BARRIERS TO SUCCESSFUL IMPLEMENTATION OF INCLUSIVE EDUCATION FOR LEARNERS WITH HEARING IMPAIRMENTS IN PUBLIC DAY PRIMARY SCHOOLS IN MURANG'A COUNTY, KENYA

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APRIL 2014
DECLARATION

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

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Supervisors: This thesis has been submitted for review with our approval as university supervisors.

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DEDICATION

This thesis is dedicated to my family and especially my son Kevin Mutua. I also would like to dedicate this work to the students of Murang’a School for the hearing impaired.
ACKNOWLEDGEMENT
I acknowledge my sincere gratitude to Kenyatta University for the use of their library and services. Secondly, to my supervisors Dr. Michael Njenga Njoroge and Dr. Isabella Musyoka-Kamere for their tireless guidance through the writing of this thesis. I cannot forget my colleagues in the department of Special Needs Education for their assistance and constant encouragement. Lastly I recognize the effort of Rachel Maina for her neat clear typing.
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<tbody>
<tr>
<td>ADA</td>
<td>Americans with Disability Act</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>CBM</td>
<td>Christoffel Blinden Mission</td>
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<tr>
<td>EARC</td>
<td>Education Assessment and Resource Centre</td>
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<tr>
<td>EFA</td>
<td>Education for All</td>
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<td>GOK</td>
<td>Government of Kenya</td>
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<tr>
<td>HIV</td>
<td>Human Immune Virus</td>
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<tr>
<td>IDEA</td>
<td>Individuals with Disability Education Act</td>
</tr>
<tr>
<td>KESSP</td>
<td>Kenya Education Sector Support Programme</td>
</tr>
<tr>
<td>KSDC</td>
<td>Kenya Society for Deaf Children</td>
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<tr>
<td>LHI</td>
<td>Learners with Hearing impairment</td>
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<tr>
<td>LSN</td>
<td>Learners with Special Needs</td>
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<tr>
<td>LVI</td>
<td>Learners with Visual Impairment</td>
</tr>
<tr>
<td>MoEST</td>
<td>Ministry of Education Science and Technology</td>
</tr>
<tr>
<td>NCESS</td>
<td>National Committee for Education Support Services and Training</td>
</tr>
<tr>
<td>REI</td>
<td>Regular Education Initiative</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational Scientific and Cultural Organization</td>
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<td>UNSREOE</td>
<td>United Nations Standard Rules on Equalization of the Opportunities to Education.</td>
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ABSTRACT

The study investigated barriers hindering implementation of inclusive education for learners with hearing impairments (LHI) in selected public primary schools in Murang’a County, Kenya. The Five schools selected purposefully were Gatuya, Kiboi, Njumbi, Saba Saba and Kirunguru primary schools. The sample size consisted of 51 participants selected through probability and non-probability techniques. The distribution of the sample included 5 head teachers, 15 teachers, 5 education officers, 15 parents and 11 LHI. The researcher collected qualitative and quantitative data using questionnaires for each of the stakeholders involved. The data collection tools were based on the study objectives. The reliability of the tools was tested using Spearsman Rank Order formula using split-half techniques where the correlation co-efficient was 0.8 during piloting at Mukubu primary school in Kiambu County. Qualitative data was put under themes consistent with the research objectives. Quantitative data was analyzed through descriptive statistics such as tables and pie charts. Other forms of collected data was assigned codes and grouped into categories to match the variables and analyzed using the descriptive statistics. The study established that the major factors hindering the implementation of inclusive was lack of funds to cater for school management and development, lack of trained teachers in special needs education in the area of hearing impairments, and teachers’/parents’ attitude towards inclusive education. Regarding the adjustments of systems to accommodate LHI, the study established that only minimal adjustments were made in the schools hence making learning for LHI unfavourable. The study also revealed that there was inadequacy of resources both in EARC and schools therefore inappropriate assessment of learners with hearing impairment could occur leading to wrong placement. It was established that learners with profound cases performed poorly due to the constant transfers from regular schools to special schools and vice versa. The study also established that there was minimal collaboration from the stakeholders and majority of them preferred learners with hearing impairment to be placed in special schools. The study recommends that: only learners with severe impairments should be retained in special schools while those with mild impairment should learn in regular schools since the government has currently allocated more funds to purchase learning/teaching materials in special schools; the government through Ministry of Education should organize campaigns to sensitize all community members on importance of educating learners with hearing impairment; the Ministry of Education should provide adequate facilities to EARCs to improve the assessment and placement processes in all centres; among other recommendations.
CHAPTER ONE

INTRODUCTION

The chapter covers the background of the study. The background of the study highlights the various declarations and acts that have supported the education of learners with special needs. Learners with special needs are those learners who their educational needs requires a degree of adaptation or adjustments. They include learners with hearing impairments (LHI). The chapter also presents the statement of the problem, detailing the issues addressed by the study. The study was carried out in Muranga County and it was guided by six objectives and research questions derived from the objectives. The significance of the study is also presented, together with limitations of the study, assumptions, theoretical and conceptual frameworks.

1.1 Background of the Study

In 1948 the United Nations (UN) declared education as a basic human right for all through Article 26 of the Universal Declaration of Human Rights. Kenya being among the signatories to this declaration is obliged to provide education to all her citizens. The United Nations Educational Scientific and Cultural Organization (UNESCO) in 1994 stipulated that the education should be provided to even those who are disadvantaged by biological, geographical, political, economical and religious circumstances. That clearly indicated all children should be provided with education.

The Children’s Act 2001 defines the disadvantaged children as those whose basic needs such as food, clothing, security, health and education are denied. They include Children with special needs. The Ministry of Education (MoE 2009) classified children with special needs into 22 categories which include learners with hearing impairments (LHI). Hearing
impairment (HI) is a general term which applies to an individual who is either deaf or hard of hearing.

