachers who

were qualified at Degree level could handle any category of special need learners well compared to those teachers who were qualified at diploma level. These findings suggest that those teachers qualified at degree level have more knowledge, skills and capacity to handle learners with special needs in an inclusive class. These teachers are more resilient, patience and social to interact freely with all types of learners including those learners with special needs and thus they readily accept and work towards effective inclusive education implementation.

The null hypothesis (H_03) that teachers qualification had no significant influence on teachers' attitudes was tested using a chi-square for independence was rejected (Chi-square= 181.25, $df=4$, $c=0.614$ and $p<0.05$). The teacher's qualification can account for about 37.7% of variation in attitudes towards inclusive education implementation. This result indicated that teachers' qualification had significant influence on teachers' attitudes towards inclusive education implementation. These findings suggested that teachers who had Degree training in special needs education perhaps were adequately prepared to teach learners with special needs compared to their counterparts with Diploma qualification as portrayed by their attitudes towards inclusive education implementation. Further these results could imply that degree training was tailored to meet the needs of special need learners in inclusive classes as compared to other cadres of teachers.

As seen in Table 4.2 there were more teachers (52.7%) with Diploma qualification (special need training) in inclusive schools compared to both teachers with degree qualification and general training including those with master's qualification.

Teachers trained at Diploma level in special needs education were usually posted in primary schools while those teachers trained at Degree level were posted to secondary schools (County Directors' statistics, 2013). This perhaps the reason why there were more teachers with Diploma qualification in inclusive primary schools. Mwaimba (2014) reported that teacher's professional qualification had an influence on inclusive education implementation. Brownell (2007) contended in his study that teachers' qualification had an impact on inclusive education implementation. United States Department of Education (2008) underscored the fact that professional qualification had a direct relationship to academic achievement of learners in an inclusive class.

Carroll (2003) who studied 220 pre-service teachers' attitudes towards inclusive education in Australia found that prior to training teachers were not comfortable teaching in inclusive schools but after training in special need education, they changed their attitudes towards learners with special needs who were included in regular classes. Other researchers also concluded that training in special need education had a positive impact on pre-service teachers' attitudes (Avramids *et al*, 2010; Campbell, Gilmore & Cuskelly, 2003; Forlin, 2006; Hasting & Oakford, 2003). In the current study, the headteachers who were interviewed on the need for teachers to undergo special need education training also stated that most teachers in their schools who were not trained were not comfortable handling special need learners who were included in the classes. They reported that there was need for all teachers in inclusive schools to be trained in special need education so as to be able to handle learners with special need confidently.

Table 4.10 Teachers' qualification (SNE) and Teachers' attitudes

Teacher Qualification	Teachers Attitudes			Total
	Negative	Ambivalent	Positive	
None. (General training)	105(75%)	4(2.9%)	31(22.1%)	140(100%)
Diploma	1(1%)	12(13.0%)	79(85.5%)	92(100%)
Degree	0	7(10.3%)	61(89.7%)	68(10%)
Total	106	23	171	300

4.3 Teachers' knowledge of Teaching strategies used in inclusive classes towards implementation of inclusive education

To achieve this third objective, information was sought from teachers about their attitudes towards knowledge of and what strategies they use in teaching inclusive classes. As can be seen in Table 4.11, 20.3 % and 42% of teachers both strongly agreed and agreed that they are trained in various teaching strategies while 20.7% and 14% of them strongly disagreed and disagreed that they were trained and that 16% and 24% of teachers strongly agreed and agreed that they used individualized educational programme. On technical support from Educational Assessment centers, 13% and 30.3% of teachers strongly agreed and agreed that they don't get technical support. According to the present study over 50% of teachers were trained to handle inclusive classes (36.3% trained at Diploma and 18.3% trained at Degree level in special need education). The present researcher assumed that teachers were taught various teaching strategies in inclusive classes.

The present study showed that whereas 54.6% of teachers who were teaching in inclusive schools were trained at both Diploma and Degree level, 45.4% of teachers were not trained in special need education including those with masters training. Nonetheless all these teachers were teaching in inclusive classes either because they had long experience teaching in those schools or they had been sensitized on special need education or by virtue of them being in inclusive schools they were staffed in those classes.

Some of those teachers who were not trained in special need education might not have been using appropriate teaching strategies (20.7% and 14% of teachers both strongly disagreed and disagreed that they were using different teaching strategies) as seen in table 4.11. Other teachers received in service courses on how to handle learners with special needs in inclusive classes (12.7% and 20% of teachers both strongly agreed and agreed respectively that they got in-service training) as presented in table 4.11.

The present showed that not all teachers had been trained to use different teaching strategies (20.3% and 42% of teachers strongly agreed and agreed respectively that they had been trained to use different teaching strategies). From this finding, the study suggested that among the teaching strategies that were used by teachers included the use of Individualized Educational programme, team teaching, Peer tutoring among others.

The use of individualized education programme is a must if special education service has to be said is being offered to learners with special need in an inclusive class. Individualized educational programme is the hallmark of special need education. The present study showed that less than 50% of teachers used an individualized educational programme. The results implied that either some teachers do not know how to make

I.E.Ps or they handle crowded classrooms and teachers were overwhelmed by huge number of learners in their classes and were unable to draw up individual plans.

Pagana *et al* (2004) contended that for teachers to handle inclusive class using different teaching styles and approaches he or she need to undergo some training in special need education and also they keep on being in-serviced from time to time. However, as the present study showed, teachers who were handling inclusive classes were (45.4%) and not trained in various teaching strategies. Thus somewhat inclusive education was being handled by teachers who either had not been trained and or had been in-service on how to handle learners with special needs in inclusive classes.

Table 4.11 Teaching strategies used in inclusive classes

ITEM	SA		A		UN		SDA		DA	
	F	%	F	%	F	%	F	%	F	%
1.Different strategies	61	20.3	126	42	9	3	62	20.7	42	14
2.IEP	49	16.3	72	24	24	8	113	37	42	14
3.Collaboration	38	12.7	155	51.7	30	10	30	10	53	17.7
4.Peer tutoring	41	13.7	148	49.3	28	9.3	30	10	53	17.7
5.Teaching whole class	73	24.3	153	57	27	9	20	6.7	27	9
6.Team teaching	72	24	147	49	24	8	18	6	39	13
7.Confident teaching	94	31.3	126	42	5	1.7	27	9	48	16
8.Teach average learners	95	31.7	125	41.7	26	8.7	12	4	42	14
9.Refresher courses	38	12.7	60	20	22	7.3	124	41.3	56	18.7
10.Technical support	39	13	91	30.3	25	8.3	67	22.3	78	26
11.Different teaching strategies for different types of special needs										
• Hearing impaired	38	12.7	127	42.3	35	11.7	62	20.7	38	12.7
• Visually impaired	43	14.3	117	39	31	10.3	67	22.3	42	14
• Learning difficulty	30	10	117	39	39	13	58	19.3	56	18.7
• Physically disabled	30	10	135	45	25	8.3	46	15.3	64	21.3
• Intellectual challenges	21	7	129	43	33	11	57	19	60	20
• Autistic learners	16	5.3	129	43	47	15.7	52	17.3	56	18.7
12.Setting goals	59	19.7	96	32	56	18.7	33	11	56	18.7
13.Teachers or more in class	36	12	91	30.3	29	9.7	85	28.3	59	19.7
14..Plan, teach, evaluate together	46	15.3	56	18.7	43	14.3	71	23.7	84	28
15.Modifying goals for individual	56	18.7	95	31.7	30	10	59	19.7	60	20
16.Positive image	70	23.3	145	48.3	12	4	34	11.3	39	13
Interpersonal skills	52	17.3	148	49.3	14	4.7	37	12.3	49	16.3
17.All learners participation	73	24.3	154	51.3	13	4.3	16	5.3	44	14.7

KEY: SA- Strongly Agree; A- Agree; UN-Undecided; DA- Disagree; SDA- Strongly Disagree

During the interview headteachers reported that some teachers were not using appropriate inclusive teaching methods and yet it was assumed that some of them had undergone training and taught on different teaching strategies used in inclusive classes. According to the headteachers these teachers had forgotten what they trained for in colleges as some of them trained theoretically and needed refresher courses for them to be able to use current skills when handling learners with special needs. Further, Headteachers reported that inclusive education being a new trend in education in Kenya, it was important that teachers undergo in-service courses to be appraised on the new teaching strategies so that they be able to use them in inclusive classes. For those teachers who reported that they got training from time to time on teaching styles, during the interview the headteachers mentioned their individual schools organized such trainings and or the local education officers. See verbatim reports (Appendix J).

Perhaps it was in these schools where there was a semblance of effective inclusive education implementation (12.7% and 20% both strongly agreed and agreed respectively while those who strongly disagreed and disagreed 41.3% and 18.7% respectively). A case in point was two schools in Mumias Sub-County and Butere Sub-County. In these schools headteachers whole heartedly supported inclusive education programmes in their schools and teachers were enthusiastic about the programme. These schools had large enrollment of students and were performing well in national exams as well as effectively implementing inclusive education programmes.

These findings were similar to Mwaura's (2012) findings in South Sudan which revealed that teachers who were not trained in various teaching strategies and were not confidently handling learners with special needs in inclusive classes thus non effective implementation of inclusive education. Okuta (2011) also found that in Homabay county teachers who were handling inclusive classes were unprepared to use different teaching methods in inclusive classes.

Different strategies that were used in inclusive classes included individualized educational programmes (IEP), collaborative/cooperative teaching, peer tutoring, whole class teaching, and team teaching among others. Teachers who reported that they used individualized educational programme (IEP) were (16.3% strongly agreed and 24% agreed while 37% strongly disagreed and 14% disagreed that they used individualized educational programme. This could imply that some teachers were trained to use the IEP and others were not. Therefore the variations in the use of IEP. Non use of IEP could also be due to the fact that classes were overcrowded thus heavy workload on the part of the teachers or because teachers had different qualifications obtained in different colleges and thus some could not confidently use the individualized educational programme. Roberts and Martha (1995) suggested that both trained and not trained teachers in the use of individualized educational programme in inclusive were not fully enthusiastic to serve learners with special needs in mainstream classes because of heavy workload demands by the ministry of education officials.

Other strategies used as reported by teachers included collaborative/cooperative (strongly agreed (12.7%) and agreed (51.7%); peer tutoring (strongly agreed (13.7%), agreed

(49.3%); whole class teaching (strongly agreed (24.3%) and agreed (57%); and team teaching (strongly agreed (24%) and agreed (49%). From this information about different teaching strategies, teachers were aware of them and they could be using them while teaching or they were knowledgeable about them and not practically using them. These could be alluded to such factors as large enrollment due to free primary education program or overcrowded curriculum.

Those teachers who were trained in teaching strategies and confident teaching in inclusive schools were (strongly agreed (31.3%) and agreed (42%). However, those teachers who reported that they were not confident teaching in inclusive schools despite their level of training (strongly disagreed (9%) and those who disagreed (16%). During the interview with the headteachers, it was reported that as much as some teachers were trained in special needs education generally, the demands of the curriculum, coverage of the syllabus, understaffing in schools and poor remuneration caused teachers not to use their knowledge of special need education and resorted to the use of traditional methods of teaching. However they maintained that they have positive attitudes towards learners with special needs and they would prefer to teach them only that they were constrained by very many challenges.

Teachers used different strategies to teach different categories of special needs in inclusive schools. For instance, 12.7% and 42.3% of teachers both strongly agreed and agreed respectively that they used different strategies to teach hearing impaired learners; 14.3 % and 39% of them strongly agreed and agreed respectively that they used different teaching strategies to teach learners with visual impairments; 10% and 39% of them

both strongly agreed and agreed respectively that they used different teaching strategies to teach learners with specific learning difficulties; 10 % and 45% both strongly and agreed respectively that they handled learners with physical disabilities differently; 7 % and 43% of them strongly and agreed respectively that they used different teaching strategies to teach learners who were for intellectually challenged and for autism 5.3% and 43% of teachers both strongly and agreed that they used different strategies. Teachers who disagreed that they do not use different strategies for hearing impaired were (strongly disagreed 20% and disagreed 12.7%); visual impairment (strongly disagreed 22.3% and disagreed 14%); specific learning difficulties (strongly disagreed 19.3% and 18.7%); physical disabilities (strongly disagreed 15.3% and disagreed 21.3%); intellectually challenged (strongly disagreed 19% and 20% disagreed) and autism (strongly disagreed 17.3% and disagreed 18.7%).

The majority of teachers who did not use different strategies in handling inclusive classes might have not trained, were not committed, were poorly trained and at different levels (certificate, diploma, undergraduate and postgraduate) and handled large sizes of classes. Other teacher competencies included teachers setting goals for their learners to achieve academically, planning together with the general teachers, modifying goals, facilitation of positive image towards learners with special needs, teachers' interpersonal skills and encouraging classroom participation by all learners.

As seen in Table 4.11, 19.7% and 32% of teachers strongly agreed and agreed respectively that they set goals for their learners to achieve, while 29% of teachers disagreed; 15.3 % of teachers strongly agreed and 18.7% agreed that they plan, teach and

evaluate together while 28.7% and 28 % of teachers strongly disagreed and disagreed that they plan and teach together. On the hand 23% and 48.3% of teachers strongly agreed and agreed respectively that they facilitate positive image while 17.3% and 49.3% of teachers strongly and agreed that they had interpersonal skills and 24.3% and 51.3% strongly agreed and agreed that they encourage participation by all learners in classroom activities. Majority of these skills are desirable for effective inclusive education implementation except the teachers setting goals for their learners. Teachers could have demonstrated the knowledge of these skills and perhaps they did not use them in the really teaching of inclusive classes. This fact also was reported by headteachers during the interview with the present researcher. The headteachers noted that some teachers demonstrated a lot of information about special need education but were reluctant using the same in real classroom teaching.

According to this study, mentally challenged learners and those learners with emotional difficulties were the majority of learners who were included (each type 25.6%). Walton et al (2009) noted that the use of diversified instructional methods was recommended in an inclusive setting depending on the category of learners. For instance, those learners who do not know how to read, materials should be read to them, those who are visually impaired should be provided with Braille machines and those who are hearing impaired should be communicated with using sign language. Kiaritha (2011) suggested that teachers should face and address directly and not the interpreter when speaking to hearing impaired learners. The non use of different strategies when handling learners with special needs could be contributing to non effective implementation of inclusive education. The mean score for this scale was 3.2 as presented in Table 4.12.

Some teachers used the teaching strategies that influenced inclusive education implementation while others did not. Perhaps those teachers who used effective teaching strategies had undergone training in special need education (36.3% of teachers had diploma training in special need education and 18.3% of teachers had bachelors degree training in special need education). Those teachers who had not received special need education training and were handling inclusive classes were 45.4%. These were the teachers whose positive attitudes towards inclusive education was low (31) as shown in table 4.10. Thus they seemed they were the teachers who did not handle learners with special needs in inclusive classes effectively and or used their long experience to handle learners with special needs in classes.

In the conceptual framework, it is argued that effective inclusive education implementation depends on effective teaching strategies that are used by teachers who are trained in inclusive education practices. Teachers who are trained adequately ensure that the teaching styles are adapted for effective inclusive education implementation.

Table 4.12 Mean analysis of teaching strategies used in inclusive classes

	N	MIN	MAX	MEAN	STD DEV
1.Teachers are trained in various teaching strategies in inclusive education	300	1.00	5.00	3.2733	1.46027
2.Teachers in inclusive schools use	300	1.00	5.00	2.6733	1.35203
3.Individualized Educational Programme	300	1.00	5.00	3.4167	1.18366
4.Collaborative/ Cooperative teaching	300	1.00	5.00	3.3900	1.21221
5.Peer tutoring	300	1.00	5.00	3.7733	1.11629
6.Teachers teach whole inclusive class	300	1.00	5.00	3.7200	1.14278
7.Team approach/ problem solving	300	1.00	5.00	3.7067	1.30370
8.With your training in special needs / general teaching, you are confident teaching an inclusive class	300	1.00	5.00	3.8300	1.13963
9.Teachers teach the average learners in an inclusive classroom	300	1.00	5.00	2.4400	1.49684
10.Teachers in inclusive schools undergo training from time to time to learn new strategies of handling learners with special needs	300	1.00	5.00	2.8567	1.40095
11.Teachers in inclusive schools get technical support from special educators stationed at the district headquarters	300	1.00	5.00	3.1367	1.36781
12.Teachers use different teaching strategies for hearing impairment	300	1.00	5.00	3.0900	1.41252
13.Teachers use different teaching strategies for visual impairment	300	1.00	5.00	3.0167	1.32498
14.Teachers use different teaching strategies for specific learning difficulties	300	1.00	5.00	3.1300	1.29047
15.Teachers use different teaching strategies for physical disabilities	300	1.00	5.00	2.9900	1.29441
16.Teachers use different teaching strategies for mental disabilities	300	1.00	5.00	3.3067	1.28249
17.Teachers have predetermined standards for their learners in inclusive education	300	1.00	5.00	2.7800	1.43939
18.In inclusive classes there are more than one teacher assisting individual learners with their individual education needs	300	1.00	5.00	2.7400	1.40201
19.Teachers in inclusive classes plan	300	1.00	5.00		

together, teach together and evaluate results together					
20. Teachers modify learning goals for each individual learners and use diversified instructional methods	300	1.00	5.00	3.0933	1.43463
21. Teachers facilitate positive image among all learners in their inclusive classes	300	1.00	5.00	3.5933	1.28587
22. Teachers demonstrate strong interpersonal skills that are considerate of all learners in their classes	300	1.00	5.00	3.4300	1.28995
23. Teachers encourage and facilitate active participation by all learners in classroom activities	300	1.00	5.00	3.7467	1.13731
Mean Score					3.1

4.3.1 Teachers' Experience and Teaching Strategies

As presented in Table 4.13, 91.8% of teachers with teaching experience of between 6 to 10 years had a higher positive attitudes towards teaching strategies as compared to 76% of teachers who had over 11 years teaching experience and those teachers who had experience of between 1 to 5 years (90.2%). As these findings suggest, teachers who had taught for more than 6 years seemed to utilize their experience well when teaching perhaps with a hope that they would get promotion or the mere desire to serve learners with special need education. This however was contrasted by those teachers with more than 11 years as the study showed. Perhaps this finding could be attributed to low morale among teachers or due to the fact that future prospects for the teachers seemed to be diminishing. However when the chi-square was used to test the null hypothesis (H_0) of teaching experience having no significant influence on attitudes towards teaching strategies, it was rejected (chi-square=15.89, df=4, c=0.226, $p < 0.05$). Given the

contingency coefficient of 0.226, it implied that 5.1% of the variation in teaching strategies in inclusive education implementation can be attributed to teaching experience thus it had an influence on implementation of inclusive education overall.

It can be argued that in teaching profession, one utilizes the experience gained in the first 5 years well up to around 10 years but start going down thereafter as the present showed. Those teachers who had taught learners with special needs for some time were aware of which teaching strategies to use in inclusive classes compared to those with little experience (91.8% of them had experience of over 6 years). Mambo (2011) findings indicated that teachers experience and exposure to learners with special needs of varying severity increased their capacity to handle inclusive classes.

Table 4.13 Teachers' Experience and Teaching Strategies

Teachers Attitudes				
Teacher Qualification	Negative	Ambivalent	Positive	Total
1 to 5 years	9(98%)	0	83(90.2%)	92
6 to 10 year	2(4.2%)	2(4.2%)	45(91.8%)	49
11 and above	22(14.3%)	15(9.7%)	117 (76%)	154
Total	33	17	245	295

4.3.2 Teachers' professional Qualification and Teaching Strategies

As seen in Table 4.14, 109 teachers had diploma training in special need education, 55 teachers had degree training in special education and 136 teachers had general teacher training including those teachers with master's degree. Among those teachers with diploma training in special need education 80 (73.4%) of them had positive attitudes towards teaching strategies while 41(74.5%) teachers who had degree qualification in special need education had positive attitudes towards teaching strategies. The implication of these findings was that qualification of teachers in special need education had influence on teaching strategies. Teachers who were trained were able to use teaching strategies that enhanced inclusive education implementation. as presented in table 4.11, 20.3% and 42% of teachers were trained to use different teaching strategies in inclusive education.

The null hypothesis(HO5) that teachers' qualification has significant influence on teaching strategies in inclusive education implementation was tested using a chi-square for independence and rejected (Chi-square=80.41, df=4, c=0.46, $p < 0.05$). . These results indicate that about 21.1% of changes in teaching strategies in inclusive education implementation can be due to teachers' qualification. From these findings teachers' qualification was instrumental in effective teaching methods as it is in other professions where competencies are gained as a result of training.

Table 4.14 Teachers' professional Qualification and Teaching Strategies

Teacher Qualification	Teachers strategies			Total
	Negative	Ambivalent	Positive	
Diploma	9	20	80(73.4%)	109
Degree	0	14	41(74.5%)	55
General Trasing	50	50	36(26.5%)	136
Total	59	84	157	300

4.3.3 Teachers' Gender and Teaching Strategies

According to Table 4.15, 101(70%) male teachers and 111(71%) female teachers had positive attitudes towards teaching strategies. These results implied that gender had no influence on teaching strategies. Both male teachers and female teachers were trained in various teaching strategies appropriate for inclusive education implementation. Teaching is both male and female profession and any professional imparts same skills and ethics to the trainees irrespective of the gender and this what the study showed.

The null hypothesis (H_06) that gender has no significant influence on teachers teaching strategies in inclusive education implementation was tested using chi-square for independence (Chi-square =0.424, df=2, c=0.038, $p >0.05$), since the p-value was greater than 0.05, the null hypothesis was not rejected. This result indicated that gender of teachers had no significant influence on teaching strategies towards inclusive education implementation in primary schools.

According to the literature reviewed, teachers in primary schools were to be provided with pre-service training to enable them have positive orientation towards persons with special needs, knowledge and skills necessary to handle all learners in inclusive classes (UNESCO, 1994). These teachers were required to teach all learners and assess those with special needs, adapt the curriculum content, utilize assistive aids, plan individualized educational programme to suit a large range of abilities among other strategies.

Table 4.15 Teachers' Gender and Teaching Strategies

Teachers Strategies				
Gender	Negative	Ambivalent	Positive	Total
Male	32	9	106(70%)	144
Female	33	9	111(71%)	156
Total	65	18	271	300

4.4 Teachers' knowledge of curriculum and examinations adaptation towards implementation of inclusive education

To achieve this fourth objective, information was sought from teachers about their attitudes towards knowledge and use of adapted curriculum and examinations in inclusive classes. Different teachers reported differently how they had adapted the curriculum and examinations to suit learners with special needs in an inclusive setting as seen in Table 4.16. For instance, 25.3% and 22.7% of teachers strongly agreed and agreed respectively

that the curriculum that was being offered to special need learners in inclusive schools needed to be adapted while 15.7% and 17.7% strongly agreed and disagreed that there was no need for the curriculum to be adapted. On the question of whether the curriculum had been adapted well, 32.7% of teachers strongly disagreed while 29.3% disagreed and only 12% strongly agreed. Teachers who strongly agreed and agreed that teachers had been trained to adapt curriculum were 17% and 22.7% respectively while those who strongly disagreed and disagreed were 33.3% and 18.7% respectively.

The teachers who disagreed might have been teaching in inclusive schools that catered for learners with physical disabilities where regular curriculum was being offered while schools that were catering for visually impaired, intellectually challenged and hearing impaired teachers there agreed that adaptation had been undertaken. Learners with physical disabilities only needed adapted environment and provision of assistive aids. According to the Republic of Kenya (2008), the curriculum for hearing impaired and visually impaired had been restructured to suit the needs of these learners. Perhaps that was what was represented by 12% and 14.7% of teachers who strongly agreed and agreed respectively that curriculum had been adapted. In countries like US America and Asian countries, their curriculum had been adapted to suit the needs of learners with disabilities (Falvey *et al*, 2004).

Table 4.16 Curriculum and Examinations adaptation

ITEM	SA		A		UN		SDA		DA	
	F	%	F	%	F	%	F	%	F	%
1.Adapted curriculum exam vital	76	25.3	68	22.7	58	18.7	47	15.7	53	17.7
2.Curriculum adapted well	36	12	44	14.7	34	11.3	98	32.7	88	29.3
3.Teachers trained to adapt	51	17	68	22.7	25	8.3	100	33.3	56	18.7
4.Adapted English	65	21.7	92	30.7	14	4.7	85	28.3	44	14.7
5.Adapted Math	53	17.3	104	34.7	19	6.3	81	27	44	14.7
6.Adapted science	48	16	100	33.3	10	3.3	98	32.7	44	14.7
7.Adapted social studies	36	12	99	33	22	7.3	99	33	14	14.7
8.Adapted social studies	50	16.7	75	25	31	10.3	95	31.7	49	16.3
9.Adapted Kiswahili	40	13.3	86	28.7	43	14.3	87	29	44	14.7
10.Design of examinations	29	9.7	52	17.3	34	11.3	85	28.3	100	33.3
11.Competition a barrier	86	28.7	70	23.3	28	9.3	68	22.7	48	16
12.Monitoring system	59	19.7	72	24	30	10	93	31	46	15.3
13.Assessment information	38	12.7	86	28.7	40	13.3	74	24.7	62	20.7
14.Appropriate assessment procedures	43	14.3	92	30.7	35	11.7	53	17.7	77	25.7
15.Adequate time to do exams	20	6.7	120	40	31	10.3	56	18.7	73	24.3
16.Award of certificate on other abilities	28	9.3	56	18.7	47	15.7	56	18.7	113	37.7
17.Criteria used to promote learners										
• Test scores	87	29	95	31.7	42	14	31	10.3	45	15
• Unique talents	25	8.3	87	29	31	10.3	78	26	79	26.3
• Co-curricular activities	43	14.3	73	24.3	39	13	64	21.3	81	27
• Social skills	33	11	59	19.7	68	22.7	71	22.7	69	23

KEY: SA- Strongly Agree; A- Agree; UN-Undecided; DA- Disagree; SDA- Strongly Disagree

As indicated in Table 4.16, individual subjects had been adapted to suit the needs of different learners. English for instance had been adapted as reported by 21.7% of teachers who strongly agreed and 30.7% agreed while 28.3% of teachers and 14.7% strongly disagreed and disagreed respectively that English had been adapted. Those teachers who strongly agreed and agreed that math had been adapted were 17.3% and 34.7% respectively while 27% and 14.7% strongly disagreed and disagreed respectively; 16% and 33.3% of teachers strongly and agreed that science syllabus had been adapted while 32.7% and 14.7% strongly disagreed and disagreed respectively; 12% and 33% of teachers respectively strongly agreed and agreed that social studies curriculum had been adapted while 33% strongly disagreed and 14.7% disagreed. The report of whether there was adaptation or not indicated that some subjects could have been adapted or teachers had undertaken the training and adapted the subjects as they taught on the floor of the classrooms.

Similarly, different type of special need learners had the subjects adapted which suited their needs and teachers who were not handling them might have been aware of the adaptation.

Further, 16.7% of teachers strongly agreed that creative Arts had been adapted and 25% of teachers agreed while 31.7% and 16.3% of teachers strongly disagreed and disagreed respectively. Those teachers who agreed could have been teaching in inclusive schools for the visually impaired learners while those who disagreed could have been teaching in inclusive schools that catered for hearing impaired learners, schools for learners with

physical disabilities and other disabilities that have vision problems. In addition, 13.3 % and 28.7% of teachers strongly agreed and agreed that Kiswahili had been adapted and or removed from the curriculum. Those teachers could have alluded this fact to addition of sign language in the curriculum for hearing impaired learners and also the simple Kiswahili that was being taught in inclusive schools for the intellectually challenged. For those teachers who strongly disagreed (29%) and disagreed (14.7%) that Kiswahili had been adapted could have been teaching in inclusive schools that catered for learners with visual impairment (See Table 4.16).

As it can be seen, 6.7 % and 40% of teachers strongly agreed and agreed respectively that adequate time was given during examinations while 18.7% and 24.3% strongly disagreed and disagreed adequate time was allowed during examination depending on the nature and severity of the special need. The handling of different types of special needs learners could account for this disparity. The award of certificate by Kenya National Examination council basing on other abilities and talents (9.3% and 18.7% of teachers strongly agreed and disagreed respectively).

Those teachers who agreed that certificates were awarded basing on other abilities could have had in mind those certificates awarded to candidates in technical institute who studies carpentry, cookery, dress making and other skills. Those teachers who disagreed (18.7% strongly disagreed and 37.7% disagreed) that they were aware in primary schools, certificates were awarded to those candidates who sat for Kenya certificate of primary education exams at the end of 8 years circle. There were no national examinations for learners with severe special needs and this was reported by (9.7% strongly agreed and

52% agreed) but examinations were designed according to the needs of learners by individual teachers while those teachers who strongly disagreed and disagreed were 28.3% and 33.3% respectively.

It was only in technical subjects where Kenya National Examination council (KNEC) awards certificates to special projects but still exams must be attached to those projects. Those who disagreed could be teaching in inclusive schools for intellectually challenged where learners with intellectual challenges are graded by teachers and graduated after undergoing certain curriculum designed by teachers of that school. Those who agreed could have been teaching in inclusive schools where learners irrespective of those with special needs or without do the normal exams set by KNEC and have no knowledge of other students with special needs who might be assessed in other skill area other than through the KNEC exams.

Further, 29% and 31.7% of teachers strongly agreed and agreed respectively that test scores were used to promote learners to the next class while 10.3% and 15% strongly disagreed and disagreed respectively. Teachers who disagreed could have been teaching in inclusive schools that catered for intellectually challenged children where test scores were not used to promote learners to the next class. Other teachers (26% and 26.3%) disagreed and strongly disagreed respectively that unique talents are used to promote learners and also 21.3% and 27.5% strongly disagreed and disagreed that co-curricular are used. The implication of these disagreement and agreement on what criteria teachers used to promote learners to the next class implied that there was still confusion as to how to promote learners with special needs. In other words teachers who handled special need

learners used different criteria such as age, academic standards, talents and other ways to promote them to the next class.

Teachers reported that some systems have been developed to monitor the progress of learners (19.7% and 24% strongly agreed and agreed respectively) while (31% and 15.3%) of teachers strongly disagreed and disagreed respectively. Teachers disagreed (25.7%) and (17.7%) of teachers strongly disagreed that they are aware of appropriate procedures they used to assess learners behaviors while 14.3% of teachers strongly agreed and 30.7% agreed that they were aware of the procedures. This difference of opinion is as a result of some teachers not trained in assessment procedures. Teachers strongly disagreed (20.7%) and disagreed (24.7%) that they placed learners in class as per the assessment information they get from assessors while 12.7% and 28.7% of teachers strongly agreed and agreed.

Most learners in inclusive schools were never assessed before they were taken to school and thus teachers did not provide appropriate instructions. Teachers rated social skills in certain examinations (11% and 19.7% strongly agreed and agreed) while others did not (23.7% and 23% strongly disagreed and disagreed respectively). Those teachers who were teaching in inclusive schools that catered for learners who were intellectually challenged rated learners basing on social skills. Teachers who reported that academic competition in schools was not a barrier to inclusive education (28.7% and 23.3% of teachers strongly agreed and agreed) while (22.7% and 16% of teachers strongly disagreed and disagreed respectively that competition was a barrier). Depending on which category of special need learner was included these two positions were justified.

For the case of those learners with physical disabilities and visual impairments, when environment had been modified and assistive aids provided that included wheel chairs and Braille machine, examinations would not be a barrier to inclusive education.

Adapted curriculum and examinations play a role for the success and access to education for all learners. Teachers were in agreement with the above assertion (25.3% and 22.7% of teachers strongly agreed and agreed) whereas 15.7% and 17.7% of teachers strongly disagreed and disagreed respectively. Teachers handling learners with physical disabilities and those who were not aware would be the only ones to disagree while those who handle other categories of learners were the ones who would be in agreement.

Table 4.17 Mean analysis of Curriculum and examination adaptation

1. Curriculum adapted for different categories of special needs learners in English	300	1.00	5.00	3.1633	1.42246
2. Curriculum adapted for different categories of special needs learners in maths	300	1.00	5.00	3.1300	1.37334
3. Curriculum adapted for different categories of special needs learners in Kiswahili	300	1.00	5.00	3.0333	1.37545
4. Curriculum adapted for different categories of special needs learners in social studies	300	1.00	5.00	2.9467	1.31514
5. Curriculum adapted for different categories of special needs learners in creative art	300	1.00	5.00	2.9400	1.37454
6. Religious education	300	1.00	5.00	2.9700	1.30439
7. Teachers usually give adequate time to all learners during examinations according to the nature and severity of the special needs	300	1.00	5.00	2.8600	1.34652
8. Those learners with special needs who do not have abilities to sit for national exams are awarded certificates basing on their other abilities and talents by KNEC	300	1.00	5.00	2.4333	1.39237
9. Teachers design exams according to individual learners needs and severity of their special needs and severity of their special needs	300	1.00	5.00	2.4167	1.35740
10. Teachers have adapted curriculum sufficiently to suit the learning needs of special learners	300	1.00	5.00	2.4733	1.36216
11. Teachers use test scores to promote learners to the next class	300	1.00	5.00	3.4933	1.39395
12. Teachers use unique talents to promote learners to the next class	300	1.00	5.00	2.6700	1.35421
13. Teachers use co-curricular activities to promote learners to the next class	300	1.00	5.00	2.7767	1.43771
14. Teachers use social skills to promote learners to the next class	300	1.00	5.00	2.7200	1.31174
15. Teachers develop systems of monitoring different categories of learners progress	300	1.00	5.00	3.0167	1.39866
16. Teachers are aware of appropriate procedures to assess learners' behaviours including those with special needs and disabilities	300	1.00	5.00	2.9833	1.35986
17. Teachers place learners according to assessment information and provide appropriate instructions	300	1.00	5.00	2.8800	1.36325
18. Social skills in group work are rated in the examinations	300	1.00	5.00	2.8100	1.45175
19. Competition in examinations is a barrier to inclusive education	300	1.00	5.00	3.2600	1.47863
20. Suitable curriculum and examinations for all learners are key to success and access to education	300	1.00	5.00	3.2433	1.41094
21. Teachers are trained to adapt the curriculum to suit all learners	300	1.00	5.00	2.8600	1.40486
Overall mean score	300			2.89	

According to Table 4.17 above, the overall curriculum index was 2.9. This was an ambivalent score for this scale. The mean implied that not all teachers had the necessary competency to adapt the curriculum as some of them had not trained in special need education and were relying on experience to teach learners with special needs in inclusive classes (See Tables 4.3 and 4.4). According to the theoretical and conceptual framework, for inclusive education to be effectively implemented, teachers were to be trained in special need education (this study revealed 56% of teachers were trained), teachers had to have long experience (over 10 years were 36.7%) and gender of the teachers also was important (present study had 52% of female teachers). The present study showed that not all teachers teaching in inclusive schools adapted the curriculum for effective inclusive education implementation.

4.4.1 Teachers' gender and curriculum/ examination adaptation towards implementation of inclusive education

According to Table 4.18 both male teachers and female teachers had both positive and negative attitudes towards curriculum and examination in equal measures. There were 66 (45 %) male teachers and 71 (49 %) female teachers who had positive attitudes while 75(48 %) male teachers and 70 (44.9%) female teachers had negative attitudes. These results implied that teachers in general adapted the curriculum irrespective of the gender.

The null hypothesis (H_0) that teachers' has no significant influence on teachers attitudes towards curriculum and examination adaptation towards implementation of inclusive education was tested using chi-square and , was not rejected (Chi-square =1.01, df=2, c=0.0034 and $p >0.05$)a. This result indicated that the gender of teachers had no significant influence on curriculum and examination adaptation in inclusive education

implementation. This result implied that gender of teachers does not affect the adaptation of the curriculum and examination. Adapting the curriculum and examination does not depend on the gender but on professional preparation of teachers whether male or female. Any type of teacher gender can adapt the curriculum and examination to suit the needs of special needs learners in inclusive classes.

Table 4.18 The teachers' gender and curriculum and examination adaptation

Curriculum and Examination Adaption				
Gender	Negative	Ambivalent	Positive	Total
Male	71	7	66(45%)	144
Female	70	11	15(48%)	156
Total	141	18	141	300

4.4.2 Teachers' experience and curriculum/examination adaptation towards implementation of inclusive education

The teaching experience of teachers had an influence on the teachers' attitudes towards curriculum and examination adaptation. As seen in Table 4.19, 99(64.3%) teachers with over 10 years of teaching experience had positive attitudes as compared to 51(54.8%) teachers' with experience of between 1 and 5 years and also 17(34.8%) teachers of teaching experience of 6 to 10 years. From these findings, it seemed that teachers with long experience were able to adapt the curriculum and examination using their long experience of interacting with learners with special needs and those without. This perhaps made them have positive attitudes.