Different scholars define deafness differently. Hallahan & Kauffman (1997) define the deaf as those whose the hearing loss ranges from mild to profound while the Individuals with Disability Education Act (IDEA) (1990) defines the term as a loss that is severe enough to adversely affect the child’s educational performance. Though classification of hearing loss is possible clinically through the use of an audiometer it may be practically difficult to get a clear distinct line among the losses. The study concentrated on the hard of hearing learners.

Hard of hearing has been defined by Assistive Technology Links (2008) as a term used in reference to those individuals who have hearing loss but are able to use the auditory skills as their primary mode of perceiving and monitoring speech or acquiring language. Their Learning can also be supported by lip reading. Lip reading is a technique where learners observe the movement of the lips of an individual speaking so as to get a clue of the words being spoken. The technique is not strictly restricted to the hard of hearing alone but can be applicable to any one. According to rule number 6 of United Nations Standard Rule on Equalization of Opportunities to Education (UNESCO, 1994) those learners should learn together with their peers in the regular schools. The purpose is to enable LHI have an equal opportunity to educational access in inclusive education settings.

Wong (1998) defines inclusive education as the placement of a student, regardless of the level of disabilities, into an age appropriate general education classroom in the local
community schools with no exception to LHI. Schneiderman (1994) asserts that learners with hearing impairments could be given an opportunity to learn alongside their non-handicapped peers if necessary support and supplementary devices are provided by stakeholders. The supplementary devices should include hearing devices while support services should include adjustment of school systems such as use of teacher aids among others. The study concentrated on the definition of Schneiderman.

The systems in school to be adjusted should include: instruction methods, mode of communication and classroom environment, and collaboration with stakeholders to ensure the implementation of inclusive education. The stakeholders in this study included teachers, parents, education officers and the LHI. The MoE (2009) cited that the stakeholders should work in as a collaborative team in order to facilitate inclusive education. To be able to place LHI for educational purpose, the learners need to be properly and appropriately assessed. Lewis and Doorlag (1983) define assessment as a process of gathering information on a learner with special needs for educational placement. The placement should be determined by their level of hearing loss. To achieve this, the assessment centers would require facilities and resources.

The study was centered in Muranga County. In the year 2005 the Ministry of Education in conjunction with Muranga education assessment and resource center (EARC) carried out a sensitization programme on the need of educating learners with special needs in regular schools. The target was for those who have mild impairments. The county is also served by one special boarding school for the hearing impaired learners. Despite that sensitization LHI continued to join the special boarding school in large numbers. The education assessment and resource center (EARC) in the county expressed concern over
the large number of LHI who have been transferred from regular day schools in the inclusive settings to the particular special boarding school (EARC, 2007).

1.2 Statement of the Problem
The problem addressed by the study was to establish factors hindering the implementation of inclusive education in regular day public schools in Murang’a County. The government of Kenya introduced Free Primary Education (FPE) in year 2003. The FPE was meant to benefit all children including those with special needs. The Ministry of Education carried out a survey in 2005 to find out the extent to which FPE was being implemented and the hindrances. This survey found out that 75 percent of learners with special needs nationally were not in school (MoE, 2005). The (MoE, 2005) report cited poor educational infrastructure as a contributing factor. In the year 2007 the Ministry of Education embarked on programme to improve the infrastructure in the day public primary schools with an aim to increase education access to learners with special needs as recommended by the UNESCO (1994) at the Salamanca conference in Paris. Despite the improvement in infrastructure in public regular day public primary schools, the number of learners with hearing impairment in special boarding schools in Murang’a County is on the rise. Many of these LHI are being withdrawn from the regular schools to the special boarding school as observed from the Educational Assessment and Resource Center records (Murang’a County EARC, 2007).

The study sought to establish the factors that may hinder implementation of inclusive education despite the measures the government has put in place to ensure this, and recommend measures and solutions to address these factors.
1.3 The purpose of the Study
The purpose of the study is to investigate on barriers to successful implementation of inclusive education for learners with hearing impairments in public day primary schools; with aim of suggesting recommendations for the improvement on the implementation of inclusive education for LHI in Murang’a County.

1.4 Objectives of the Study
The following objectives guided the study:

1. To determine factors hindering the implementation of inclusive education for LHI in Muranga County.
2. To determine the adjustments made in regular day public primary schools to accommodate LHI in Muranga County.
3. To establish the availability of resources in EARC and in schools in Murang’a County.
4. To find out the effects of the degree of hearing loss on learners on inclusive education in Muranga County.
5. To come up with recommendations that would improve the implementation of inclusive education for LHI in Murang’a County.

1.5 Research Questions
1. What are the factors hindering the implementation of inclusive education for LHI in Muranga County?
2. What adjustments have been made in regular day public primary schools to accommodate LHI in Muranga County?
3 Which resources are available for the purpose of assessment in EARC in Murang’a County?

4 What effects does the degree of hearing loss have on inclusive education of LHI in Muranga County?

5 What recommendations would be made to improve the implementation of inclusive education for LHI in Murang’a County?

1.6 Significance of the Study

The results of the study may help the society to appreciate people with special needs. It may help sweep away the barriers of ignorance and misunderstanding that keeps handicapped people and non-handicapped people apart. The study may also help the society to know the challenges people with special needs face and how to respond to some of these challenges. The information would also be utilized by the Muranga District Education office to perform an evaluation of inclusion so that it can be a successful program. The study may be useful to the policy makers who would be guided by the results of this study in budgeting for the change and also start marketing inclusive education to organizations that fund and support education in this country. If inclusive education is to be successfully implemented, teachers need to have a positive attitude towards it. The study will identify the barriers influencing attitudes of teachers toward inclusive education, which is important in order to improve their attitudes. The study could aid in ensuring that teachers embrace special needs displayed by each learner and identify different strategies for each one of them. The results of the study could help improve programme design and implementation of inclusive education, daily procedures, pre-service and in-service teacher training and support services. The study may add to
the existing body of knowledge on special education, inclusive education, and disabilities.