Further, when the hypothesis (H_{08}) that teaching experience has no significant influence on curriculum/ examination was tested using Chi-square, it was rejected (Chi-square=18.22, $df=2$, $c=0.218$, $p < 0.05$). Thus the teaching experience can account for about 4.74 % of variation in curriculum/examination adaptation in inclusive education implementation. This result indicated that teaching experience of teachers had significant influence on curriculum and examination adaptation towards inclusive education implementation.

Thus teachers with long experience were able to interpret and adapt the curriculum during lesson preparation and on the floor of the classrooms as they taught to suit the needs of all learners in an inclusive class. As for those newly posted teachers it may be a challenge knowing what to adapt and what not to adapt as they are not yet experienced with the needs of learners. It therefore means that those teachers with long experience of teaching were able to cater for the needs of learners in an inclusive class in terms of curriculum and examination adaptation thus influencing inclusive education implementation. Falvey *et al* (2004) suggested that teachers who were competent as a result of having long experience were able to select, plan, adapt and modify the curriculum and examination to make it suitable to all learners.

Table 4.19 Teachers' experience and curriculum and examinations adaptation

Curriculum and Examination Adoption				
Teachers Experience	Negative	Ambivalent	Positive	Total
1 to 5 years	38	4	51(54.8%)	93
6 to 10 years	32	0	17(34%)	49
11 and above	49	6	99(64.3%)	154
Total	119	10	167	296

4.4.3 Teachers' professional qualification and curriculum and examination adaptation

The attitudes of teachers who were qualified at degree level in special need education (44 out of 65) had positive attitudes, while those teachers qualified at diploma level (55 out of 92) and those teachers qualified in general certificates (68 out of 140) had positive attitudes. In other words 67.7% of teachers having degree qualification, 59.8% of teachers of teachers having diploma qualification and 48.6% of teachers having general training had positive attitudes towards curriculum and examination adaptation. Also many teachers with general training (71) had negative attitudes towards curriculum and examination adaptation as presented in Table 4.20.

These results can be interpreted to mean that teachers with both Diploma and Degree qualification in special need education training had higher positive attitudes because of their qualifications while those who lacked the training had negative attitudes. The teachers who had general training and held positive attitudes perhaps had been in

serviced and sensitized on special need education. Thus teachers' qualification according to the present study had an influence on curriculum and examination adaptation.

The null hypothesis (H_0) that teachers' qualification has no significant influence on attitudes towards curriculum/ examination adaptation in inclusive education implementation was tested by applying a Chi-square and rejected (Chi-square=13.76, $df=4$, $c=0.209$, $p<0.05$). The variation in curriculum/examination adaptation in inclusive education implementation that can be attributed to teacher's qualification is 4.4%. This result indicated that teachers' qualification had significant influence on curriculum and examination adaptation towards inclusive education implementation. Teachers who had academic qualification and professional qualifications had the competency and skills to adapt and modify any content of the curriculum both in advance and on the floor of the class to suit the needs of all learners and especially those with special needs. According to the results of hypothesis testing of null hypotheses, gender of the teachers had no significant influence on curriculum and examination adaptation whereas teachers' qualification and teaching experience had significant influence on curriculum and examination adaptation towards implementation of inclusive education.

The results of the curriculum and examination adaptation as reported by teachers and the hypotheses tested showed that as much as teachers did not adequately adapt the curriculum and examination in inclusive schools at an ambivalent index of 2.9 as presented in Table 4.16, the hypotheses testing of teachers experience, teachers qualification, teachers gender using chi-square and them being rejected except gender with p-value of less than ($p<0.05$) showed that curriculum/examination adaptation had a

significant influence on inclusive education implementation in primary schools in Kakamega County.

Table 4.20 The teachers' professional qualification and curriculum and examination adaptation

Curriculum and examination Adoption				
Teachers Qualification SNE	Negative	Ambivalent	Positive	Total
Diploma	37	0	55(59.8%)	92(100%)
Degree	21	3	44(71%)	68(100%)
General Training	71	1	68	140(100%)
Total	129	4	271	300

4.5 Teachers' knowledge of Suitable resources and school environment towards implementation of inclusive education

To achieve this fifth objective, the researcher using a checklist observed classes where learners with special needs had been included to confirm the provision of suitable teaching, learning and assistive aids and modified environment by teachers in inclusive classrooms. As indicated in Table 4.21, the researcher observed that teachers provided different teaching, learning and assistive aids and also modified environment in inclusive schools as follows: In all schools, writing boards and text books were (100%) provided,

toys were (44.4%) provided , maps were (33.3%) provided, class cupboards were (77.8%) provided, charts were (77.8%) provided and balls were (88%) provided.

In all inclusive schools the researcher observed that the following assistive aids were not provided and they included adapted desks, word processors, pencil/pen holders, digital personal organizers, task lighting, and multimedia and Braille machine. However both hearing aids and spectacles were available (11.1%) in few schools while wheel chairs and modified toilets were both available (2.2%). In schools where learners with visual impairments were included, the researcher observed that large print materials were provided (11.1%). In schools that had learners with mental disabilities included, communication boards were provided (44%).

From the these statistics, these findings are similar to Kurumei (2012), Okuta (2011) and Ndongye (2011) which showed that most teachers in inclusive schools had not provided teaching, learning and assistive aids to enhance learning for those learners who are included, In addition the environment had not been adequately modified. Only toilets had been modified (2.2%). Teachers might have not provided these facilities perhaps due to lack of funds or were not aware of their importance. Also perhaps the learners who were included were not profound in their disabilities and they therefore did not require these facilities.

However as argued by scholars, these facilities are essential if learners have to benefit academically. These facilities enhance acquisition of cognitive abilities such as retention of knowledge, reasoning, interaction and imagination (KISE, 2007). This implied that cognitive abilities of learners who were included were not enhanced. Those were who

had disabilities, the effect of the disabilities was not reduced as there were no assistive aids and their potential functional abilities not maximized.

The resources and the classroom environment suitability index for the 27 basic facilities was 26.1%. These resources and classroom environment were inadequate for effective inclusive education implementation. According to the conceptual framework, suitable resources influenced effective inclusive education implementation. Teachers who were trained at both diploma (36.3% and at bachelors 18.3% as presented in table 4.2) were supposed to utilize suitable resources for effective inclusive education implementation. Different categories of special needs implied the use of different resources. Those schools that catered for learners with visual impairment, hearing impairment and learners with physical disabilities were few and thus assistive aids such as hearing aids/sign language interpreters, spectacles, Braille machine, digital personal organizers, large print books, wheel chairs, adapted desks, pen guiders among others were not provided.

Table 4.21 Checklist on Suitable teaching, learning and assistive aids and environment

ITEM	N=45	FREQUENCY	PERCENT
1. Writing board		45	100
2. Textbooks		45	100
3. Toys		20	44.4
4. Maps		15	33.3
5. Class cupboards		35	77.8
6. Charts		35	77.8
7. Balls		40	88.9
8. Adapted desks		10	22.2
9. Word processors		0	0
10. Pen guiders		8	17.7
11. Digital personal organizers		0	0
12. Task lighting		0	0
13. Large print books		5	5
14. Sign language interpreters		0	0
15. Multimedia		0	0
16. Braille machine		0	0
17. Communication boards		20	44.4
18. Spectacles		5	11.1
19. Hearing Aids		5	11.1
20. Wheel chairs		1	2.2
21. Toilets		1	2.2
22. Films		0	0
23. Walls		2	4.44
24. Paths		20	44.4
25. Ramps		1	2.2
26. Widened doors		3	6.6
27. Adapted desks		5	11.1
28. Adapted libraries		1	2.2
Total Average			25.3

4.6 Teachers' attitudes on how inclusive education had been implemented in primary schools.

This sixth objective sought information from teachers on how inclusive education has been implemented in inclusive schools. As indicated in table 4.22; teachers had different attitudes on different aspects of implementation of inclusive education. For instance, 12.7% and 37% of teachers rated the general participation of learners in class activities as poor and satisfactory respectively while 42% and 8% of teacher rated the participation as good and very good respectively. Teachers also reported that almost half the class learners perform well in academic (49.7%) while almost a quarter of learners perform poorly (17%). According to the teachers' observations, inclusive education had not been effectively implemented not as a result of inclusion of learners with special needs in regular classes but because of teachers' knowledge and, provision of suitable resources and environment.

During the interview with headteachers, it was mentioned that learners with special needs did not affect school programs at all. Those learners who had ability to excel just excelled and those who did not have ability to excel never excelled inclusive education notwithstanding.

In National examination performance, 15.7% and 11% of teachers held the attitude that learners with special needs in inclusive classes perform well and very well respectively whereas 33% and 40.3% of teachers also held the attitude that these learners perform poorly and satisfactory in National examinations.

The categories of learners with special needs who sit for national examinations include those learners with hearing impairment, visual impairment, physical impairment, specific learning disabilities and emotionally behaviorally disturbed (KISE, 2007). These observations could have been made by teachers who were teaching in schools that handled the cited categories of special needs. For instance, learners with hearing impairment and specific learning difficulties were considered not to perform well because of communication difficulties while those learners who had physical disabilities and visual impairment were considered to perform well in National examination (KCPE 2010, 2011, 2013, 2016 results for Mumias, Daisy special school, Ebwaliro primary school, Khwisero primary school, Bulimbo primary school) When the curriculum and examinations are adapted and assistive devices used this types of learners with special needs usually function normally.

Those learners with intellectual challenges, their performance was perceived to be sub average. These were the learners who needed different ways and unique ways of assessing their performance. Hunt and Goetz (1997) suggested that learners with severe disabilities who were included in regular schools performed well and had their basic communication skills improved. Nenty *et al* (2012) reported that inclusive education had a positive impact on social and intellectual growth though the state department reported that special needs students who were included seemed to perform well as compared to other regular learners.

As for participation of learners with special needs in games, 27.3% of teachers reported that the participation was poor, 27.3% of teachers reported that the participation was

satisfactory while 36% of them reported that the participation was good. This implied that depending on the categories of special needs and severity of special needs, the participation of learners was to vary. Perhaps those learners whose participation was good in games could be those with hearing impairments whereas those who had physical disabilities were the ones who participated satisfactorily or poorly in games due to their disabilities.

The participation of learners with special needs in group activities as seen in table 4.35, 38% and 17% of teachers reported that the participation was good and very good respectively while 18% and 25.3% of teachers reported that the participation was poor and satisfactory respectively. These could be as a result of teacher's encouragement and mentoring of learners to accept one another and perhaps also depending on the categories of learners included. There were learners who were withdrawn as a result of their disabilities and could not participate in group activities and others were unable intellectually such as those who had intellectual challenges and thus could not cope with group activities. Teachers reported that learners without special need were not affected in terms of social relationship, communication and classroom activities irrespective of whether they were in an inclusive school or not (19.7% and 34.7%) good and very good respectively while those who said they were affected (11.3% and 30%) poor and satisfactory respectively.

The perception of teachers seemed to reveal that inclusive education seemed not to affect the academic performance of learners without special needs.

Teachers reported that the general educational outcome of learners with special needs was satisfactory (31%) and poor (24.7%). Only 31% of teachers reported that the outcome was good while 18% of teachers reported that it was very good. This implied that not all teachers were effectively implementing inclusive either on the basis of lack of knowledge, competency and or lack of assistive devices. On games, 38.3 % teachers reported that learners with special needs participated well while 19.7%r of them reported that those learners participated excellently and only 9% of teachers reported that learners with special needs did not participate well. It seemed that majority of learners with special needs had been included adequately in games at school level except a few who did not participate well could have had additional disabilities and or were visually impaired or had and physical disabilities that made them not participate.

The reading abilities of learners with special needs were rated by teachers (37%) as being satisfactory and poor (21.7%). A few of learners with special needs had good and very good reading abilities as rated by teachers (17.3% and 12%) respectively. This implied that majority of learners with special needs had problems with reading and thus lacked reading abilities. Those learners might have been hearing impaired, intellectually challenged or had specific learning difficulties. Those learners who were reported to have good reading abilities might have been those with physical disabilities and visual impairments with the help of Braille machine. Teachers reported satisfactory and good respectively that majority of learners without special needs in inclusive schools performed just as well as those in regular schools. Only 19.3% of teachers reported that those learners performed poorly.

On communication and social skills, 27.3% and 31.7% of teachers reported that those skills were satisfactory and good while 9 % of teachers reported that learners with special needs had poor communication skills.

Table 4.22 Attitudes of teachers on how inclusive education had been implemented

ITEM	POOR		SATISFACTORY		GOOD		VERY GOOD	
	F	%	F	%	F	%	F	%
1.Classroom participation	38	12.7	111	37	127	42	24	8
2.Performance in academic	51	17	149	49	76	25	24	8
3.Performance in K.C.P.E	99	33	121	40.3	47	15.7	33	11
4.General ed outcomes	74	24.7	95	31.7	69	23	54	18
5.Without SNE academic	34	11.3	90	30	104	34.7	59	19.7
6.SNE learners in games	82	27.3	82	27.3	108	36	28	9.3
7.SNE in group activities	54	18	76	25.3	114	38	51	17
8.Without SNE games	27	9	79	26.3	115	38.3	59	19.7
9.Reading abilities	65	21.7	111	37	52	17.3	36	12
10.Communication/Social skills	27	9	82	27.3	95	31.7	16	5.3

The mean index for this scale was 2.1 as seen in Table 4.23 and this implied that inclusive education implementation was unsatisfactory. These findings indicated that teachers' attitudes were positive (mean index of 3.7 as presented in Table 4.7) thus those teachers who were handling inclusive classes held positive attitude towards inclusive education implementation. However, teachers adapted both the curriculum /examination

satisfactorily (the mean index was 2.9 as presented in table 4.17). This could be due to the fact that some teachers had knowledge of adapting both the curriculum and examinations but were not practically adapting them due pressure that was put on them by the ministry of education officials. Some teachers indeed had knowledge of adapting the curriculum and examinations and did adapt them. Also some teachers used teaching styles that were appropriate in inclusive education implementation whereas others did not use suitable teaching strategies in inclusive classrooms (mean index for teaching strategies was 3.2 as presented in Table 4.12).

As for suitable resources and environment (26.1% of resources were availed as presented in Table 4.21). This implied that teachers had ambivalent attitudes on all the other three scales and thus unsatisfactory inclusive education implementation. Overall there was unsatisfactory implementation of inclusive education in primary schools in Kakamega County.

Table 4.23 Mean analysis of teachers' attitudes on how inclusive education had been implemented

1. Rate participation of learners in classroom activities in inclusive schools	300	1.00	4.00	2.3667	.81466
2. How learners in inclusive classes perform in different academic areas	300	1.00	4.00	1.67	.82850
3. Rating of learners with special needs performance in national exams	300	1.00	4.00	1.71333	.96311
4. Rating of participation of learners with special needs in games in inclusive schools	300	1.00	4.00	2.17333	.96699
5. Rating of participation of learners with special needs in group activities in inclusive schools	300	1.00	4.00	2.0667	.99126
6. Rating learners without special needs in different academic areas	294	1.00	4.00	2.5400	.94501
7. Rating of educational outcomes of students with special needs in inclusive education	294	1.00	4.00	1.9000	1.05677
8. Rating of participation of learners without special needs in games in inclusive schools	282	1.00	4.00	2.5533	.90396
9. Rating of achievement of learners with special needs in reading abilities and arithmetic skills	266	1.00	4.00	1.71667	.97918
10. Rating of the communication and social skills learners with special needs and the interaction with regular learners in inclusive schools		222 1.00	4.00	1.8350	.80499
Overall score	300			2.1	

4.6.1 Teachers' professional qualification in Special Need Education and Implementation of Inclusive Education.

The analysis that was done on the influence of how the qualification of teachers influenced their attitudes on implementation of inclusive education showed that inclusive education was implemented below average according to teachers with 87 (64%) general education and above average by 34% of teachers of the same qualification while according to 58 (53.2%) of teachers with Diploma qualification and 16 (29%) of teachers with Degree qualification implementation of inclusive education was below average. On the other hand teachers with Diploma qualification and Degree qualification (46.8% and 70.9%) respectively implemented inclusive education above average as presented in Table 4.25. The present results implied that though some teachers had been trained at Diploma and Degree levels and perhaps were teaching enthusiastically with professional preparation using relevant skills, inclusive education implementation was not satisfactory as the mean indices show.

The means for implementation according to teachers who were qualified at Diploma and Degree level was 2.6 and 2.1 respectively thus satisfactory, low inclusive education implementation as seen in Table 4.24. In addition the results of the present study implied that those teachers with general training according to them inclusive education was implemented above average (49). According to Table 4.11, 12.7% and 20% strongly agreed and agreed respectively that teachers were taken for refresher courses while 13% and 30.3% of teachers strongly agreed and agreed that teachers received technical support from special educators staffed at educational assessment centers. This perhaps was why

teachers with general training according to them inclusive education was implemented more effectively than even those teachers trained at both Degree and Diploma level.

The interviews the present researcher carried out with the headteachers showed that some teachers who were trained in special need education were not able to handle learners with special needs in inclusive classes effectively. The headteachers reported that these were the teachers who went for further training for purposes of monetary gains and promotion and not teaching learners with special needs. The headteachers suggested that aptitude tests should be carried out to all teachers that intend to go for special need training because it was important that teachers had to undergo training for inclusive education to be implemented effectively. The hypothesis (H_{011}) that teacher's qualification had no significant influence on how inclusive education was implemented was tested and rejected at p-value (0.000) less than p-value (0.05) as presented in table 4.26. These findings were similar to the findings of the study that was conducted in United States which showed that teachers who had training in special need education were enthusiastic and motivated to deal with learners with special needs in inclusive settings and were keen to notice how inclusive education was being implemented (United States department of education, 2008). Another study in South Africa indicated that teachers who received in-service training in inclusive education yearly became experts on improvisation of teaching resources and were more accommodative to learners with special needs and this led to increased enrollment in mainstream schools (Republic of South Africa, 2002). Kamene and Nyaigoti (2013) asserted in their study in Kenya that teachers need to be professionally trained to be able to handle inclusive classrooms effectively. The above

findings suggest that for inclusive education to be implemented effectively teachers had to undergo training in special need education.