1.7 Scope and Limitations
This study focused on inclusion of learners with hearing impairments in regular day public primary schools in Murang’a County. The researcher was not able to collect data from all stakeholders because that would have required considerable time, resources, financial and other logistical issues which were not possible. The team members sampled were those who were involved in an education programme for parents of children with hearing impairments between 2007 and 2010 organized by the Kenya society for deaf children (KSDC). The researcher had targeted 40 learners but was only able to interview 11 learners since by the time data was being collected, 10 had transferred to boarding schools while the others could not be accounted for.

1.8 Assumptions of the Study
The Assumptions of the study were:

- Parents would avail themselves to be interviewed on the day of data collection at Muranga South EARC where they meet weekly.
- Learners with hearing impairments who were included in the regular schools had remained there without transferring to boarding special school.
- Respondents would give sincere and reliable responses to all question asked in the process of data collection.
1.9 Theoretical Framework

The study used engagement theory which was developed by Ben Shneiderman. He developed the theory from his experience as he was teaching electronics and distance education on the environment. The fundamental idea underlying the engagement theory was that groups must be meaningfully engaged in activities through interaction and create successful collaborative teams (Schneiderman, 1994).

The theory has three principles which are relate, create and donate. These three principles are interrelated and are applicable simultaneously. The “relate” component emphasizes on team efforts that involves communication, planning, management and social skills. For the teams to relate there must be appropriate communication of what is expected of the members. For communication to take place there has to be planning which requires managerial skills. Finally, to be able to give proper feedback interpersonal skills are applied as part of social skills. This forms a relation of two or more people acting together.

The “create” aspect comes out clearly as the teams members relate. As people relate they create new ideas, concepts and methods to be able to utilize whatever resources are available. The “donate” principle stresses the value of making useful contribution to learning so as to produce a product that would satisfy the customers’ needs. Through interaction and relationship of the group members something new is created. This creation is from what the group members donate. This theory was applicable to the study because it promotes interaction within a group with similar objectives (Kearsley, 1997). The interaction of the stakeholders has been demonstrated in the following diagram of conceptual framework.
1.10 Conceptual Framework

Figure 1.1: Interactive Roles of Stakeholders in Implementing Inclusive Education for Learners with Hearing Impairments in Murang’a County

- Child with special needs

  - Hindrances
    - Economic
    - Social
    - Educational
    - Psychological

  - Stakeholders’ interventions
    - Provide resources e.g. teaching/learning materials, human, assistive devices
    - Change of attitude towards inclusive education by stakeholders
    - Adjustment of systems in schools e.g. time tables, methods of instructions, environmental noise

  - Implementation of inclusive education

  - Maladjusted child

  - Adjusted child

Source: Researcher (2013)
This conceptual framework is developed from the Engagement Theory by Ben Shneiderman (1994). The theory revolves around creating collaborative teams in order to achieve a certain objective. In this case the successful implementation of inclusive education for learners with hearing impairments. A child with special needs experiences economical, social, education and psychological hindrances within their lives. To be able to achieve their goals and have appropriate education, the stakeholders should put in place intervention measures to address the hindrances.

Parents, the government and the community as stakeholders should provide teaching/learning resources. The relationship created through discussions will assist the group members to come up with appropriate teaching/learning resources. The ideas and concepts donated may assist the teachers to adjust systems in their schools to accommodate learners with special needs. Through the relationships created the stakeholders may change their attitude toward inclusive education. This may lead to successful implementation of inclusive education for learners with hearing impairments. Learners from such an environment may be well adjusted back to the community after completion of schools. On the other hand, learners from schools where stakeholders do not address the hindrances to allow implementation of inclusive education may produce maladjusted child in the community.
1.11 Operational Definition of Terms

**Assessment:** The process of evaluating a learner who is hearing impaired with the intention of placement and educational interventions.

**Collaboration:** Working together as a team through consultation to achieve common objectives

**Deaf:** A person who has completely lost ability to hear

**Distance learning:** A mode of learning for learners where the teacher spends minimum contact hours with the learner.

**Exceptional child:** Children whose educational needs are either modified and/or assisted by devices to enable the child learn like any other child.

**Hearing impairment:** A general term referring to learners with hearing difficulties.

**Hard of hearing:** Learners with residual hearing as opposed to deaf

**Inclusive education:** Is the process of addressing learners’ needs within the regular school using all available resources to create opportunities to learn in preparing them for life

**Integration:** This principle refers to the inclusion of handicapped persons in as many cultural activities as possible, which the non-handicapped children participate while being educated in normal schools.

**Placement:** Process of putting LHI in any one of the learning Institutions.

**Post lingual deaf:** Learners who become HI after they have developed language

**Pre-lingual deaf:** Learners who become HI before language acquisition

**Regular school:** School in our communities which are not special schools

**Segregation:** Separation of LSN from other learners in a regular school.
**Sensory deviation:** An individual whose sense of hearing and sight are defective

**Stakeholders:** Parents, teachers, education officers and learners involved in the education of LHI in regular classroom.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
This chapter presents a review of literature related to the study under the following sub-headings: the development of special education, inclusive education and its rationale, inclusive education in Kenya, adjustments made to regular public schools systems, facilities and Resources At Educational Assessment and Resource Centers (EARC), the impact of degree of hearing loss on inclusive education and the impact of degree of hearing loss on inclusive education.

2.2 The Development of Special Education in Kenya
In Kenya, special education was started on segregation lines in 1960s. This segregation is the earliest form of formal provision of education for learners with special needs in education. In this system, learners with special needs are catered for in segregated setups in the community. They may be placed in special schools in which they learn with others who have similar difficulties like themselves. The schools can be day or boarding. There are schools for hearing impaired, visually impaired, mentally handicapped and physically handicapped. Under this kind of education provision, children with special needs are still taken to be different hence segregated upon.