Table 4.24 Teachers' professional qualification in special needs education and implementation

Qualification	Mean	Implementation
None	2.3779	Low
Diploma	2.6087	Satisfactory
Degree	2.1	Low
Average	2.3	low

Table 4.25 Teachers' qualification and Implementation of inclusive education

Teachers' Qualification(SNE)	Implementation		
	Below Average	Above Average	Total
Diploma	58	51 (46.8%)	109
Degree	16	39 (70%)	55
General Training	87	49 (36%0	136
Total	161	139	300

Table 4.26 One Way ANOVA for Influence of Teachers' qualification on Inclusive Education

Model	Sum of squares	df	Mean square	F
Regression	180.043	13	13.849	11.220
Residual	232.061	188	1.2	
Total	412.104	201		

Dependent Variable: Implementation of inclusive education

Predictor: The teacher's qualification**4.6.2 The Teachers' experience and Implementation of Inclusive Education**

Teachers who were implementing inclusive education satisfactorily were those with experience of over 10 years (94.1%), those with 5 years and below (92.4%) and those with experience of between 6 and 10 years (73.5%) as presented in Table 4.28. This finding could be attributed to the fact that those with long experience had interacted with learners with special need for a longer time and had gained enough skills whereas those with less experience perhaps they had been trained in various skills hence their satisfactory handling of learners with special needs.

The hypothesis of teaching experience of teachers having no significant influence on inclusive education implementation in public primary schools in Kakamega County was tested and rejected at p- value (0.000) less than p-value (0.05) as presented in Table 4.29. The mean index of teachers with over 10 years of experience was satisfactory (2.5) as presented in Table 4.27. This implied that teachers who were teaching in inclusive classes majority of them had less than 10 years of experience and thus unsatisfactory inclusive education implementation in primary schools in Kakamega County. These results suggested that teaching experience was significant for inclusive education implementation.

Algazo and Gaad (2004) in their study in Dubai found that teachers with 12 years' experience and more had positive attitudes towards inclusive education as compared to those with less years of experience. Mutisya (2010) in his study in Machakos found that teachers with long experience were more tolerant and confident in handling learners in an

inclusive class. These findings are similar to the current study's findings and they suggest that teachers who should be posted to teach in inclusive schools should be those who have taught for a long time and they should be in serviced in inclusive education training so that they can implement inclusive education effectively.

Table 4.27 Mean analysis of Teachers' experience and Implementation of Inclusive Education

Experience	Mean	Implementation
1-5 years	2.4157	Low
6-10 years	2.4142	Low
Over 10 years	2.5230	Satisfactory
Average	2.4433	low

Table 4.28 The teachers' experience and Implementation of Inclusive Education

Teachers' Experience	Implementation		
	Unsatisfactory	Satisfactory	Total
1 to 5 years	7	85	92
6 to 10 years	13	43	56
11 and Above	9	143	152
Total	29	271	300

Table 4.29 One Way ANOVA for Influence of Teachers' Experience and Implementation of Inclusive Education

Model	Sum of squares	df	Mean square	F	sig
Regression	42.502	13	3.269	5.450	.000b
Residual	122.383	204	.600		
Total	164.885	217			

Dependent Variable: Implementation of Inclusive Education

Predictor : The teachers' Experience

4.6.3 The Teachers' Gender and Implementation of Inclusive Education

According to table 4.31, 49.3% of male teachers and 41% of female teachers reported that inclusive education was implemented satisfactorily in primary schools in Kakamega County while 51.1% of male teachers and 59% of female teachers reported that inclusive education was implemented unsatisfactorily. These findings when interpreted in terms of attitudes, they imply that because female teachers were more positive they looked critically at how the implementation process was going on and thought it was not fine. As for male teachers, because of their lack of seriousness, they reported that the implementation of inclusive education was more positive than satisfactory. However, gender as the present study showed had an influence over the attitudes of teachers towards the implementation of inclusive education but did not have an influence on teaching strategies, curriculum/examination adaptation and thus the overall influence index on inclusive

implementation (2.4) was low as seen in Table 4.23 and the testing of hypotheses (H_{02} , H_{06} , and H_{07}) using the Chi-square that were not rejected.

The hypothesis (H_{010}) that teachers' gender had no significant influence on implementation of inclusive education was tested using one way ANOVA and rejected as presented in Table 4.32. However, the overall index was low(2.4) as presented in Table 4.23 implying that data that contributed to this index was not enough and or gender of teachers had no significant influence on implementation of inclusive education.

These findings were similar to the findings of the study that was carried out in Georgia by Tamar (2008) that reported that teachers' gender had an influence on inclusive education implementation. Female teachers in that study were found to be more positive towards inclusive education than male teachers. Other studies done elsewhere found that gender of teachers did not have significant influence on inclusive education implementation and they included Kanman (2013) and Dukmark (2013) that were conducted in India United Arab Emirate and India respectively. The findings of the present study were not so much different from the cited study except the attitudes of female teachers in the current study influenced implementation of inclusive education.

Table 4. 30 gender versus implementation

Experience	mean	Implementation
Males	2.4375	Low
Females	2.4195	Low
Average	2.4276	low

Table 4.31 The teachers' gender and implementation of inclusive education

Implementation of Inclusive Education			
Gender	Unsatisfactory	Satisfactory	Total
Male	73 (51%)	71 (49%)	144
Female	92 (59%)	64 (41%)	156
Total	165	135	300

Table 4.32 One Way ANOVA for influence of Gender on Implementation Inclusive Education

Model	Sum of squares	df	Mean square	F	sig
Regression	19.235	13	1.480	8.593	.000b
Residual	35.815	208	.172		
Total	55.050	221			

Dependent Variable: Implementation of inclusive education

Predictor : The teachers gender

4.6.4 Summary

The study found out that there were more female (52% as presented in Table 4.1) than male teachers (48%) while all teachers in inclusive schools had general basic teacher certificate degree, diploma and a few had master's degree beside those with special need training both at diploma and degree level as it can be seen Tables 4.2 and 4.3. These teachers had varying teaching experiences ranging between 1 to 11 years and over including those with teaching experience of 1 to 5 years (36.3%), those with teaching experience of 6 to 10 years (27%) and those with teaching experience of 11 years and above (36.7%). Further these teachers handled different types of special need learners which included physical difficulties (16.3%), Learning difficulties (16.3%), mental difficulties (32.6%), emotional behavioral difficulties (22.8%), hearing impaired (6.5%) and visual impairment (5.5%) as presented in Tables 4.4 and 4.5.

The study showed that teachers had positive attitude towards inclusive education implementation with a mean index of 3.7 as presented in Table 4.7. These results showed that in most inclusive schools teachers had positive attitudes and that was perhaps the reason even teachers who had not undergone training were handling inclusive classes and especially classes that had learners with mental challenges. When the teachers' gender was analyzed, the gender attitudes towards inclusive education implementation, it was found that 61% of female teachers and 23% of male teachers who participated in the study held positive attitudes as presented in table 4.8 while all the different types of learners with special needs with varying percentages were included in different classes. Further, the study showed that 134 (84.3%) teachers with over 11 years of teaching experience, 39 (79.6%) teachers with experience of between 6 to 10 years and 86 (93.5%)

teachers of experience between 1 to 5 years held positive attitudes towards inclusive education implementation as presented in table 4.9. In the same vein, as presented in Table 4.10, 79 (85.9%) of teachers with diploma qualification and 61(89.7%) of teachers with degree qualification and those teachers with general training who also held positive attitudes were 31(22.1%).

The null hypotheses of teacher's gender, teaching experience and qualification having no significant influence on teacher's attitude were tested using Chi-square and rejected thus they had significant influence on attitudes towards teaching strategies, curriculum/examination and overall in inclusive education implementation as presented in Tables 4.9 and 4.10.

The results of the current study revealed that not all teachers were using the teaching strategies that would influence inclusive education implementation positively in primary schools. The mean index was 3.2 as presented in Table 4.12. These results implied that not all teachers were trained to use the teaching strategies recommended in inclusive schools and this could have led to unsatisfactory inclusive education implementation as seen in Table 4.14. When the null hypothesis of teachers gender, teaching experience and qualification having no significant influence on teaching strategies towards implementation of inclusive education were tested using chi-square only the null hypothesis of teachers gender was not rejected as presented in Tables 4.13, 4.14 and 4.15. The gender of teachers did not have significant influence on teachers teaching strategies while teachers experience and qualification had significant influence on teaching strategies towards inclusive education implementation.

The study found that curriculum/examinations were not adequately adapted for implementation of inclusive education. The mean index was 2.9 as presented in Table 4.17. According to these results, teachers might have been aware of how to adapt the curriculum and examinations but were not doing it practically perhaps because of the overload of the curriculum itself or the sheer large population of learners in an inclusive class. When the null hypotheses of teacher's gender, teaching experience and teachers qualification having no significant on influence on curriculum and examination adaptation were tested, they were all rejected except the null hypothesis of teacher's gender. Teachers' gender had no significant influence on curriculum and examination adaptation towards implementation of inclusive education as presented in Tables 4.18, 4.19 and 4.20.

For the provision of resources and classroom environment, the study found that teachers had not provided them. Only 25% of the resources required had been provided as presented in Table 4.21. These results implied that few resources were available and or teachers in inclusive schools were aware of what was needed or they were not aware or the schools lacked funds to purchase the resources. On inclusive education implementation, the study results showed that it was unsatisfactorily implemented with a mean index 2.1 as presented in Table 4.23. The null hypotheses of gender, teaching experience and teacher's qualification having no significant influence on inclusive education implementation were tested and rejected as presented in Tables 4.26, 4.29 and 4.32. These results implied that for inclusive education to be implemented effectively, the teachers attitudes and knowledge depended on the teachers attitudes generally, teaching experience, teachers qualification and to some extend the teachers gender.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter focused on the summary of the findings on demographic data, teachers' attitudes towards implementation of inclusive education, teachers' knowledge and use of teaching strategies and adaptation of curriculum and examination. In addition, the Chapter focused on the teacher's knowledge of suitable resources and environment, findings of how inclusive education had been implemented in primary schools, discussions of the findings and conclusions.

5.2 Summary

In this summary, information about the six objectives of the study was reported and they included.

5.2.1 Influence of the demographic data (teachers' gender, teaching experience and teachers' qualification) towards implementation of inclusive education

The guiding question in research objective one was: What was the influence of teachers' gender, teachers' experience and qualification towards teacher's attitude, teaching strategies, curriculum and examination adaptation towards implementation of inclusive education?

The findings of the study showed that the gender of teachers had no significant influence on teaching strategies, curriculum and examination adaptation. However, it had a significant influence on teachers' attitude towards implementation of inclusive education. Overall, on the basis of the gender of teachers having a significant influence on teachers' attitude, it had a significant influence on implementation of inclusive education in primary schools in Kakamega County. Further the study showed that teachers' experience and qualification had significant influence on teachers' attitudes, teaching strategies and curriculum /examinations adaptation towards implementation of inclusive education in primary schools. See Tables 4.8, 4.15, 4.18, 4.30, 4.31 and 4.32; Tables 4.4, 4.9, 4.13, 4.19, 4.27 and 4.28; Tables 4.3, 4.10, 4.14, 4.20 and 4.25.

5.2.2 The attitudes of teachers towards implementation of inclusive education in primary schools

The guiding question in research objective two was: What were the teachers' attitudes towards implementation of inclusive education in primary schools in Kakamega County? The findings of the study showed that teachers handling inclusive classes had positive attitudes towards implementation of inclusive education in primary schools in Kakamega County. See Tables 4.6 and 4.7.

5.2.3 Teachers' knowledge and use of teaching strategies towards implementation of inclusive education in primary schools

The guiding question in research objective three was: What were the teachers' knowledge of and use of teaching strategies towards implementation of inclusive education in primary schools in Kakamega County? The result of the study showed that almost 50 %

of the teachers handling inclusive classes in primary schools had knowledge and used relevant teaching strategies in their classes while the other 50% of teachers had no knowledge and were not using relevant teaching strategies towards implementation of inclusive education. See Tables 4.11 and 4.12.

5.2.4 The teachers' knowledge of adapting the curriculum and examinations towards implementation of inclusive education in primary schools.

The guiding question in research objective four was: What was teachers' knowledge of the curriculum and examinations adaptation in primary schools in Kakamega County? The study found out that teachers were not adapting the curriculum and examinations adequately to suit learners with special needs in inclusive classes. See Tables 4.16 and 4.17.

5.2.5 Teachers' knowledge of the provision and use of suitable resources and environment towards implementation of inclusive education in primary schools

The guiding question in research objective five was: What were suitable resources and environment had teachers provided towards implementation of inclusive education in primary schools in Kakamega County? The result of the study showed that teachers handling inclusive classes were not using and had not adequately provided suitable teaching, learning and assistive aids and environment in inclusive classes towards implementation of inclusive education in primary schools in Kakamega County. See Table 4.21.

5.2.6 Teachers' attitudes on how inclusive education had been implemented in primary schools

The guiding question in research objective six was: Were teachers' attitudes on how inclusive education had been implemented? The study found out that inclusive education had not been implemented effectively by teachers in primary schools. See Tables 4.22 and 4.23.

5.3 Discussion

In this section the demographic data about teachers and special need learners that included teachers' gender, teaching experience, teachers' qualification and the type of special need learners in inclusive schools was discussed. Also information about the teachers' attitudes, knowledge of teaching strategies, curriculum and examination adaptation and provision of suitable resources and environment was discussed. In addition information about teachers being aware of how inclusive education had been implemented was covered in this section.

5.3.1 The influence of Demographic data towards implementation of Inclusive education

In this study the demographic data that was determined included teachers' professional qualification both general and specific in special needs education, gender, experience and type of special need learners. As indicated in Table 4.2, 52.7% of teachers had Diploma training, 18.3% had Bachelor's Degree and 22.7% primary teacher certificate. Only 1.3% had Masters' Degree. This implied that teachers in inclusive schools had different levels

of qualifications. As for those trained in special needs education, 36.3% and 18.3% of teachers were qualified at Diploma and first Degree level respectively while 45.4% of teachers in inclusive schools had not undergone training in special needs education. On mean analysis, teachers who were qualified at Diploma level were satisfactory (2.6) and at degree level low (2.1). This showed that some teachers who were handling inclusive classes in inclusive schools were trained and some were not adequately trained in special needs education. The study also found that different types of special need learners were included in different classes as presented in Table 4.5.

The null hypotheses of teacher's professional qualification having no significance influence on teacher's attitudes, teaching strategies, and curriculum/examination adaptation and assessment were tested and rejected. These results showed that teachers' qualification had significant influence on teachers' attitude. The study also found out that teachers' qualification had significant influence on implementation of inclusive education.

In the conceptual framework, teachers who are trained in the various teaching strategies in inclusive set ups are able to use appropriate teaching strategies so that learners with special needs benefit maximally (Carey, 1997). For learners to participate in the learning process, to interact and develop communication skills and achieve academically, according to the conceptual framework, the teachers' attitudes towards implementation of inclusive education have to be positive, the curriculum and examination have to be adapted, suitable resources and environment have to be provided and the intervening variables might influence its implementation.

UNESCO (1994) contended that appropriate curricular organizational arrangement by teachers, teaching strategies and provision of suitable resources should be in place if inclusive education has to succeed. Some studies have concluded that for inclusive education to succeed teachers need to be trained adequately. They contend that teachers who are trained are motivated and enthusiastic at their work (A study in United States department of education, 2008; Kamene and Nyaigoti, 2013). In their studies(Campbell et al, 2003) found that teachers who had received training in special need education showed more positive attitudes towards inclusive education compared to those who had not received the training.

The results of the present study which were similar to the findings of the previous cited studies indicates that the impact of training on teachers attitudes is so huge and it necessitate that all teachers handling inclusive classes should be taken for refreshers courses if not previously trained. Thus all training institutions for teachers in Kenya at all levels including those teacher trainings for primary teachers and secondary teachers should have courses in special need education according to the finding of this study.

It can be argued that learners who were included and they comprised hearing impaired; visually impaired, mentally challenged all required services of qualified teachers and more so qualified in specific areas. It is not logical for such learners to be in an inclusive class for the sake of inclusive education but they should be seen benefiting academically. As per the present study's findings, most of the learners who were included in regular primary schools had mild conditions including mental retardation, hearing impairments, visual impairments, and physical difficulties and learning difficulties. Perhaps because of

the mild conditions of learners who were included, teachers who had not received training but had long teaching experience handled them appropriately. According to the findings of this study inclusive classes were manned by teachers of different qualifications though it was important as the study revealed that there was need for all the teachers who handled inclusive classes to have relevant knowledge in inclusive education.

Teachers' gender in the current study had significant influence on teachers' attitude. There were more females who were handling inclusive classes than males (52% females while males were 48%). However, the gender of teachers did not have significant influence on the teaching strategies, curriculum and examination adaptation and provision of suitable resources and environment while the gender of teachers had significant influence on general inclusive education implementation. This was on the basis that gender had an influence on teachers' attitude. One can suggest that female teachers are more motherly and can accept to handle those learners with disabilities more than male teachers both at school and at home. Male teachers on the other hand because learners with special needs require tender care, at time men have little time for learners with special needs. It was perhaps because of men don't care attitude that make them not able to handle learners in an inclusive classes A study that was carried out in Georgia by Tamar(2008) reported that teachers gender had an influence on inclusive education implementation.

Other studies findings were consistent to the present study's findings in relation to gender's influence on teachers attitudes and they included Avramidis *et al* (2000) and

they showed that females displayed more positive attitudes towards inclusive education compared to males while Al-Zayudi (2006) et al study's found that gender had no significant relationship to teachers attitudes. From these findings, it can be argued that gender of teachers in different regions could influence or not influence the attitudes of teachers towards inclusive education depending on various factors. For instance, in African societies, the responsibilities of taking care of infants were usually the work for mothers while the fathers went out to look for money to feed the families. The fathers never sat at home baby caring for their infants. If the same fathers were teachers then they would find it difficult to handle young learners and more so if they had special needs.

Other factors that could account for the inconsistencies in attitudes could include differences in experiences of teachers that were sampled, their level of training and whether the schools where the teachers were teaching had adequate teaching learning resources, classes were overcrowded and among other supportive services.

Teachers' experience, according to the present study had an influence on teachers' attitude, teaching strategies and curriculum and examination adaptation as presented in Tables 4.8, 4.12 and 4.17. In general implementation of inclusive education was influenced significantly by teachers' experience as presented in Table 4.29. Alghazo and Gaad (2004) in their study in Dubai found out that teachers with experience of over 10 years had positive attitudes towards inclusive education. In the present study, 36.7% of teachers had over 11 years teaching experience with a mean index of 2.5 while 27% of teachers had over 6 years teaching experience with a mean index of 2.4 as presented in

Tables 4.4 and 4.27. Combined teachers of over 6 years' experience were 63% as presented in Table 4.5. It can be argued that implementation of inclusive education require teachers who have taught in regular classes for some time before they can be posted in inclusive classes. Learners with special needs have challenges that can demoralize teachers who have no experience at all and thus can be unable to implement inclusive education accordingly. As this study showed teachers who were in inclusive classes' majority of them had experience of 6 years and above though few had experience of over 10 years. It thus follows inclusive education was not being implemented effectively because teachers of over 10 years' experience would be ideal to be staffed in inclusive classes as compared to those teachers with 6years teaching experience and below.