Most of the special schools were started by church and other charitable organizations, because of the charitable outlook of this type of provision, children with special needs in education are viewed as objects of pity, dependent on others, underachievers and special persons who need to be in a special school or class under a specially trained teacher,
finally the cost for this provision is very high and unsustainable. However, there are some positive characteristics of this form of special education, which include:

- Smaller class enrolment resulting in a teacher handling fewer children.
- Greater access to experts like trained special needs teachers, therapists such as physiotherapists, occupational therapists, speech therapists and others.
- Modified environment such as cemented pavements, ramps and lowered toilets for children with physical handicap.
- Availability of specialized equipment and resources.

Though special schools have positive characteristics to offer specialised education, the National Committee on Education Objectives and Policies (Republic of Kenya, 1976) recommended integration of children with special needs in society by transferring them from special schools and other centres to regular schools. The argument was that special schools are often far from the learner’s home, separating the learner from the family and age mates. Such schools also limit the learners’ interaction with the real world as they spend most of the time with others like themselves. The learners are separated from peers and siblings in their formative years to people who may not know how to relate to them. This makes it difficult for the learner to face the real world full of diversities, which she or he was not prepared for. Specially trained teachers in the special programme rarely interact with teachers of regular schools and so they do not exchange new ideas on teaching. Such teachers are trained to work with only a specific special need.

Integration attempted to place learners with special needs in education in the mainstream regular education system. The focus was still on disability where children with special needs were expected to adapt themselves in the schools’ environment. This system had its
merits. Children with special needs in mainstream enjoyed social integration from peers and relatives. The environment was less restrictive to the learners as they interact with others without similar special needs. Learners without special needs got opportunity to support those with special needs in various activities and sharing of resources. However, these integration programmes lacked proper coordination and learners with special needs in education were excluded from academic learning. They were labeled and stigmatized hence lowering their self-esteem. Finally, both teachers and learners in regular schools where learners with special needs were integrated felt incompetent to deal with them as they thought they should be handled by the specialist teachers in special schools. This is contrary to the recommendations made by Republic of Kenya (1988; Koech 1999).

2.3 Inclusive Education and its Rationale

The concept of inclusive education is based on the fact that all children and young people, despite different cultural, social and learning backgrounds, should have equal learning opportunities in all kinds of schools (UNESCO, 2008). Essentially, inclusive education is an approach that looks into how to transform education systems and other learning environments in order to respond to the diversity of learners. Removing barriers to participation in learning for all learners is at the core of inclusive education systems (UNESCO, 2005).

The Concept of inclusive education is enshrined in international conventions including: the UN Convention on the Rights of the Child (1989), which sets out children’s rights in respect of freedom from discrimination and in respect of the representation of their wishes and views; the UNESCO Salamanca Statement (1994) which calls on all governments to give the highest priority to inclusive education; and the UN Convention
on the Rights of Persons with Disabilities (2006) which calls on all States Parties to ensure an inclusive education system at all levels.

The Salamanca Statement (UNESCO, 1994) on the Framework for Action on Special Needs Education proclaimed that: every child has a fundamental right to education, and must be given the opportunity to achieve and maintain an acceptable level of learning. This is based on the fact that every child has unique characteristics, interests, abilities and learning needs. Inclusive education is viewed to have some benefits.

Inclusive education is seen to assist in development of individual strength of a student and creation of friendship within a wide variety of students. Inclusive education involves parents in the education of their children and schools activities. Eventually the inclusive education affects both the school and the community in a way that they appreciate diversity. However, inclusive education require some students to spend time out their regular class for a particular purpose for example, learners with hearing impairments may attend speech therapists but this can be seen as an exception.

According to Western Canadian Research Centre inclusive education has its own limitations. Not all teachers are qualified in specific areas of special needs education. Parents of children without special needs feel that the education of their children has been weakened though not true (Hutchison, 2002).

In Uganda, Children with Disabilities (CWDs) were segregated especially those with hearing impairment, visual impairment or both. It was felt that small specialized units and schools be created to provide education to these learners. It was felt that these specialized units would guarantee the right of education in the medium of sign language and access
to the deaf culture (UNESCO, 2006, cited in Combrinck 2008:304. This form of education is contrary to the Salamanca statement where all learners should be included in regular schools regardless of the status of their disability.

A study by Nyende (2012) found out that some children with disability were denied admission in inclusive schools. Those schools that admitted children with disability stated that it was a temporary measure pending the establishment of the severity of the disability. The aim was to make a decision on whether to retain the child or otherwise. Some of the reasons given for not admitting the child included: when a child is violent hence threatening the safety of other learners; when the form of disability requires a lot of attention yet it is not available at the school; when the infrastructural environment was not conducive for CWDs e.g. the school terrain can’t facilitate wheel-chained children; and when the necessary equipment and assistive devices are not available at the school, among others.

In Kenya, the national policies for inclusive education include the education commission reports by Ominde (Republic of Kenya, 1964) and Gachathi (Republic of Kenya, 1976), which recommended education of children with special needs in regular schools. The presidential working party on education and Manpower Training for the Next Decade and Beyond (Republic of Kenya, 1988) emphasized the provision of education for learners with special needs in education in the regular classroom and recommended that the media and national programmes to be used more intensively to publicize awareness of the needs of people with disabilities.
The Totally Integrated Quality Education and Training (Republic of Kenya, 1999) emphasized the need for early intervention for children including those with disabilities, improving accessibility, equity, relevance and quality with special attention to gender sensitivity, the disabled and the disadvantaged group, the content of education at various levels with special attention to early childhood special and primary education. Education for All (EFA) Kenya (Republic of Kenya, 2001) advocated for education for all to be free and available to all Kenyans by 2015. In attempting to achieve EFA goals, the Ministry of Education has made commendable efforts culminating in the provision of Free Primary Education (FPE) since 2003 and Free Day secondary Education since 2008.

Most studies done in Kenya have recommended integration philosophy of education provision for children with various disabilities. Mwangiri (1989) found that integration of hearing impaired children in its various forms was not only possible but that it should be pursued more. He further recommended that more teachers be trained to support and guide the teachers in ordinary schools. This has been realised with launching of Distance Education programme at Kenya Institute of Special Education (KISE) which is currently training learners from all over Kenya as a parallel programme to a full time programme that is training teachers in diploma in special education.

Mwaura (2001) conducted a study of teachers’ attitudes on teaching the hearing impaired children together with the hearing. He found that there was a general consensus among all the teachers who participated in the study that children with hearing impairments should be educated just like their hearing brothers and sisters. However, he postulated that attitudes could be the greatest barrier or the greatest asset to the development of integrated schools. They may influence the challenges to be chosen and goals to be
achieved if education for all is to be achieved; it has to start with a change of attitudes (Mwaura, 2001).

Despite the recommendations by Mwaura (2001) on change of attitudes, 10 years later Kibet (2012) conducted a study on the effectiveness of inclusive education in public primary schools in Keiyo district. The study found out that teachers and community members still have negative attitudes towards inclusion though the reasons are different. Teachers’ negative attitude is based on inadequate resources while the community’s is based on cultural beliefs. However, inclusion has increased the number of children accessing education; increased the literacy rate in the community; has created positive perception towards disability in the community and has enabled learners to appreciate each other’s strength and weaknesses. Njoka, Riechi, Obiero, Kemunto, Muraya, Ongoto & Amenya (2012) conducted a study entitled ‘Towards Inclusive and Equitable Basic Education System’. The study found out that policies developed to address inclusive and equitable basic education have not been effectively implemented and that overall extreme poverty remains the main barrier to attainment of inclusive and equitable basic education.

Though inclusive education for learners with visual impairment, physical and mental handicapped may be easier, inclusion for learners with hearing impairment may be difficult because it involves hearing and speech. This study therefore sought to find out if teachers’ and parents attitudes are among the factors hindering the implantation of inclusive education for LHI in Murang’a County.
2.4 Barriers to the implementation of inclusive education for LHI

Barriers to the implementation of inclusive education include psychological, educational, social and economical factors.

2.4.1 Psychological and Social Barriers

Teachers are the key implementers of any educational policy in many countries. According to Waldron and Mcleskey (1997) the success or failure of inclusive education is dependent on teachers' attitudes. A survey by UNESCO (1986) on teachers' attitudes revealed that teachers favoured education for all in an integrated environment, only because there was that mandated them to do so. This is a clear indication that teachers do not favour the idea of inclusive education. Years of research in USA had shown that attitudes and beliefs of teachers were some of the ways that hindered successful inclusive education.

Smith and Johnson (2001) pointed out that parents in USA who had their children in special schools were reluctant to have them in regular classroom. There was fear that teachers in regular schools may have negative attitudes towards LHI. The combining of the various categories of learners with special needs may lead to less attention to the specific need of each child.

According to Walsh (2013) Society's views of persons with special education needs can impact negatively on what goes on in schools. Some communities may not be friendly towards students who are differently abled, whether physically or mentally. Some members of the community may be ignorant of the facts while others may be just indifferent and ignore persons with disabilities. When members of these households meet
as a community, little or nothing positive may be done because low expectations provide little or no positive action. However, Walsh (2013) notes that supportive members of the community got involved in educating parents about the positive aspects of inclusion. It was no easy task to change these parents’ beliefs of many years that have been psychologically imprinted by their parents and communities.

The situation may not be different in Kenya where parents may feel the same. Murang’a County with assistance from Kenya Society for Deaf Children (KSDC) embarked on a five years programme to form groups of parents of LHI so as to support the learning of their children (KSDC, 2005). Some of their objectives included advocating for educational access for their children and creating awareness to enable the parents have positive attitudes towards education of their children. Learner with hearing impairment had difficulties in socializing with teachers and other students due to lack of language of communication.

2.4.2 Educational and Economical Barriers

Learners with special needs face barriers within schools and classrooms owing to organization of curriculum and teaching methodologies. At times, they are assessed and ‘identified’ and thereafter isolated within schools, or even classrooms, to receive discriminatory curriculum (Jha, 2002). In England, under the existing policy more than 20 percent children are being identified and labeled as ‘special educational needs’ with or without ‘statements’. Statemented children more than often are sent out of schools. Curriculum in many developing countries is not child friendly or relevant to the needs of children. It is content based and children learn by rote and memorization. In Kenya, though the curriculum has been modified by Kenya Institute of Curriculum Development
to suit learners with special needs, the teaching/learning materials have not been adequately modified especially for learners with hearing impairments.

Most schools used oral communication as a major method of instruction. Caution has been put in place when educating LHI among hearing students. Though the language development of children with hearing impairments develops the same way as those without impairments, at some level the child with hearing impairment develops the language of his or her background. The language learnt by the child with hearing impaired may be sign system taught at home or developed by self (Iverson and Meadow, 1998). Therefore alternative modes of communication in those schools should be applicable.

Ling (1976) pointed out that LHI may have difficulty in following verbal instructions or directions. A child who has not heard the sounds of the language being used would not be able to decode print if taught in the usual method of matching sounds to print (Paul and Quigley, 1994). Alternative methods of communication and instructions should be incorporated in the class for the LHI. This concurred with the views of Iverson and Meadow (1998) who observed that the child with hearing impairment develops some sign system based on their backgrounds. Due to the development of this sign system a differentiated curriculum is necessary as observed by Kamere (2004) in the study of development of special education in Kenya. This study sought to establish the extent to which the schools are equipped to meet the needs of the learners and the educational choices the parents make in educating learners with hearing impairments.
2.5 Adjustments made to Regular Public Schools Systems to facilitate Inclusive Education

UNESCO (1997) posits that in order to place LHI in regular schools, the school systems should be adjusted to meet the needs of all children. The adjustments are made to address the various barriers to implementation of inclusive education (Sabba and Sachler, 1997).