Teachers who had just completed general teacher training and posted to inclusive schools found it difficult to settle in those schools. This was according to the interviews held with the headteachers of inclusive schools by the current researcher. Most of those teachers sought for transfers immediately but because of the ministry of education policy of teachers staying in a station for 5 years before he or she could be moved made these teachers stay in that school. If these teachers were placed in inclusive classes, they did not teach effectively learners with special needs who were included hence non effective implementation of inclusive education. In western world, 25% to 40% of newly employed graduate teachers resigned or burnt out during their first 3 to 5 years of teaching while in Australia there was high attrition rate of graduate teachers who were posted to teach in inclusive schools (Ewing & Smith, 2003; Dest, 2006).

In this study few teachers with less than 5 years teaching experience were found to be handling inclusive classes. However some few teachers who found themselves posted in those inclusive schools fresh from general teacher training became enthusiastic and interested in special need education perhaps because of future personal professional growth and or remuneration aspects and thus these were the teachers who had positive attitudes as reported by the study. These were the teachers however little experience they had in teaching handled learners with special needs effectively.

Implementation of inclusive education as the current study showed do not depend on the type of special need learners included. The teachers' preparedness in terms of training, experience and attitudes apparently matters for implementation of inclusive education. As the present study showed most learners with special need who were included were those with mental challenges, emotional problems and those with specific learning difficulties. These are learners who can be handled by teachers who have general knowledge of teaching even if they might lack specialized training and also who might have long experience of teaching regular classes. This was what the present study showed.

5.3.2 Teachers' attitudes towards implementation of inclusive education

The findings of the present study showed that teachers held positive attitudes towards implementation of inclusive education in primary schools in Kakamega County. The attitudes were influenced by teachers' experience, qualification and their gender. In both theoretical and conceptual framework, effective and successful inclusive education implementation depended on teachers attitudes. According to Jelas *et al* (2006), teachers who provided opportunities for learners to interact and support one another in an

inclusive classroom were positive towards inclusive education. According to social learning theory, people learn from one another through observations, imitation and modeling (Bandura, 1997). In the present study, major of the teachers who were handling inclusive classes had undergone training and held positive attitudes and encouraged learners to interact, learn from one another and lived together. Keriongi (2011) in her study in Mount Kenya region found that those teachers who were trained and were teaching in special schools or special units that were attached to primary schools held positive attitudes towards inclusive education implementation in primary schools in central region.

The head teachers who were interviewed by the present researcher reported that most teachers in their schools held positive attitudes towards inclusive education implementation. The headteachers further went on to say that as much as these teachers held positive attitudes not all were prepared practically to teach in inclusive classes. The headteachers further observed that teachers in their schools were concerned about their lack of knowledge and skills and thus were unable to give appropriate attention to the entire student in an inclusive class however much they held positive attitudes. That most teachers had positive attitudes towards those learners who were included and had less support needs compared to those with higher support needs (severe to profound). They noted that it was important that teachers be trained; schools to be adequately staffed and adequate resources to be provided if these teachers could confidently teach learners with special needs in inclusive classes effectively. Kurumei (2012) in his study found that teachers who were teaching in inclusive school in Elgeyo Marakwet had negative attitudes towards inclusive education and generally learners with special needs because

they had no training in inclusive education and thus recommended that for them to have positive attitudes and knowledge on inclusive education there was need for them to be trained. Teachers' attitudes are very vital if inclusive education has to succeed and this was shown by the present study. In their training teachers are usually sensitized to be positive towards learners with special needs so as to be able to help them achieve academically. The present study has demonstrated that teachers who were teaching in inclusive classes had positive attitudes towards inclusive education programme. Generally people in Kenya usually sympathize with persons with disabilities and also appear to be concerned to please other people but deeply they hold different opinion and this was perhaps what the present study showed. Persons with disabilities have coined a saying that don't 'sympathize with us but give us tangible help' and this seemed to be what some teachers do in their classes. The present study showed that teachers held positive attitudes towards inclusive education. It can be argued that some teachers could have reported that they accept learners with special needs in their classes but when it came to teaching they had challenges as reported by the headteachers.

5.3.3 Teachers' knowledge of Teaching strategies used towards implementation of inclusive education

The present study found that teachers had ambivalent attitudes towards teaching strategies in inclusive schools. The teaching strategies were influenced by the teachers' experience and qualification. Some teachers who were handling inclusive classes had undergone training in special need education (36% of teachers trained at diploma, 18.3% of teachers trained at degree level) while some had been sensitized and attended inset training organized at both school level and County level. However some teachers had just

been staffed in inclusive classes on the basis that they already were teaching in those schools that were practicing inclusive education. In both theoretical and conceptual frameworks, it was noted that effective inclusive education implementation depended on teachers who were trained in effective teaching strategies such as whole class teaching, group/cooperative teaching, peer tutoring, child to child teaching and team approach (Jha, 2002).

Katz and Mirenda (2002) suggested that instructional methods such as direct instruction, small group instruction, individualized educational teaching were combined in a team based approach. KISE (2007) noted that this team approach method promoted the skills of sharing responsibilities, listening to each other, control of emotions and making decisions. It was argued that this strategy enhanced learning, improved good relations, developed problem solving skills, improved academic and social skills of special need learners in inclusive classrooms (Puttnam *et al*, 2002).

Falvey *et al* (2004), suggested that peer tutoring minimized behavior problems and increased opportunities to respond and enhance activity of comprehension in such areas as in math, reading and social interaction. Mwaura (2012) in his baseline survey study in south Sudan , noted that teachers who were handling inclusive education in that country were inadequate, poorly trained and thus were not implementing inclusive education implementation effectively. Kurumei (2012) in his study suggested that for inclusive education to be implemented effectively, teachers had to be equipped with the necessary skills and knowledge to handle all learners in an inclusive classroom effectively. The findings of the present study indicated that teachers were not trained adequately to handle

inclusive education classes in Kakamega County (mean index of 2.3 which was unsatisfactory). Teachers who are not trained adequately might not handle learners with special needs in inclusive classes effectively. Most of the time they will fumble and get worried whenever there are new challenges.

In the interviews the present researcher held with the headteachers, it was suggested by those headteachers that teachers did not use the appropriate approaches when teaching learners with special needs. Most of the teachers especially those who had not undergone the training used the traditional methods of teaching general classes and assumed that all learners were the same. The use of individualized educational programmes was never emphasized and learners with special needs were supposed to learn at the same pace as other regular learners. Thus the headteachers reported that it was important that teachers be trained in inclusive teaching strategies so that all learners could benefit.

From the findings of the present study, it is apparent that some teachers handling inclusive classes are not well equipped with the necessary skills and capacities to ensure that all learners in their classes achieve academically as expected. There are general teachers in inclusive schools who require direction from teachers who are trained in special need education. However from the interviews held with headteachers, schools were not well staffed with qualified trained teachers in special need education. Thus it is not possible for the available qualified teachers in special need education to in-service other general teachers at the same time teach the overcrowded classrooms. From the literature reviewed, consultative model of inclusion involves the use of teaching strategies which includes individualized educational programmes, small group

instructions and co-teaching (Cook & Friend, 1995) as cited by Rinaldo *et al* (2010). In co-teaching model of instructions, two or more professionals deliver substantive instructions to a diverse or blended group of students in a single physical space.

The general and special educators engage in parallel teaching, station teaching, team teaching and alternative teaching. They may opt to rotate teaching responsibilities throughout the day with other teachers serving in support capacity. When teaching the authors noted that there is differentiation of instructions and employment of intervention techniques designed to benefit both general and special need teachers. In small group model, there is one to one teaching where there is direct support. In this format there is individualized teaching by a certified consultant in special need education. From the literature reviewed, inclusive schools should have sufficient teachers trained to handle learners with special needs in inclusive classes. Effective use of teaching strategies that make learners with special needs benefit in large sized crowded classes.

5.3.4 Teachers' knowledge of curriculum and examinations adaptation towards implementation of inclusive education

The present study found out that the curriculum and examinations had not been adequately adapted to suit the needs of learners with special needs and other regular learners. The curriculum adaptation and examination was also affected by both teachers experience and qualification. Teachers who had taught learners for over five years interacting with the curriculum as they teach using different techniques were more effective compared to those teachers who had taught for a short period of time. These teachers in the long run can know which content materials are suitable for learners with

special needs and which one are not suitable. For instance, teachers who teach learners with hearing impaired at class five levels would know which steps to follow when introducing concepts in a subject like maths such as addition, subtraction, multiplication and division. The teachers if trained adequately in special need education would also know the limitation of learners with hearing impaired in terms of grasping concepts and thus will differentiate the instructions, differentiate the assessment procedures and award marks as per those limitations. According to Falvey *et al* (2004), for all learners to access education and be able to communicate and interact well with the peers, the curriculum has to be differentiated and adapted adequately. In countries like Korea, a more holistic approach that considers grades, essays and extracurricular activities is being used to promote learners to the next classes (Beech, 2002).

Most of the teachers who were involved in the present study reported that the awards of certificates by Kenya National Examinations council was based on national exams such as Kenya certificate of primary education, Kenya secondary certificate examinations among others (18.7% of teachers strongly agreed and 37.7% of teachers agreed). However, those learners with severe special needs are awarded certificates basing on other abilities and talents by individual institutions (52% of teachers agreed with that assertion). In South Korea, students are picked not because of their test scores but for their unique talents and abilities to proceed to the next level or to pursue their careers (Beech, 2002). According to Elliot (2002), examinations make students drop out of schools especially those students from rural areas and those with disabilities.

UNESCO (1994) highlighted the need for child centered pedagogy that addressed the educational needs of the disadvantaged and disabled children. Jha (2002) noted that success and access to education by all learners lied in the curriculum, pedagogy and examinations adaptations. In Kenya passing of examinations means good jobs and thus good life. The students who have passed exams go to good schools, colleges and universities and pursue careers that are lucrative such as law, medicine, engineering, architecture among others. Those students who do not perform well in examination are usually condemned to oblivion and are considered failures in life. Later these failures turn to menial jobs though other gifts and talents they could be having are usually unrecognized. Learners with special needs have talents and unique abilities which are never considered or captured by the formal curriculum and examinations in Kenya. As such learners with special needs drop out of school and become beggars. The only way can be of value is for the education system to be adapted so that their needs can be catered for. Among the key recommendations the government of Kenya made towards implementation of inclusive education in Kenya included training of teachers in inclusive education, the adaptation of the curriculum to cater for special need learners in inclusive programmes, inclusion of special need education in teacher trainings colleges and redesigning of national examinations to cater for special need learners (Republic of Kenya, 2009). Kenya government has been preparing an inclusive education policy which envisaged that by the year 2015, each primary school could have been posted with one special need teacher to help implement inclusive education programme (Adoyo, 2007).

The present study showed that teachers did not adapt the curriculum and examinations adequately to suit the needs of learners with special need in inclusive classes. In most cases teachers are confined to the official curriculum and syllabuses and usually do not break down the content to manageable units where learners with special need can benefit. Teachers at the same time are not thoroughly trained to break down the content and also their inspectors are not aware that learners with special needs learn at their individual pace. Most inspectors are ignorant of the special need cases of learners hence can't encourage teachers to teach learners at their individual pace. On the other hand, teachers especially those trained in special need education perhaps have the skills, knowledge and capacity to adapt the curriculum and examinations to suit the needs of learners with special needs in an inclusive setting but they are constrained by the requirements of the ministry of education. For instance, the present performance contracting, syllabus coverage and performance in national examinations would work against a teacher in an inclusive school.

Teachers are required to plan daily for over 50 pupils in a class, cover a certain number of topics, document the same and do the filling and submit to the headteachers office. In addition the introduction of free primary education programme has overwhelmed teachers in terms of crowded classrooms where a teachers handle almost over 70 learners in a class. These challenges sometimes are insurmountable to teachers whether trained in special need education and or general teacher and they make them not able to adapt the curriculum and examinations to suit learners with special needs in inclusive classes. As the findings of the present study suggest it is important that teachers adapt the curriculum and examinations if learners with special need have to benefit in inclusive classes and

thus effective implementation of inclusive education programme in primary schools in Kakamega County.

5.3.5 Teachers' knowledge of Suitable resources and environment towards implementation of inclusive education

The present study found out that suitable resources that included adapted chairs, hearing aids, spectacles, word processors, pencil holders, digital organizers, and Braille machine among others were not provided by teachers in inclusive classes in schools inclusive schools. Few others that were provided included wheel chairs (2.2%), modified toilets (2.2%) and hearing aids (11%).

Studies done previously in other parts of Kenya revealed that suitable resources including assistive aids had not been adequately provided in inclusive schools (Kurumei, 2012; Okuta, 2011 & Ndonye, 2011). These resources are crucial if learners with special needs are to benefit academically and socially in an inclusive programme (KISE, 2007). These facilities enhance acquisition of cognitive abilities such as retention of knowledge, reasoning, interaction and imagination.

Teachers were to ensure that assistive aids and other specialized learning resources were given first priority when planning for any education programme for learners with special needs in the inclusive classes (Maryberry & Lazarus, 2002 & Muka, 2009). Lazarus and Maryberry (2002) and Muka (2009) contended that learners with special needs benefited greatly from using such assistive aids as word processors, digital personal organizers, multi-media (films and microphones).

As the study showed, most inclusive schools did not have suitable resources especially assistive aids which include hearing aids, word processors, Braille machines, audiometers among others. These devices are expensive and most schools do not have financial capacity to procure them. Schools get little money per individual pupil and these gadgets are never included. These gadgets can only be donor funded or it should a well thought out different government project from the usual government capitation. These could have been the reason why the researcher did not find assistive aids in the schools where he carried out the study. As suggested earlier by different findings of various studies notably Kurumei *et al* (2012), KISE (2007), Merybery and Lazarus *et al* (2002), assistive technology is of great value to effective inclusive education implementation.

Learners with visual impairments cannot function without such assistive technology as magnifying glasses, Braille machine, software added to the computer that enable student type and read thick lined papers and large print texts among others while learners with hearing impairments require assistive technology such as hearing aids, speech trainers and audiometers among others. These learners with hearing impairments also require the services of sign interpreters. Further, learners with physical difficulties require assistive technology such as false legs, calipers/special shoes among others. The assistive technologies cited are expensive to purchase by the ordinary public primary school. In Kenya, the ministry of education seems to be hampered by financial constrains hence cannot adequately supply the necessary resources to all inclusive primary school.

The restructuring of the classrooms, construction of ramps, paths and leveling of the school compound was important if the inclusive education had to succeed (KISE, 2007).

Ndonye (2011) and Kochung (2009) reported that learners with special needs and disabilities required barrier free environment to maximize their functional potential. Republic of Kenya report on the special needs policy (2009) recommended that the environment in an inclusive setting was to be accessible and disability friendly. The policy further recommended that all primary schools were to be provided with funds to remove the existing barriers that made school environment unfriendly to learners with special needs and disabilities. The areas that were to be made disability friendly included libraries, toilets, furniture, steps (ramps) and pathways. With this friendly environment for persons with disabilities it was envisaged that learners with low vision and motor problems were to move around in the school environment easily and were to feel part and parcel of the school community (KISE, 2007).

The schools where the present study was carried out had not adapted their environment adequately. Most classrooms had no enough ventilations thus no enough light in the classrooms, desks and chairs were designed for normal learners and not for learners with special needs especially those with physical difficulties, the school grounds were not level most of them had hills and stones, ramps and paths were missing. From the interviews held with the headteachers, they reported that they had been sensitized on disability friendly environment and even funds sent to their schools in 2005 to enable them modify their school environment and make schools disability friendly. However, headteachers reported that when these funds were sent and because inclusive education was not considered a priority, most headteachers wired the funds to other school needs and thus the environment was not made disability friendly as it had been anticipated by

the ministry of education. This implied that even the ministry of education itself never monitored how these funds were used.

Kenya programme organization (KENPRO, 2010) noted that issues to be addressed for successful implementation of inclusive education included the provision of adapted and specialized equipment, adaptation of buildings and physical structures in the school in the school were to be suitable and should have met the needs of the learners with motor problems. In a study carried out by Mukhopadhyay, Nenty and Abosi (2012) in Botswana on inclusive education, it was found out that for inclusive education to succeed there was need for improvement in the school infrastructure and provision of resources.

The present study has suggested that teachers did not use resources that could enhance inclusive education implementation. Most classes had such resources as hearing aids, Braille machines, and word processors among others. The headteachers whom the present research interviewed complained of lack of funds, lack of cooperation from the stakeholders to enable schools purchase the resources. However, they also noted that teachers could not be resourceful enough to improvise materials which could help in teaching learners. Thus most of the classes that had learners with special need included lacked suitable resources including the modified classroom environment.

5.3.6 Teachers' attitudes of how inclusive education had been implemented in schools

The study found out that inclusive education had not been implemented effectively. The schools that were implementing inclusive education had one or two teachers trained at diploma or degree levels. Others were either in serviced or sensitized on inclusive

education and or were teaching in inclusive classes because they were posted in those schools by The Teachers service commission. The head teachers in the interviews told the current researcher held with them that one teacher trained in special need education was in charge of the inclusive education programme. In other words, all inclusive programmes were manned by a trained teacher in special need education irrespective of the level of training. In most cases the headteachers reported that teachers in charge of the programme was the most concerned, other teachers were not even interested and if they happened to have learners with special need in their classes they did not handle the learners well. Headteachers reported learners who were presently included in different inclusive classes were previously in special units that were attached to those primary schools. This was as a result of change in policy in education towards inclusive education. The teachers who previously were handling special units were thus more concerned with inclusive education compared to those were in regular classes before the policy of inclusive education came into effect. This perhaps explains the reasons why some teachers had positive attitudes while others had negative and or ambivalent attitudes towards inclusive education. These other teachers who were in general classes found it difficulty accepting learners with special need in their classes. They had it difficulty adjusting and using appropriate teaching strategies, adapting the curriculum and examinations, using suitable resources and environment that could assure effective inclusive education implementation. However, the heateachers reported that they usually mounted inset courses in their different individual schools to sensitize other general teachers who were not previously in special units on how to handle learners with special needs that were included in regular classrooms which they were manning.

According to the present study findings, ratings of the teachers attitudes was satisfactory, while the teachers attitudes towards training was ambivalent where only 36.3% of teachers had diploma training while 18.3% of teachers had degree training. The ratings of teaching strategies, curriculum and examination adaptation and resource provision towards inclusive education implementation was unsatisfactory. This implied that inclusive education was not being implemented effectively. Teachers were not using of teaching strategies that could enhance inclusive education implementation and they were not providing suitable resources and adapted the curriculum and examination.

5.4 Conclusions

Based on the findings of the study, the following conclusions were made:

From the findings of the study, it was concluded that the teachers' experience and qualification influenced the teachers' attitudes, teaching strategies and curriculum and examinations adaptation towards implementation of inclusive education in primary schools in Kakamega County. However, teachers' gender only influenced the teachers' attitudes.

Also based on the findings of the study, it was concluded that more female teachers than male teachers were handling inclusive classes and were more positive than male teachers towards implementation of inclusive education in primary schools. Further, it was concluded that some teachers in inclusive primary schools were trained in special needs education and had knowledge and used different teaching strategies that suited all learners in inclusive classes in primary schools.

The study also concluded that teachers had provided few suitable resources and environment and did not adequately adapt the curriculum and examinations that suited all learners in inclusive classes. Lastly the study concluded that inclusive education was not being implemented effectively in primary schools in Kakamega County.

5.4 Recommendations

In relation to the study conclusions, the following recommendations were made:

- i. All teachers teaching in inclusive schools should have teaching experience and necessary professional qualifications in special needs education.
- ii. All teachers in inclusive schools should have positive attitudes towards learners with special needs and implementation of inclusive education in all primary schools.
- iii. Teachers in inclusive schools should have knowledge and should use relevant teaching strategies for all learners including those with special needs to benefit academically and socially.
- iv. Teachers in inclusive schools should have knowledge of curriculum and examination adaptations suited to the needs of diverse learners in inclusive classrooms.
- v. Teachers in inclusive schools should have knowledge of and use suitable resources and environment that suit the needs of all learners in inclusive classrooms.

- vi. Teachers in inclusive schools should implement inclusive education program effectively using through holding positive attitudes and necessary knowledge on inclusive education.

5.5 Recommendations for further study

I, A study to be conducted in all colleges that train teachers in special needs education including Universities on the quality and relevance of the training offered towards implementation of inclusive education.

ii, A study to be carried out on the suitability of assistive aids for different categories of learners with special needs in primary schools in the country.

iii, Different studies to be carried out on inclusion of specific types of special needs learners in schools.

REFERENCES

- Adoyo, P. O. (2007). Educating Deaf children in an inclusive setting in Kenya: challenges and considerations. *Electronic journal for inclusive education*. Vol 2., No 2(Summer/Fall), 120-125.
- Agbenyega, J. (2006). *Examining teachers concerns and attitudes to inclusive education in general schools*. Ghana. Codat. Ibadan.
- Ainscow, M., T., Booth and Dyson, A. (2006). *Improving Schools. Developing inclusion*. Abingdon, Routledge.
- Ainscow, M and Booth, T. (2011), *Index for inclusion: developing learning and participation in Schools*. Bristol: Centre for Studies on Inclusive Education.
- Alghazo, E & Gaad, E. (2004). General Education Teachers in the UAE and their acceptance of inclusion of students with disabilities. *British Journal of special education*, 31(2), 94.
- Alper, S., & Ryndak, D.L. (1992). Educating students with severe handicaps in regular classes. *The elementary school journal*, 92, 373-387.
- Al-Zyoudi, M.(2006). Teacher's attitudes towards inclusive education in Jordian schools. *International Journal of Special Education*, 21(2),55-63.
- Attielo, J. and Bullock, L.N. (1990). Building Commitment to responsible inclusion. *Preventing school failure*, 43:99-102 (Links).
- Avramids, E. and Kalyva, E. (2007). The influence of Teaching experience and professional development on Greek teachers attitudes towards inclusion. *European Journal of Special Needs Education*, 22 (4), 367-389, doi: 10.1080/108856250701649989
- Avramids, E., Bayliss, P., and Burden, R..(2000). Students Teachers attitudes towards the inclusion of children with special education needs in the ordinary school. *Journal of Teaching and Teacher Education*, 16(3), 277-293, doi: 10.1016/50742-051x(99)0062-1
- Bogdan, R.C., and Birklep, C.K. (2007). *Qualitative Research for Education. An introduction to Theories and Methods*. Bostn MA Peason.
- Bandura, A. (1963). *Aggression: A Social Learning Analysis*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.

- Beech, H. (2002). School daze. *Time*, April 15, 2002 Vol.159 No. 14(70-78).
- Bowe, F. (2005) *Making Inclusion work*. Meril Education. Upper saddle five. Prentice. Hall.
- Brownel, M. (2007). Evaluation systems for Special Education. Perf-Brownell.pdf (Website).University of Florida.
- Burstein N., Sears, S. Wilcoxon, A., Cabello. B. & Pagana S. (2004). Moving toward inclusive practices. *Remedial and special education* 25 (2), 104 – 116. Retrieved September 26, 2006 from <http://hwwilsononweb.com>.
- Campbell, J., Gilmore, L., and Cuskelly, M. (2003). Changing students teachers attitudes towards Disability and inclusion. *Journal of Intellectual and Developmental Disability* 28(4), 369-379, doi:10.1080/13668250310001616407.
- Chhabra, S., Srivastava, R., and Srivastava, I, (2010). Inclusive Education in Botswana: The perceptions of school Teachers. *The Journal of Disability policy studies*, 20(4), 219-228.
- Carey, M (1997). *Fundamentals of special education and vocational rehabilitation*. Ibadan Codat.
- Chomba W. C. (2012). Past and present perceptions towards Disability. A historical perspective. *Disability studies quarterly*. Vol , 32. No 2. 30-34
- County Education Office (2013). Quarterly TSC returns. Unpublished report from county education office. Kakamega.
- Creswel, J. W. (2003). *Research Design*. London. Sage Publishers.
- Creswel, J. W. (2008). *Education Research: Planning, Conducting and evaluating quantitative and qualitative research (3rd Ed)*. Upper Saddle River, NJ: Pearson.
- Drew, J. C., Hardsman, L.M. and Hosp, L. J.(2008). *Designing and Conducting research in Education*. Thousands Oaks, CA: Sage.
- EARC-Kakamega North, South, Central, Nabakholo, Lugari, Matete, Mumias, Butere & Khwisero. (2014) . Report on learners with special needs. Kakamega.
- Elliot, M. (2002) .Test Score, Don't say it all. *Time*, April 15, 2002 Vol.159 No. 14,100.
- Falvey, M.A., Dingle, M., Givner, C.C., Haager, D. (2004). Essential Special and General Education Teacher Competencies for preparing teachers for inclusive settings. Issues *In Teacher Education*, spring. Vol. 13. No 1 (40-44).

- Feldmann, R. S. (1990). *Understanding Psychology*. (2nd Ed). United States of America. McGraw Hill. Inc. New York.
- Fisher, D., Frey, N. & Thousands, J. (2003). What do special educators need to know and be prepared to do for inclusive schooling to work? *Teacher education and special Education* 26(1), 42 – 56 retrieved September 26, 2006 from <http://hwwilsonweb.com>
- Forbes, F. (2007). Towards inclusion: Australian perspectives, *Support for Learning*, 22(2), 66-71. doi:10.1111/j.1467-9604.2007.00449x.
- Forlin, C. (2006). Inclusive Education in ten years after Salamanca. *European Journal of psychology of Education*, 21(3): 265-277. Doi: 10,1007/BF03173415.
- Frankel R.S., Wallen E.N. (1993). *How to design and Evaluate Research in Education* (2nd Ed).
- Frankel, J.R and Wallen, N.E (2008). *Design and evaluate research in education*. London New McGraw. Hill Inc.
- Gaad, E and Khan, L.(2007). Mainstream teachers attitudes towards inclusion of students with special educational needs in the private sector: A perspective from Dubai. *International Journal of special education*, 22(2), 95-109.
- Gall, M.D., Borg, W.R., and Gall, J.P. (1996). *Research Methods, Educational Research an Introduction*(6th ED). New York: Longman.
- Gall, M, W & Borg, J. G. (1989). *Education Research. An Introduction*. New York. Longman.
- Harding, K. A., and Darling, C. A. (2003). Understanding Inclusion: Perspectives of family and Consumer sciences teachers, *Journal of Family and consumer sciences*, 95(1), 38-46.
- Hastings, R.P., and Oakford, S.(2003). Student teachers Attitudes towards the inclusion of children with special needs. *Educational psychology*, 23(1), 87-94, doi:10.1080/01443410303223
- Hayes, N. (2000). *Foundation of psychology*. J&L Composition ltd. South Western Filey.
- Hodkinson, `A.(2006). *Conceptions and Misconceptions of Inclusive education. A critical analysis of newly qualified teachers knowledge and understanding of inclusion*. *Journal of Research in Education*, 76, 43-55.
- Heijnen, J. L. (2002). *Development Disorders of the Frontostriatal system. Neuropsychological, Neuropsychiatric and evolutionary perspectives*. Philadelphia, P.A: Psychology Press.

- Hunt, P & Goetz, L. (1997). Research on inclusive educational programmes, practices and outcomes for students with severe disabilities. *The Journal of special education*. 20:103-110 (Links).
- Idol, L. (2006). Towards inclusion of special Education students in General Education: A program Evaluation of 8 schools. *Remedial and special education journal*. Vol 27, No 2. 10-12.
- Ingule, F.O., Rono, R.C., Ndambuki, P.W. (1996). *Introduction to Educational Psychology*. East African publishers. Nairobi. Kampala.
- Israel, G. D. (2009). Determining Sample Size: *Gainesville, FL. Florida State University, Cooperative Extension Service*. Retrieved 7, April, 2012 from <http://edis.ufl.edu/Pd006> (Achieved at Webcite at <http://www.Webcitation.org/66Kke1Cob>).
- Jelas, Z.M., Mustapha, R., & Ali, M M.(2006). An empirical on study on Teachers perceptions towards inclusive education in Malaysia. *International journal of special education*. Vol. 21 no 3. 39-40.
- Jha, M.M. (2002). *Schools without walls: Inclusive Education for all*. Oxford: Heinmann Publishers.
- Johnson, R. B and Onwuegbuzie, A.J.(2004). Mixed methods research: A research paradigm whose time has come. *Journal of Education research*, 33(7), 14-26.
- Kamene & Nyaigoti A, (2013) *Institutional factors influencing implementation of inclusive Education in Public Primary Schools in Nyamira County*. Unpublished M.ed project University of Nairobi.
- Kamp, D. M., Barbetta, P.M., Leonard, B.R., & Dequadri, J. (1994). Class wide Peer tutoring: integration strategyfor students with autism and general classroom peers. *Journal of the Association of Applied Behaviour Analysis*, 27, 49-61.
- Katz, J., & Mirenda, P. (2002).Including students with Developmental disabilities in general classrooms: Educational benefits. *International journal of special education*. Vol. 17 no 2, 20-21.
- Kasomo, D.(2007). *Research Methods in humanities and Education*. Eldoret-Kenya. Egerton University Press.
- KENPRO. (2010). *Challenges facing inclusive Education in regular primary schools in Kenya* *KENPRO online papers portal*. Available online at www.kenpro.org/papers.

- Kenya National Examinations Council. (2005, 2006, 2007, 2008, 2009, 2010, 2011 & 2012). *Kenya Certificate of Primary Education examinations series*. Nairobi. KNEC.
- Kenya Institute of Education. (2012). *Situational Analysis of inclusive Education in primary schools and secondary schools in Kenya*. Ministry of Education. Nairobi.
- Keriongi, L. (2011). Attitudes of teachers and pupils towards inclusive education in Kenya. A case Study of Nairobi County. Unpublished master of Education Thesis. Kenyatta University.
- Kiaritha, E. N. (2011). The implementation of persons with Disabilities Act (2003) in public Universities in Kenya: Its implications on social interactions and learning of students with disabilities. Unpublished PHD thesis. Moi University. Eldoret.
- Kilei, J. (2014). School denies pupil chance to sit for KCPE examinations. *March, 15th Standard Newspaper, pp.10*. Nairobi.
- King-Seers, M. E., & Cummings, C.S. (1996). Inclusive practices of classroom teachers. *Remedial and special education journal*. Vol 17, 217-225.
- KISE (2002). *Educational assessment and interventions. Measures for children with Special need (1st Ed)*. Introduction to inclusive Education. Nairobi. KISE.
- KISE. (2007). *Introduction to Inclusive Education (2nd Ed)*. Nairobi. KISE.
- Kochung, E. (2009). Role of Higher Education in Promoting Inclusive education; Kenyan perspective. *Journal of Emerging trends in educational research and policy studies (JETARAPS)* 2(3):144 – 149.
- Kombo, D. K. & Tromp, D. L .A (2006). *Proposal and Thesis writing: An introduction*. Pauline Publishers Africa. Nairobi.
- Kristenson, K., Loican, O. M. and Onen,N. (2003). The inclusion of learners with barriers to learning and development into ordinary schools settings: A challenge for Uganda. *British Journal of special education*, 30(4), 194-201.
- Kumar, D. A. (2004). *Inclusive Education: A paradigm Shift*. Kuruksheet University Hararyana Vinay. New Delhi.
- Kurumei W.K. (2012). *Effectiveness of inclusive Education in Public Primary School in Keiyo District*, Unpublished Master Thesis. Mt. Kenya University Elgeiyo.
- Lawson, H., Parker, M., and Sikes, P.(2006). Seeking stories: Reflections on a narrative approach to researching understanding of inclusion. *European Journal of special needs education*, 21(1), 55-68.

- Leung, C and Mak, K. (2010). Training, Understanding and the Attitudes of primary school Teachers regarding inclusive education in Hong Kong. *International Journal of inclusive education*, 14(8), 829-842.
- Levin, H. (1997). *Doing what comes Naturally: Full inclusion in Accelerated schools-Inclusion and school Reform*. Lipsky, D. K & Gartner, A. (Eds). Baltimore: Paul H. Brooks publishing company.
- Lipsky, D., and Gartner, A. (1998). Taking Inclusion into the future. *Journal of Educational Leadership*, 56(2), 78-81.
- Long, M., Wood, C., Littleton, K., Passenger, T., and Sheely, K.(2011).*The psychology of education*.(2ND Ed).New York: Routeledge.
- Mahbub, T. (2008). Inclusive education at a BRAC School-perspectives from the children. *British Journal of special education*, 35(11), 33-41.
- Maryberry, S. and Lazarus, B.(2002). *Teaching students with special needs in the 21st century classroom*, Lanham: Scarecrow. Press Inc.
- Mashiya, J. (2003). Educators' Attitudes Towards Inclusive Education. Unpublished M.ed Thesis. University of Nairobi. Nairobi. Kenya.
- Mba, P. O (1980). Planning for the Individual Child. Unpublished Lecture Notes. University of Ibadan. Nigeria.
- McDonell, J.(1998). Instruction to students with severe disabilities in general education settings. *Education and training in mental retardation and developmental disabilities*. 33, 199-215
- Merriam-Webster dictionary. (1978). New York, NY:Merriam –Webster.
- Mike, O. (1990). *The Individual and social model of disability*. Leads Ac. Uk. Retrieved 2012- 11- 10
- Miles, S. (2000). Enabling Inclusive Education: Challenges and Dilemmas. Paper presented at A Symposium on development policy entitled, 'children with disabilities and the Convention on the Rights of the child". Gustav Stresman Institute, Bonn, Germany
October 27-29. www.eenet.org.uk/theory_practice/bonn_2shtml.
- Mugenda O.M. and Mugenda A.G. (2008). *Research methods in social sciences (5th Ed)*. London St. Martins Press Inc.

- Muka, S. (2009). Assessment of special units in education of children with special needs in Kakamega central District. Unpublished Masters Thesis. Masinde Muliro University.
- Mukhopadhyay, H., Nenty, J., Abosi, O. (2012). *Inclusive Education for learners with Disabilities in Botswana primary schools*. DOI: 10, 1177/215824401245184. Published 29 June, 2012.
- Mutungi, N & Nderitu M. (2014) Perception and Head teachers on effectiveness of inclusive Education in Public Primary Schools in Yatta Division. *Journal of Education and Social Research*. Vol. 4 No. 1, 2-4
- Mwaimba, A. W. (2014). Factors influencing Implementation of Inclusive Education in primary schools in Taita Taveta County. Unpublished Master of Education Degree Thesis, Nairobi University.
- Mwaura, S. (2012). *Baseline Study on inclusive Education in Nuba Mountains* .South Sudan Kordofan Publishers. Nairobi.
- Nachimias, C.F & Nachimias, D. (1996). *Research Methods in Social Sciences (5th Ed)*. Higher Ed Publishers. London.
- Ndonye, F. (2011). Challenges of including the excluded in the education and development in Kenya. Unpublished paper. Moi University. Eldoret.
- Ndurumo, M.M. (1993). *Exceptional Children: Developmental Consequences and Intervention*. Nairobi: Longman Publishers.
- Ndurumo, M. M. (2003). Potential solutions to the challenges facing persons with disabilities in Kenya. A Paper Presented to the World Bank, Nairobi.
- Ogula, P. A. (2002). *Research Methods*. The Catholic University of Eastern Africa, Nairobi.
- Oluoch, G. P (2002). *Essential of curriculum Development*. Bondo. Macmillan Publishers
- Okuta, W. (2011). Inclusion of Mentally retarded children in Regular primary School in Rachuonyo District, Kenya. Unpublished Master of Education Thesis. Maseno University
- Orodho, J. A. (2003). *Techniques of writing Research Proposals and reports*. Nairobi. Macmillan Publishers.
- Oso, W. Y & Onen, D. (2009). *A general guide to writing Research proposal and report*. Jomo Kenyatta Foundation. Nairobi.

- Pearson V., Lo., Chui, E & Wong D. (2003). A heart to learn and care? Teachers? Responses towards special needs children in mainstreaming schools in Hong Kong. *Disability and society*, 18: 4, 489 – 508.
- Peters, J. S. (2003). *Inclusive Education: Achieving Education For All by including those with Disabilities and special needs*. World Bank Report. 266900wpoeEnglish0inclusive0Education.pdf.
- Puamau , P. (2009). An opening Address at the Regional Workshop on advancing inclusive Education in the pacific by Emmeri Wenty on 5/10/2007 at Institute of Education University of the South Africa.
- Putman, R. F., Handler, M., Ray, J. & O’Leary-Zonarich, C. (2002). *Class wide support Intervention: Using functional assessment practices to design effective interventions In General classroom settings*. A paper presented at the Annual conference of Association of Behavior Analysis. Toronto, Canada.
- Rinaldo, J. V., Foote, J.C. and Kilanowsk-press, L. (2010). Inclusion classrooms and Teachers: A current practice. *International Journal of special Education*, 25(3),53-54.
- Republic of Kenya (2003). *Persons with Disabilities Act*. Nairobi: Government Printer.
- Republic of Kenya (1964). *Report of the Kenya education Commission*. Nairobi: English press Ltd.
- Republic of Kenya (1968). *Education Act-Amendment Act: The Education for all Handicapped children*. Nairobi: Government Printer.
- Republic of Kenya (1976). *Report of the national committee on Educational objective and Policies*. Nairobi: Government Printer.
- Republic of Kenya 1988). *Report of the presidential working party on Education and manpower training for the next decade and beyond*. Nairobi: Government Printer.
- Republic of Kenya (1999). *Totally Integrated Quality education training (TIQUET): Report of the Commission of Inquiry into the Education system of Kenya*. Nairobi: Government Printer.
- Republic of Kenya (2001). *The Children’s Act*. Nairobi: Government printers
- Republic of Kenya (2003). *Report of the Task Force on Special Needs education*. Nairobi: Government Printer.
- Republic of Kenya (2005a).*Sessional paper No. 1: A Policy framework for education. Training and Research*. Nairobi: Government Printer.