2.5.1. Communication mode

The new constitution in Kenya made Kenya sign language (KSL) a national language for everyone. A circular from the Ministry of Education (2009) instructed schools with learners with hearing impairments to include KSL as a subject in the curriculum to be taught to all learners – with or without hearing impairment. The subject to be examinable by Kenya National Examination Council. This was implemented in 2010 and has continued but only in special schools and not in regular schools. Though the Ministry of Education recommended the use of Kenya Sign Language (KSL) as a medium of instruction in the lower primary classes where LHI are included teachers need to be trained on the skill relevant to instruct LHI. Training of teachers in special needs education has been done extensively by KISE through distance learning all over Kenya, and specifically in Nyanza by Leornard Chesire Disability Programme but the specific skills require the use of KSL as a method of communication is inadequate. This study sought to find out whether teachers in the regular schools in Murang’a County were adequately trained in Kenya sign language.
2.5.2 Instructional Methods for Learners’ with Hearing Impairments

Due to the limitation of oral language for LHI, several other methods of communication should be incorporated to suit the learners. Some of these methods include: visual gestures, Visual aids, speech/lip-reading and writing. Visual gestures are facial expressions that give meaning to spoken or signed word. They give emphasis on concepts such as sadness, happiness, surprise. Visual aids on the other hand can be drawings or realia materials that are used to support learning. Speech reading, also commonly known as lip reading is a unique technique where LHI could observe the movements of the lips to get a clue of what is being said and use language in logical forms. (Benson, Bakari and Tobias, 2005). These combined instructional methods which are referred to as total communication are applicable in the inclusive setting.

2.5.3 Collaboration of Stakeholders in Inclusive Education

Collaboration is working together as team/stakeholders to achieve a common objective Shneiderman (1994). For this study the stakeholders include parents, teachers, learners with hearing impairments and education officers. These stakeholders should be made aware of the impact of working together in the implementation of inclusive education as quoted by Bunch (1999):

“You learn to talk by talking, you learn to read by reading, you learn to write by writing, you learn to include by including’ (p9)

A survey on the status of inclusive education in Kenya conducted by Karugu (2001) revealed that 90 percent of the educators agreed that Kenya should practice the philosophy of inclusion in delivering educational services to children with special needs. Among the recommendations made by Karugu was that public awareness campaigns on education of
children with special needs in inclusive education. To implement some of the recommendations by Karugu (2001) the Ministry of Education in collaboration with Education Assessment and Research Centres (EARC) carried out an awareness programme in Murang’a County among other counties in the year 2006 - 2007. The programme focussed on assessment and placing children in inclusive setting. Later, in 2007, 2011 the Kenya Society for the Deaf conducted a programme targeting parents, teachers and EARC officers in team collaboration in Murang’a County among other counties. The two programmes were meant to ensure that learners are placed in an inclusive setting through collaboration. The study sought to find out the impact of the training on inclusive education.

2.5.4 Collaboration of Parents in Inclusive education

Parents form an integral part in the education of their children. According to Kirk, Gallagher, and Anastasiow (2003) early intervention of LHI was important which was the same view held by (Ndurumo, 1993). Parents’ should be responsible in assisting the learning of their children as early as possible since infants learn communication from their parents. This should be continued through out their school lives. They should also play a major role in their contribution towards inclusive education in total.

The parents should be in constant contact with the teachers and especially attendance of schools meetings (Hakapaino, Savolaine, Kokkalah and Alasuutari 2000). The parents should support the learning of their children at home. They should also control their progress at home and in school. A child’s successful education and socialization depends on the parent’s collaboration with teachers on performance and general welfare of the learner. Parents should ensure that they put their children where the assessment officer has
placed them and make a follow up to support them in their education irrespective of the schools placement.

2.5.5 Teachers collaboration in inclusive education for LHI

Kauffman and Hallahan (1994) observed that there was opposition to inclusion in USA from the teachers. The teachers felt that inclusion would threaten their jobs and at the same time inclusion was replacing one injustice with another. Their argument was that special services would not follow the student to the class and the regular class teacher may not be prepared to deal with those learners. Teachers are not willing to go an extra mile to acquire skills, change timetables, modify environment, use appropriate instructional methods and prepare individualized education programmes to accommodate LHI.

Most teachers in USA felt that the learners with special needs might lower the quality of their work considering that time allocated for syllabus coverage and the curriculum is the same as that of regular learners. A study in Kenya by Alade (1999) found out that there was misconception that persons with HI were mentally deficient after consistently scoring low grades in National examinations. This view could be perpetuated in Kenyan schools where the mean standard scores in examinations were highly valued. The performance of a teacher was measured in terms of mean standard scores and not value addition to the learner. Therefore the teachers could feel that LHI placed in their classes may affect the performance due to the fact that their pace of learning and the insensitive curriculum could overall affect their performance. The teacher could therefore be reluctant to admit such a learner in the class.
2.6 Facilities and Resources at Educational Assessment and Resource Centers (EARC) and Schools

In Kenya assessment of LHI is mostly done at the Education Assessment Resource Centers (EARC). These centers are located at district headquarters. Screening and diagnostic assessment are carried out to establish the levels of hearing loss of an individual among other educational needs. To carry out this assessment efficiently proper facilities and resources are required.

In the 2003, the Ministry of Education (MoE) task force looking into the implementation of FPE observed that the EARC’s were situated at district headquarters far from the communities they were meant to serve. They also lacked facilities and resources for proper assessment (Ministry of Education, 2003) Ndurumo (1993) highlighted lack of appropriate and early assessment as a factor hindering early educational interventions for LHI thus most of them do not access education.

The 2003 MoE task force recommended that the EARC needed to be facilitated to develop mechanism of creating awareness and importance of assessment. Proper assessment to determine the level or degree of hearing loss would require audiometers and screening rooms away from environmental noise. Once the learners have been screened, those classified as hard of hearing would be placed in the regular school. They would also be fitted with hearing devices. The same report found that regular schools did not have adequate facilities and resources to accommodate learners with special needs. In the year 2006 the Ministry of Education embarked on a programme to disburse funds to schools to improve infrastructure, purchase assistive devices and other learning materials.
for learners with special needs. There is need to investigate if the set objectives and recommendations by the Ministry of Education were implemented.

2.7 The Impact of Degree of Hearing Loss on Inclusive Education

After assessment to determine of the degree of hearing loss of a learner, the appropriate placement is done. Medically, the level of the loss is measured by the use of decibels (dB). However, the educational definition of hearing loss relates to the child’s ability to learn language through audition and how the learner performs academically. There is no clear distinction from one loss to the other. Ndurumo (1993) classified the following range of hearing loss for educational purpose: Insignificant0-15dB, slight hearing loss (16-25 dB), mild hearing loss (25-40 dB), moderate hearing loss (41-55 dB), moderately severe hearing loss (56-70 dB), severe hearing loss (71-90 dB) and lastly profound hearing loss (91 dB and above). UNESCO (1990) proposed that the hard of hearing category should range from mild to moderately severe. The other categories should be classified as deaf.

Regardless of the classification of the hearing loss many LHI possess normal intelligence. They follow the same sequence of cognitive development as children without hearing losses but sometimes at a lower rate. Due to the slow development of literacy skills that do not commensurate with their intelligence the LHI lag behind, two or more classes than the other learners of their age. The higher the degree of hearing loss the drastic the effect it is likely to have on the learner.
2.8 Summary of Literature Review

Literature reviewed has shown that barriers to implementation of inclusive education include psychological, social, educational and economical barriers. Psychological and social barriers include negative attitudes among stakeholders and lack of collaboration. Educational and economical barriers include failure of adjustment of school systems, communication and instructional methods, inadequate training of teachers and lack of teaching/learning materials, assistive and supportive devices. This study therefore sought to find out the factors hindering the implementation of inclusive education for LHI in Murang’a County; with an aim of recommending measures that would improve the implementation of inclusive education for LHI in Murang’a County.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction
In this chapter, details on how the study was conducted are presented. The chapter is divided into eleven sub-sections: research design, variables, location of the study, target population, sample size and sampling procedures, data collection instruments, pilot study, reliability, validity, data collection procedures and data analysis.

3.2 Research Design
The study adopted descriptive survey design to investigate the factors influencing inclusive education for learners with hearing impairments in public day primary schools in Murang’a County. Descriptive survey designs were used in preliminary and exploratory studies (Luck and Ruben, 1992) to allow researchers to gather information, summarize, present and interpret for the purpose of clarification (Orodho, 2002). Descriptive survey research is intended to produce statistical information about aspects of education that interest policy makers and educators (Borg and Gall, 1989). The choice of this design is made based on the fact that the researcher will not manipulate variables.

3.2.1 Variables
In the research, the independent variables were qualification of participants in Special Needs Education, adjustment of school systems by head teachers (which included friendly timetables, curbing environmental noise and funds allocation), adjustments in classrooms by the teachers (such as sitting arrangements, curbing environmental noise, time table adjustments and preparation of individualized education programmes). Others included assessment facilities and resources in EARC’s and schools (such as
audiometers, Otoscopes, screening rooms, hearing devices and speech trainers among
others), the degree of hearing loss on education of LHI, communication and instructional
methods for LHI and finally collaboration of stakeholders (such as attendance of parents
teachers meetings, resource contribution, consultation on performance and assessment).
Those were the variables that seemed to influence inclusive education. The dependent
variable was inclusive education which would be affected by the independent variables.

3.3 Location of the study

The study was carried out in Murang’a County in Central Province of Kenya. The county
is located about 80 km North of Nairobi along Nairobi-Thika-Muranga Highway. The
county borders Kiambu on the southern side, Nyeri on the northern side, Kirinyaga on the
east and Nyandarua on the west. The area was chosen because of availability of variables
that the researcher is interested in (learner with hearing impaired included in the schools)
and also because of the proximity and accessibility of the area to the researcher. Also, no
similar studies, to the best knowledge of the researcher, have been carried out in
Murang’a County.

3.4 Target population

The study targeted all the 5 headteachers, 5 Education Officers, 50 teachers, 50 parents
and 40 learners with hearing impairment in the 5 public day primary schools in Murang’a
County. Fifty parents of the learners with hearing impairment were also targeted
3.5 Sample size and Sampling Procedures

Sampling means selecting a given number of subjects from a defined population as representative of that population. Any statements made about the sample should also be true of the population (Orodho, 2002). Simple random sampling was used to select 15 teachers for the study. Purposive sampling was used to select 5 headteachers, 5 Education Officers and 11 learners with hearing impairment. Though the study had targeted 40 learners, data was collected from 11 learners only. Among the other 29 learners 10 had transferred to boarding schools while the others could not be accounted for, by the time data was being collected.

3.6 Data collection Instruments

The study employed interview and observation schedules for data collection instruments. The interview schedules consisted of open-ended questions covering all the objectives of the study. They were used to guide face-to-face interviews held with headteachers, parents, learners and education officers. The researcher personally interviewed the respondents. The observation schedule on the other hand collected data regarding the teaching/learning facilities in the schools.

3.7 Pilot Study

Piloting ensures that the instruments had the same meaning to the respondents when repeated after a particular interval (Mugenda and Mugenda, 2003). The pilot study was carried out at Mukubu Primary School in Kiambu County. The school was chosen because it has learners wit hearing impairments included in their classes. The aim of the
pilot study was to clear any unclear or ambiguous statements found in the data collection tools.