- Republic of Kenya (2005b) Sectional paper no. 2.: *Kenya Education Sector Support Programme (KSSP 2005 – 2010). Deliver Quality Education Training to all Kenyans*. Nairobi: Government Printer.
- Republic of Kenya (2008). *Vision 2030*, Government Printer, Nairobi
- Republic of Kenya. (2009). *The National Special Needs Educational Policy Framework*. Nairobi: Ministry of Education.
- Republic of Kenya (2010). *National housing and Population census*. Nairobi: Government Printer.
- Republic of South Africa (2002) Implementation of inclusive Education in South Africa. True stories we can learn from Kwazulu Nattal.
- Roberts, R. & Martha, N. (1995). The return of students with learning disabilities to regular classrooms, A sell out? Learning Disabilities, Research and Practice. *The division for learning disabilities, council for exceptional children*, 10(1), 46 – 58
- Rodgers. J. (1993). The inclusion revolution (Electronic version) *Phi Delta Kappa – the research Bulletin* 11, 1 – 6
- Sightsavers. (2011). Policy paper: Making Inclusive Education a reality. WWW.sightsavers.org.
- Springer, K. (2010). Educational research: Contextual approach. New York: John Willey.
- Stainbak, S. and Jackson, H.J. (1992) *Towards inclusive Classroom*. Baltimore; Paul h. brooks.
- Tamar T. (2008) Regular teachers attitude towards inclusion of learners with special needs in Tibilis Norway, unpublished M.ed Thesis Oslo University Norway.
- Tania, A. K. (2011). An Investigation of secondary school teachers' attitudes towards knowledge about inclusive education in Bangladesh. M.ED Thesis, University of Canterbury Christian church Newzealand.
- Triandis, H.C.(1971). Attitudes and Attitudes change. New York. John Willey.
- UNESCO (2008). *Open file on Inclusive Education*. Paris: UNESCO Workshop printers. <http://www.unesco.org/education/inclusive>. Downloaded 14th July,
- UNESCO (1948). *Declaration of Human rights*. Paris. UNESCO.
- UNESCO (1998). *Developing Inclusive Education*. Paris. UNESCO.

- UNESCO (1989). *Conversations of the Childs Rights*. Paris. UNESCO
- UNESCO (1994), *The Salamanca Statement and Framework for Action on Special needs Education and Vocational Rehabilitation*: Ibadan; Codat, UNESCO.
- UNESCO, (1990). *The world Declaration on Education for all*. Jomtien. Paris, UNESCO
- UNESCO (1993). *Standard Rules on the equalization of Opportunities for person with disabilities*. Paris. UNESCO.
- UNESCO (1996). *Learning: The treasure within, Report to UNESCO of the International commission on Education for the 21st century*. Paris: UNESCO.
- UNESCO (2000). *United Nations Millennium Declaration: A/Res/55/2*. New York: UNESCO.
- UNESCO (2001). *An open file for inclusive education*. New York, NY 10017. USA.
- UNICEF (2007). *State of the worlds children*. New York. NY 10017. USA.
- UNESCO, (2009), *Towards Inclusive Education for Children with Disabilities: A Guideline*. Bangkok
- U.S America Congress (1997). Individuals with Disability Act Amendments, Pub. L. 105-17, 1401-1420.
- Villa, R. A.& Thousand J.S, (2003). Making inclusive education work. *Educational leadership* 61 (2), 19 – 23 Retrieved September 26, 2006 from <http://hwwilsoweb.com>
- Wagithunu, M.N.(2014). Teachers' Attitudes as a Factor in the realization of Inclusive Education practice In Nyeri County. *Mediterranean Journal of social sciences*, 5(5), 117-118.
- Walton. E., Nell. N., Hugo. A. & Muller. H. (2009). Research into the inclusive practices of Independent schools. *South African Journal of Education*. Volume 29, No. 1,10-15 Pretoria.
- Wanjiku, J.(2004). Factors affecting the implementation of inclusive education policy of children with special needs in public primary schools in Kikuyu Division, Kiambu District.[URL:http://erepository.uonbi.ac.ke](http://erepository.uonbi.ac.ke); 8080/xmlvi/handle/123456789/18404.
- Whitbreadits, K. M.(2012). Inclusive Education. Teaching Exceptional children. *Council for exceptional children*. Vol 39 No 4. (35-40).

APPENDICES

Dear Respondent,

The questionnaire you are about to complete is for Mr Andrew Kuya Makachia- a PhD student at Moi University pursuing Educational Psychology. The information you give will be for research purpose and not for any other reason. Therefore feel free to give the correct information and as accurately as possible for the researcher to be able to make relevant recommendations that will be used to improve the education of special need children. Also the information given will be treated confidentially and you do not need to write your name. Participation is voluntary and therefore you are not under any obligation to complete the questionnaire but it will be helpful to the researcher to complete it.

**APPENDIX I: QUESTIONNAIRE ON TEACHERS ATTITUDES AND
KNOWLEDGE TOWARDS INCLUSIVE EDUCATION IMPLEMENTATION.**

INSTRUCTIONS

This is a questionnaire for teachers and has five sections. The first section has general information about teachers teaching in inclusive schools. Second section has items on attitudes of teachers towards inclusive education implementation. Third section has items on the teachers knowledge and use of the teaching strategies. Section four has items on teachers knowledge on adaptation of the curriculum, examinations and suitable resources and environment and section five has items on implementation of inclusive education.

SECTION ONE: Background Information

1. Name of the school.....
2. Gender of the teacher.....
3. Is the school practicing inclusive education?
4. what type of special need learners are included in your school i.e hearing impaired, intellectually challenged, visual impairment, learning disability, emotionally disturbed, etc
5. How many learners are included in the school?
6. What is your qualification? Certificate () Diploma () 1st degree () Masters and above () Tick appropriately
7. What is your qualification in special need education?
Certificate () Diploma () 1st degree () Masters and above () Tick appropriately
8. How long have you been teaching? Between 1 and 5 years () between 6 and 10 years () 11 years and above ()

SECTION TWO: Questionnaire on teacher's attitudes towards inclusive education and learners with special needs

Instructions:

This questionnaire sought information from teachers about their attitudes towards inclusive education and learners with special needs. Tick (√) one of the options given to indicate your attitude towards inclusive education.

KEY: SA-Strongly agree, A-Agree, UN-Undecided, DA-Disagree, SDA-Strongly disagree

ITEMS

		SDA 1	DA 2	UN 3	A 4	SA 5
1	Teachers understand the meaning of inclusive education.					
2	Learners with special needs have a right to be included in this school.					
3	Learners in your class interact freely and are friendly to those learners with special needs.					
4	Learners with special needs in inclusive class do not delay the syllabus coverage.					
5	The government, community and parents accept the concept of inclusive education.					
6	Learners with special needs do not always lag behind the rest in academic achievement.					
7	All learners in an inclusive school are given equal opportunities in all school activities.					
8	Inclusive education is not a burden to the school and other regular learners.					

9	Learners with special needs do not struggle painfully to learn in inclusive classes.					
10	Learners with special needs belong to regular schools and not special schools or special teachers.					
11	The right place for learners with special needs is inclusive schools and not hospitals or special schools.					
12	People do not get disabilities or special need through physical contact.					
13	Inclusive education is practiced in Kenyan primary schools.					
14	Teachers teach learners with special needs like any other and not because they are paid special allowance or extra pay in regular schools,					
15	Teachers ensure that all learners participate in games at their pace in regular primary schools.					
16	Teachers teach all learners in inclusive classes to share teaching and learning materials.					
17	Classroom activities are assigned appropriately and they build an inclusive community.					
18	Teachers focus on the strength of learners and not the special needs.					
19	Learners with special needs are not a curse in their families.					

SECTION THREE: Questionnaire on teaching strategies used by teachers in inclusive schools

Instructions:

This questionnaire sought information on teachers' attitudes and knowledge towards the teaching strategies they use in inclusive schools. Tick (√) one of the options given to indicate the teaching strategies used in your school.

KEY: SA-Strongly agree, A-Agree, UN-Undecided, DA-Disagree, SDA-Strongly disagree

	ITEMS	SDA 1	DA 2	UN 3	A 4	SA 5
1	Teachers are trained in various teaching strategies in inclusive education.					
2	Teachers in inclusive schools use the following teaching styles and practices :					
	i) Individualized Educational program,					
	ii) Collaborative /Cooperative teaching,					
	iii) Peer Tutoring,					
	iv) Teachers teach whole inclusive class,					
	v) Team approach /problem solving,					
3	With your training in special needs /general teaching, you are confident teaching an inclusive class.,					
4	Teachers teach the average learners in an inclusive classroom,					
5	Teachers in inclusive schools undergo training from time to time to learn new strategies of handling learners with special needs in inclusive classes,					
6	Teachers in inclusive schools get technical support from special educators stationed at the district headquarters (Educational Assessment centres),					
7	Teachers use different teaching strategies for the					

	following different categories of learners:					
	i) Hearing impairment,					
	ii) Visual impairment,					
	iii) Specific learning difficulties,					
	iv) Physical disabilities,					
	v) Mental disabilities,					
	vi) Autism,					
8	Teachers set goals for their learners in inclusive schools to reach irrespective of the individual differences.					
9	In inclusive classes there are more than one teacher assisting individual learners with their individual educational needs.					
10	Teachers in inclusive classes plan together, teach together and evaluate results together.					
11	Teachers modify learning goals for each individual learners and use diversified instructional methods.					
12	Teachers encourage all learners to have positive attitudes towards one another.					
13	Teachers relate well with each individual in the class(interpersonal skills).					
14	Teachers encourage all learners to participate in classroom activities.					

SECTION FOUR: Questionnaire on teachers' knowledge and use of adapted curriculum and examinations that meets the needs of all learners in inclusive schools /classes.

INSTRUCTIONS: This questionnaire sought information from teachers on attitudes towards their knowledge and use of adapted curriculum and examinations that meet the needs of all learners in an inclusive setting. Tick (√) one of the options given as per your feelings.

KEY: SA-Strongly agree, A-Agree, UN-Undecided, DA-Disagree, SDA-Strongly disagree

	ITEM	SDA 1	DA 2	UN 3	A 4	SA 5
1	The following curriculum areas have been adapted for different categories of special needs learners:					
	i) English;					
	ii) Maths;					
	iii) Kiswahili;					
	iv) Social studies;					
	v) Creative Art;					
	vi)Science.					
2	Teachers usually give adequate time to all learners during examinations according to the nature and severity of the special needs.					
3	Those learners with special needs who do not have abilities to sit for national exams are awarded Certificates basing on other abilities and talents by Kenya National examination council.					
4	Teachers design Examinations according to individual learners needs and severity of their special needs.					
5	Teachers have adapted curriculum sufficiently to meet the needs of learners with special needs and disabilities in inclusive schools /classes.					
6	Teachers use the following criteria to promote learners to the next class: i,)Test scores;					

	ii) Unique Talents;					
	iii) Co curricular activities;					
	iv) Social skills.					
7	Teachers develop systems of monitoring different categories of learner's progress in the instructional setting.					
8	Teachers are aware of appropriate procedures to assess learners' behaviors including those with special needs and disabilities.					
9	Teachers place learners according to assessment information and provide appropriate instructions according to the same information in 8 above.					
10	Social skills in group work are examined in the examinations.					
11	Competition in examinations is a barrier to inclusive education.					
12	Suitable curriculum and examinations for all learners are key to success and access to education.					
13	Teachers are trained to adapt the curriculum to suit all learners.					

SECTION FIVE: Questionnaire on assessing inclusive education implementation in primary schools in Kakamega County.

This questionnaire sought information on inclusive education implementation primary schools. **INSTRUCTIONS:** Tick (✓) one of the options given to indicate inclusive education implementation in primary schools.

	ITEM		Poor 1	Satisfactory 2	Good 3	Very Good 4
1	How do you rate participation of learners in classroom activities in inclusive schools?					
2	How do learners in inclusive classes perform in different academic areas?					
3	How do you rate learners with special needs in inclusive class performance in K.C.P.E?					
4	How would you rate the participation of learners with special needs in games in inclusive schools?					
5	How do you rate learners without special needs in different academic areas?					
6	How do rate learners with special needs in group activities in inclusive class					
7	How do you rate the general Educational outcomes of learners with special needs in inclusive schools?					
8	How would you rate the participation of learners without special needs in games in inclusive schools?					

9	How do you rate the achievement of Learners with special needs in reading skills in inclusive schools?					
10	Rate the Communication and social skills of learners with special needs and the interaction with regular learners in inclusive schools.					

Thank you for taking time to complete the questionnaire.

APPENDIX II: OBSERVATIONAL CHECKLIST

The researcher used the checklist to find out whether teachers have provided suitable teaching, learning, assistive aids and physical environment for all learners in their classrooms.

1. The researcher to indicate (√) the availability of the materials/aids/facilities observed in the classroom/school.

<u>Material</u>	<u>Yes</u>	<u>No</u>	<u>Material</u>	<u>Yes</u>	<u>No</u>
Blackboard	Films	.....	.....
Writing boards	Maps	.....	.....
Text books	Any other	.....	.....
Toys			
Classroom cupboard			

2. The researcher checked the availability of the following assistive devices in the inclusive classes.

<u>Material</u>	<u>Yes</u>	<u>No</u>	<u>Material</u>	<u>Yes</u>	<u>No</u>
a) Adapted desks	h) Multimedia	.....	.....
b) Pencil /pen guiders	i) Braille machine /translators	.....	.....
c) Word Processors	j) Communication boards	.....	.....
d) Digital personal organizers	k) Hearing Aids	.....	.....
e)Task lighting	l) Spectacles	.....	.....
f) Large print books	m) Wheel chairs	.....	.....
g) Interpreters			
Any other visible materials			

3. The physical facilities adapted in the school /class to suit the needs of learners with special needs.

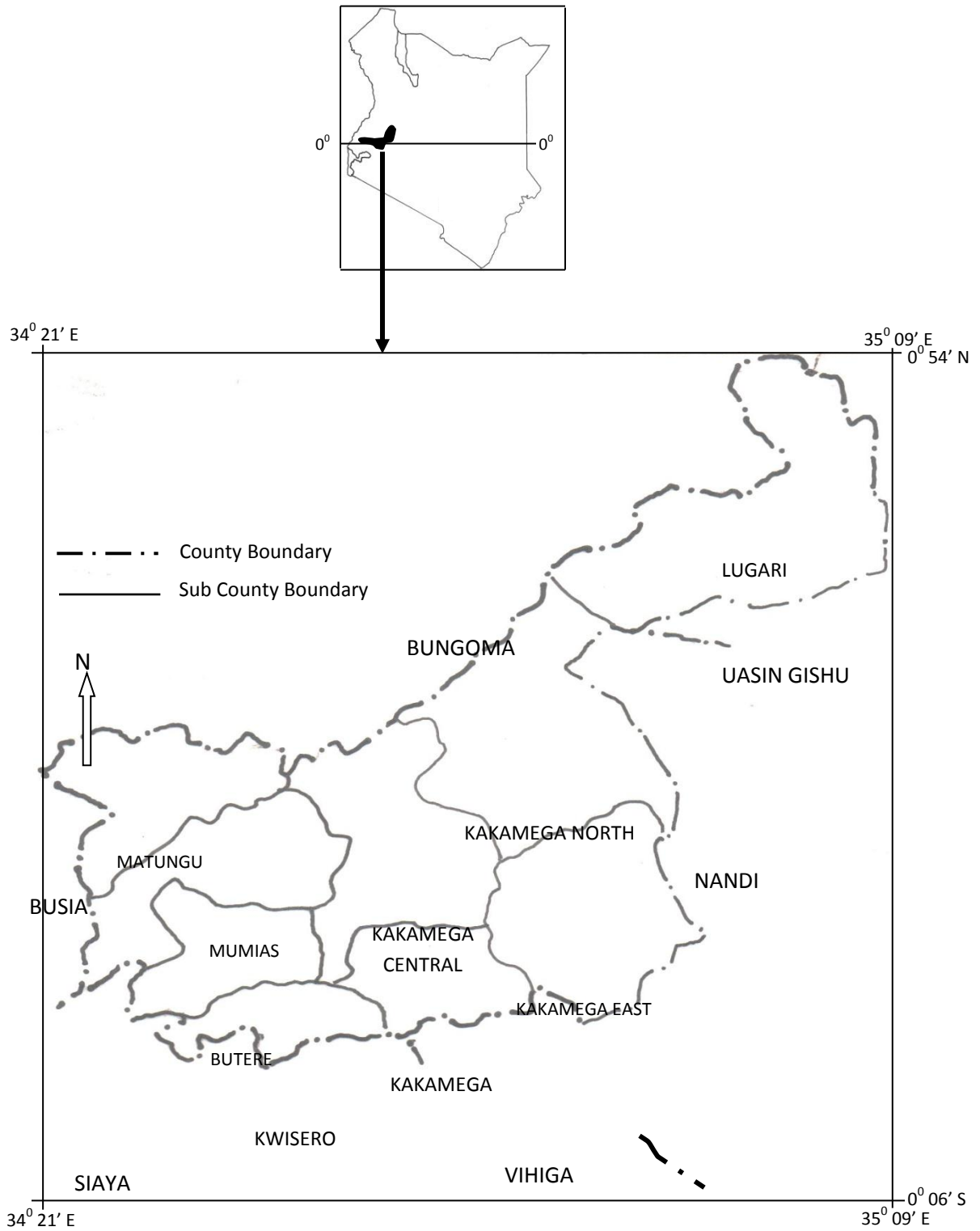
Facility	Yes	No
(i) walls
(ii) Paths
(iii) staircases
(iv) Libraries
(v) Toilets
(vi) Doors
(vii) chairs
(viii) Desks

APPENDIX III: INTERVIEW SCHEDULE FOR HEADTEACHERS

1. Is inclusive education practiced at your school?
2. When was this programme launched in your school?
3. What categories of special needs are included in your school?
4. Is the concept of inclusive education accepted in the school?
4. Which teaching strategies do teachers in this school use in inclusive classes?
5. Do teachers in this school adapt both curriculum and examination for the benefit of all learners in inclusive classes?
6. What is the enrolment in each class? What about the whole school?
7. What measures are you taking to ensure that inclusive education is implemented effectively in your school? In other words, are all teachers trained adequately?
8. Do learners with special needs affect the academic performance of the whole school? How?
9. Is there any benefit academically for all learners in an inclusive school?
10. Do teachers use suitable teaching learning aids? What about assistive aids in this school?

Thank you for taking time to answer the questionnaire.

APPEVDIX IV: MAP OF KAKAMEGA COUNTY



APPENDIX V: Statistics Tables

Table 1.

Sample Size for $\pm 3\%$, $\pm 5\%$, $\pm 7\%$, and $\pm 10\%$ Precision Levels where Confidence Level Is 95% and $P=.5$.

Size of Population	Sample Size (n) for Precision (e) of:			
	$\pm 3\%$	$\pm 5\%$	$\pm 7\%$	$\pm 10\%$
500	a	222	145	83
600	a	240	152	86
700	a	255	158	88
800	a	267	163	89
900	a	277	166	90
1,000	a	286	169	91
2,000	714	333	185	95
3,000	811	353	191	97
4,000	870	364	194	98
5,000	909	370	196	98
6,000	938	375	197	98
7,000	959	378	198	99
8,000	976	381	199	99
9,000	989	383	200	99
10,000	1,000	385	200	99
15,000	1,034	390	201	99
20,000	1,053	392	204	100
25,000	1,064	394	204	100
50,000	1,087	397	204	100
100,000	1,099	398	204	100
>100,000	1,111	400	204	100


a = Assumption of normal population is poor (Yamane, 1967). The entire population should be sampled.



APPENDIX VI: PERMIT (PASSPORT-NACOST)

THIS IS TO CERTIFY THAT:
MR. ANDREW KUYA MAKACHIA
of MOI UNIVERSITY, 79-40105
MASENO, has been permitted to conduct
research in Kakamega County
on the topic: AN EXAMINATION OF
TEACHERS ATTITUDES AND KNOWLEDGE
TOWARDS EFFECTIVE INCLUSIVE
EDUCATION IMPLEMENTATION IN
KENYAN PRIMARY SCHOOLS IN
KAKAMEGA COUNTY
for the period ending:
31st December, 2015

Permit No. : NACOSTI/P/15/0643/6510
Date Of Issue : 27th August, 2015
Fee Received :Ksh 2,000



Andrew Kuya Makachia
Applicant's Signature

Amos Mwangi
Director General
National Commission for Science, Technology & Innovation

CONDITIONS:

- 1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit**
- 2. Government Officers will not be interviewed without prior appointment.**
- 3. No questionnaire will be used unless it has been approved.**
- 4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**
- 5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.**
- 6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.**

REPUBLIC OF KENYA
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION
NACOSTI

Serial No. A 6374
RESEARCH CLEARANCE PERMIT
CONDITIONS: see back page

APPENDIX VII: PERMIT NACOST



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:

27th August, 2015

NACOSTI/P/15/0643/6510

Andrew Kuya Makachia
Moi University
P.O. Box 3900-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*An examination of teachers attitudes and knowledge towards effective inclusive education implementation in Kenyan Primary Schools in Kakamega County,*" I am pleased to inform you that you have been authorized to undertake research in **Kakamega County** for a period ending **31st December, 2015.**

You are advised to report to **the County Commissioner and the County Director of Education, Kakamega 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.


SAID HUSSEIN
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Kakamega County.

The County Director of Education
Kakamega County.

APPENDIX VIII: RESEARCH PERMIT

MINISTRY OF EDUCATION SCIENCE & TECHNOLOGY

Telephone: 056 - 30411
 FAX : 056 - 31307
 E-mail : wespropde@yahoo.com
 When replying please quote.



COUNTY DIRECTOR OF EDUCATION
 KAKAMEGA COUNTY
 P. O. BOX 137 - 50100
 KAKAMEGA

STATE DEPARTMENT OF EDUCATION

REF:WP/GA/29/17/VOL.II/

20th November, 2015

Andrew Kuya Makachia
Moi University
P. O. Box 3900 – 30100
ELDORET

RE: RESEARCH AUTHORIZATION

The above has been granted permission by National Council for Science & Technology vide letter Ref. NACOSTI/P/15/0643/6510 to carry out research on "**An examination of teachers attitudes and knowledge towards effective inclusive education implementation in Kenyan Primary Schools in Kakamega County, Kenya**" for a period ending, 31st December, 2015.

Please accord him any necessary assistance he may require.

pp
MURERWA S. K. (MRS)
 COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY

APPENDIX IX: KAKAMEGA COUNTY COMMISSIONERS AUTHORITY

REPUBLIC OF KENYA



THE PRESIDENCY

MINISTRY OF INTERIOR & CO-ORDINATION OF NATIONAL GOVERNMENT

Telegrams
 Telephone: 056-31131
 Fax-056-31133
 Email-cckakamega12@yahoo.com

COUNTY COMMISSIONER
 KAKAMEGA COUNTY
 P.O BOX 43-50100
KAKAMEGA

When replying please quote

DATE: 20th NOVEMBER, 2015


REF: ED.12/1/VOL.II/37

ANDREW KUYA MAKACHIA
 MOI UNIVERSITY
 P.O. BOX 3900 -30100
ELDORET

RE: RESEARCH AUTHORIZATION

Following your authorization vide letter Ref: NACOSTI/P/15/0643/6510 dated 27th August, 2015 by National Commission of Science, Technology and Innovation to undertake research on "*An examination of teachers attitudes and knowledge towards effective inclusive education implementation in Kenyan Primary Schools in Kakamega County,*" for a period ending 31st December 2015.

I am pleased to inform you that you have been authorized to carry out the research on the same.


 M. M. OGWENO
 FOR: COUNTY COMMISSIONER
KAKAMEGA COUNTY

COUNTY COMMISSIONER - KAKAMEGA

**APPENDIX X: EXAMPLES OF SOME OF THE REPORTS OF THE
INTERVIEWS HELD WITH HEADTEACHERS OF INCLUSIVE SCHOOLS**

HEADTEACHER ONE

Headteacher one said that as much as inclusive education was being practiced in his school, the concept of inclusive education had not been well understood by all teachers in the school. There were a few children with different special needs who had been included in classes 4 to 6. The majority of children who had been included were those with learning difficulties and mental challenges.

He pointed out that the Government was not fully committed in deed except pronouncements over the Televisions and meetings. There were no enough facilities such as drawing boards for mentally handicapped children, charts, secure classrooms where children's work can be kept among others. On his part, he said that he usually call parents meetings to educate them on the need to accept and treat their children as others in the family and especially taking them to school. On performance, he said that when they performed below average in KCPE, the overall mean score of the school went down and this caused the school to be blamed for not performing by the community and even the very government that agitate for inclusive education.

The headteacher pointed out that at least learners with special needs are better off in inclusive schools as they are able to communicate with peers and socialize. This to him was good enough for inclusive education to be supported. Teachers in that school were not adequately trained as only two teachers had undergone special training at diploma level and two others had undergone three months in service at Kenya Institute of special

education. On the whole he was optimistic inclusive education programme would succeed especially when facilities, teaching staff and the attitude of people are in place.

HEADTEACHER TWO

Headteacher two reported that inclusive education concept was understood in her school and even parents understood the concept well. She said that the purpose of inclusive education is to ensure that those learners with special needs are appreciated and they feel like others in the same neighbourhood and same family. This was the more reason they should learn together in the same school with their brothers, cousins and neighbors. In her school, the headteacher reported that different types of special needs learners are included and that according to her the government supports the programme under free primary education programme. Some support services in her school includes guiding and counseling of teachers, learners and parents to accept inclusive programme in the school.

On performance the headteacher reported that her mean score has never been affected by the presence of learners with special needs. She reported that some learners particularly those with hearing impairments who were included performed well and were admitted to good secondary schools like St Mary's Mumias girls high school.

Teachers in her school were regularly in serviced on how to handle learners with special needs and they were comfortable with learners with special needs in their classes.

HEADTEACHER THREE

Headteacher three reported that the school initially was having special unit that was attached to it but with the government policy of inclusive education programme, the school currently practice it. Most of the time learners with special needs are in regular classes except on a few occasion when they are withdrawn to the special unit for some remedial lessons. Learners with mental retardation were fully included in regular classes. The headteacher reported that teachers were not well conversant with the concept of inclusive education. Some of them thought that it was integration and others thought that inclusive education was special education and or special school education.

The headteacher reported that the government does not fully support inclusive education and even the local education officers do not understand the concept of inclusive education. Usually they confuse terms of special need learners. For instance an education officer can be heard referring to a learner with hearing impairment as dumb or blind or mentally retarded.

The headteacher reported that he was trying to sensitize teachers and parents on the need to accept learners with special needs although he was getting it tough. He pointed out those learners with special needs lowers the mean score of the school. When the interviewer probed further generally the performance of the schooling national exams previously, the headteacher reported that it had not been well. Teachers in this school were not trained in special need education except one.

HEADTEACHER FOUR

This was a headteacher of a senior primary school with three streams and two deputy headteachers. This headteacher reported that he did not have personally any problem with inclusive education and this is the kind of spirit he wanted his teachers to have. He said that he always encouraged his teachers not just to concentrate on academic subjects but also concentrate on talents and other areas learners with special needs can excel in. He pointed out that learners with special needs in his school were given necessary support by the school community that included parents, teachers and other learners.

He lamented that the government was giving scanty support in terms of free primary education. He wished that the government provided assistive devices including hearing aids, wheel chairs, specialized teaching materials so that all learners would feel supported. He mentioned that if there was enough support then it came from donors.

About 5 teachers were trained in this school at diploma, degree and masters level in special need education. The other teachers were trained on the ground by these teachers who had received training in special need education. Learners with special needs were spread in all classes. The headteacher maintained that he was determined to see that inclusive education in his school was fully implemented.

HEADTEACHER FIVE

Headteacher five pointed out to the researcher that when he was posted to the inclusive on promotion, he found a special unit for learners with special needs that was attached to the present school. The type of special need learners in that unit were those with mental difficulties. After sometime the government introduced inclusive education policy which was to be implemented in all primary schools that had special units attached to them and his school immediately changed to an inclusive school. Most teachers who had been in regular school did not understand inclusive education concept but those who were handling special need learners in the unit understood the meaning of inclusive education concept. The headteacher reported that before he was posted to this school he had not interacted with learners with special needs. Therefore he had no idea what inclusive education was all about. Other teachers in the school had a rough idea but they never expected that they will directly handle them in an inclusive setting. The headteacher informed the researcher that before he was transferred to the present school he knew that learners with special need belonged to special schools and not regular primary schools. They had their own special teachers and were not to learn together with the normal learners. So he was changing his perception on the same slowly and this was also true of other teachers in the school. The government on its part was trying to sensitize the communities and teachers in general about inclusive education.

The government gave extra capitation for those learners with special needs in the inclusive classes. Teachers who had been in the special unit also tried to sensitize other teachers to understand the concept of inclusive education and what inclusive education generally entailed. Some teachers had remained negative about inclusive education while

others were changing their perceptions slowly. The teachers who had remained negative complained from time to time according to the headteacher. These teachers complained of not completing the syllabus, being overworked. Sometime learners with special needs were stubborn and lagged behind. These teachers wanted to be transferred to other schools because according to the headteachers they could bear no more.

The headteacher reported that he had tried to organize internal and external training of teachers on how to handle special need learners in the classes., He had invited DEOs staff in charge of special need section to the school to come and train his teachers. He reported that learners with special needs performed dismally and affected the overall school means score in every class. He reported that though the government was giving capitation for special need learners there was need for the government to increase capitation for learners with special needs. This he said will enable the learners to get food, other learning materials and assistive aids. The headteacher also said that before the government could roll out inclusive education policy, it would have been better if all teachers teaching in inclusive schools would have been in-serviced on how to handle learners with special needs in inclusive classes because most teachers had no training at all in special need education.

HEADTEACHER SIX

Headteachers six reported that his school was seriously implementing inclusive education policy. All categories of special need learners were included in various classes. She herself had undergone special need training including other teachers. Most of them had undergone the training in special need education through Kenya Institute of special education distance programme. Almost half of the teachers were specially trained though at different levels. Some had three months in-service course, diploma, degree and master's in education.

According to her, the government was supporting inclusive education implementation as those learners with special needs were getting extra capitation as compared to those learners without special needs. She also mentioned that specialized personnel from the sub-county education assessment centre usually visited the school to give support to the learners they usually refer to the school, Constituency Bursary Fund had built over four classrooms in the school particularly to support inclusive programme and other help she did not mention. The headteacher told the researcher that she usually ensures that the newly posted teachers are in-serviced in all aspects of inclusive education.

The headteacher after the researcher probed her, she reported that inclusive education was beneficial to all learners for they all learnt from one another, they shared items in the class and all learnt that they are brothers, sisters, cousins and neighbours. They learnt that society is composed of everybody and therefor the school was a small society where all were members.

On syllabus coverage and curriculum, the headteacher reported that it would have been fine if the curriculum and examinations were adapted to suit the needs of all learners

especially those with special needs. The learners who had special needs especially those with mild cases were performing as equally those able learners thus she recommended that learners with mild cases should be educated in inclusive settings. Only those learners with severe to profound cases were to be educated in special schools. Learners with hearing impairments and visual impairments should be handled by teachers specialized in sign language and Braille language. However if these personnel can be posted to inclusive schools that would be the ideal environment because the learners would interact fully and at the same time their needs would be met in an inclusive setting.

HEADTEACHER SEVEN

Headteachers seven reported that inclusive education was practiced in his school though teachers pretended to be helping learners with special needs. When he made proper follow up in learner's notebooks, there was not much that these learners had been taught. Teachers seemed to be sympathetic and compassionate to learners with special needs. The headteacher attributed this fact to the way religious people handle persons with disabilities. Also traditionally, Africans treated persons with handicapping conditions as sick people who required sympathy and compassion. The headteacher said teachers in his school treat learners with special need in the same way.

The headteacher reported that due to overcrowding as a result of Free Primary education programme, matters had become worse for inclusive education implementation. Teachers are overworked especially those teaching subjects such as English, maths and languages. The marking of books on the daily basis makes teachers ignore those learners with special needs. These are subjects that are core to academic achievements which learner's with special needs to be assisted in. The headteacher commented that these are the subjects in which they miss totally.

Generally inclusive schools are not staffed adequately and thus the few teachers who are there have their hands full. The headteacher reported that the remedy lie in the government staffing inclusive schools adequately with specially trained teachers in special need education. For this headteacher the government was not supporting inclusive schools sufficiently. There was no provision of assistive aids, no posting of qualified teachers, and ministry of education officials were ignorant of what was happening in special need area and there were no qualified education officers who could professionally

advice teachers in inclusive schools. The learners with special needs who were included in this school ranged from those learners with mild hearing loss, learners with low vision, physical difficulties and mental retardation.

HEADTEACHER EIGHT

This headteacher reported that as much as inclusive education programme was being practiced in his school, he had not modified the school environment, nor had teachers accepted the concept of inclusive education and understood it wrongly. Teachers were not adapting the curriculum and examination to suit the needs of special need learners.

For him the inclusive education policy was being forced on schools that had previously been hosting special units. The school management board had not impressed the whole idea of inclusive education because they had not been sensitized. The headteacher further reported that at one point, the school was given funds to make the environment disability friendly before inclusive education programme was introduced but the money was never used for the purpose for which it was intended. The board wired that money to other use the school board thought was more urgent than modification of the environment. To date, the headteacher reported, the environment is still not disability friendly. The school terrain was still rugged by the time the present researcher visited the school. Learners with mobility problems usually have difficulties moving around the school compound. Of all the teachers in the school, only one teacher had undergone three months in-service course in special need education at Kenya institute of special education and this was the teacher who initiated the establishment of the unit before the policy of inclusive education was implemented.

The few learners with special needs who had been included in the regular classes were having mild physical difficulties. This category of special need learners according to the headteacher was normal in every sense of the word except that they had physical deformities. That these learners were normal and could struggle like others and therefore did not require any special attention. The headteacher pointed out that this was the more reason the board of management did not prioritize the needs of the learners with special needs in their schools. Teachers equally had do not care attitudes towards learners with special needs. The headteacher noted that this was the same attitudes teachers had when the unit existed in their compound.

The headteacher however reported that the presence of learners with special needs did not affect the academic performance of the school and also said that he had recently received extra capitation for learners with special needs and that he also recently had started convincing the board of management that it was high time they started appreciating learners with special need in their school and prioritizing their needs as the government was determined to improve the welfare of persons with special needs in Kenya.

The headteacher said that the attitudes of the school community towards learners with special needs could be the way it was perhaps because of the way they looked at the teacher who was in-charge of the previous unit or because she was not equipped adequately to champion the needs of learners with special needs. There was need for the government to post a qualified teacher at the level of diploma or degree to be able to change the attitudes of the school community the headteacher remarked.

HEADTEACHER NINE

This headteacher reported that he supported inclusive education in his school fully as he understood its meaning and implications. He noted that learners with special needs belonged to the society; some of them were brothers, cousins, sisters, relatives and neighbours. The headteacher told this researcher that some of us stay with these learners at the same house, eat together, go to the same church and participate in cultural activities like funerals together. He reported that it unethical for schools to segregate these learners. In his school, he said that he has preached this gospel of accepting learners with special needs to teachers, pupils and the whole school community.

The school community has come to accept that reality and inclusive education programme has been accepted wholly. All type of special need learners were included in the school and were receiving necessary support. He told this researcher that any newly posted teacher was forced by circumstances to accept learners with special needs in inclusive classes. The headteacher reported that he usually lobbied for funding from friends, churches, well-wishers and donors including the government of Kenya.

The school had magnificent buildings, good compound and good administration block because of the headteachers attitude including his teachers and the rest of the school community. The headteacher also reported that he lobbies for the posting to the school qualified teachers in special need education so that the needs of learners with special need can continue benefiting academically. According to him the attitudes of teachers tell it all for successful and effective inclusive education implementation in schools. In fact the headteacher reported that he had started lobbying his neighboring primary headteachers to impress inclusive education programmes in their schools.