3.8 Reliability

Borg and Gall (1989) define reliability as a measure of the degree to which a research instrument yields consistent results or data after repeated trials. Prior to data collection, a pilot study was conducted in one primary school from Kiambu County, but which was not included in the actual study. The pilot study helped to improve reliability of the instruments. The split-half technique of measuring reliability was used. This involved splitting the pilot questionnaires into two halves (odd and even) then calculating the correlation coefficient (r) for the two halves. To do this, the Spearman’s Rank Order Correlation Coefficient (r) was used. The reason behind pre-testing was to assess the clarity of the questionnaire items so that those items found to be inadequate or vague were either discarded or modified to improve the quality of the research instrument thus increasing its reliability (Kathuri and Pals, 1993). This was achieved.

According to Gay (1992), a correlation coefficient of at least 0.7 and above for the two halves is considered sufficient. The researcher aimed at producing interview schedules that would give this reliability result for data collection.

3.9 Validity

Mugenda and Mugenda (1999) define validity as the accuracy and meaningfulness of inferences, which are based on the research results. In other words, validity is the degree to which results obtained from the analysis of the data actually represents the phenomena under study. Validity, according to Borg and Gall (1989) is the degree to which a test measures what it purports to measure.
All assessments of validity are subjective opinions based on the judgment of the researcher (Wiersma, 1985). The piloted questionnaires were assessed for clarity and those items found to be inadequate or vague were modified to improve the quality of the research instrument thus increasing its face validity. According to Borg and Gall (1989), content validity of an instrument is improved through expert judgement. As such, the researcher sought assistance from her supervisors, in order to help improve content validity of the instrument.

3.10 Data Collection Procedures

The researcher got an introduction letter from the University and a research permit from the National Council for Science and Technology. After this, the researcher booked an appointment with the sampled teachers, learners and education officers through the headteachers, to visit and conduct interviews. The researcher then visited each of the schools and conducted the face-to-face interviews with the respondents. The parents were interviewed at Muranga South EARC where they usually hold cluster meetings. This was because it was more convenient to interview them at a venue they are more familiar with. The respondents assured of utmost confidentiality and that the information they gave would be used for academic purposes only.

3.11 Data Analysis

Before the collected data was analysed, data cleaning was done in order to determine inaccurate, incomplete, or unreasonable data and then improved the quality through correction of detected errors and omissions. Descriptive and analytical statistics was used to analyze the data obtained. Data analysis procedures employed involved qualitative procedures. Qualitative analysis considered the inferences that were made from the
opinions of the respondents, whereby similar responses were tallied to come up with frequency counts and then percentages were calculated based on the total number of responses. Data was presented in summary form using frequency distribution and tables.
CHAPTER FOUR
PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Introduction

Presented in this chapter are the results of the study based on data collected from the field. The chapter presents data analysis, presentations and discussions of the study findings. The main objective of the study was to find out factors influencing implementation of inclusive education for Learners with Hearing Impairment in day public primary schools, in Murang’a County. The chapter is organized into seven sections as follows; bio data of the participants, adjustments made in regular public schools to accommodate LHI, availability of facilities and resources in EARC, effect of degree of hearing loss on learners education, stakeholders’ collaboration in support of inclusive education for LHI and strategies put in place to improve inclusive education system in Murang’a county. Results were presented by use of pie charts, bar charts and tables, and then findings were discussed in relation to literature reviewed.

4.2 Bio data of the Participants

The study targeted a sample of 5 headteachers, 15 teachers, 5 education officers, 15 parents and 11 learners with hearing impairment hence yielding a total of 51 respondents from public primary schools in Murang’a County. The bio data of the participants has been analyzed and presented in relation to their gender, age and the level of qualification in Special Needs Education. The gender has been further distributed according to the category of participants. The age of the participants has been classified using age brackets of ten years. The qualification in special needs range from certificate, diploma, under graduate and post-graduate levels of education.
4.2.1 Gender of Participants

Of the 51 study participants, 21 were males while 30 were females. Figure 4.1 illustrates gender distribution of the study respondents.

Table 4.1: Gender distribution according to categories

<table>
<thead>
<tr>
<th>Participants</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Percentage</td>
</tr>
<tr>
<td>Headteachers</td>
<td>5</td>
<td>100.0</td>
</tr>
<tr>
<td>Education Officers</td>
<td>4</td>
<td>80.0</td>
</tr>
<tr>
<td>Teachers</td>
<td>4</td>
<td>26.7</td>
</tr>
<tr>
<td>Parents</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>Learners</td>
<td>7</td>
<td>63.6</td>
</tr>
</tbody>
</table>

As shown in Table 4.1, all (100.0%) the headteachers were males and only 1 (20.0%) education officer was a female. This shows that males were more engaged in decision making level compared to their female counterparts. Of the 15 teachers, 4 (26.7%) were males while 11 (73.3%) were females. Among the 15 parents, 1 (6.7%) was a male while the rest were females. This shows that majority of the study respondents were females. Gender difference in special schools could be explained by the popular belief that females are more sympathetic than males and hence leading to more female teachers in special schools than male teachers. These findings concur with those of Baron-Cohen (2003) who argues that women have better emotional intelligence, better adaptation ability and empathy. On the same note, the results presented in Figure 4.1 shows that out of 11 learners with hearing impairment, 7 (63.6%) were boys whereas 4 (36.4%) were
girls. This shows that the parents may favour the education of boys to that of girls or probably after enrolment in school more girls drop out.

4.2.2 Age Characteristics of the Participants

The age of learners with hearing impairment is as shown in Figure 4.1.

Figure 4.1: Age of learners with hearing impairment

Figure 4.1 shows that 3 (27.3%) learners with hearing impairment were aged 7-10 years, 6 (54.5%) were aged 11-14 years while 2 (18.2%) were aged 15 years and above. This was generally the school going age of many learners in Kenya. The introduction of Free Primary Education for all children in Kenya gave children, including those with disabilities, an opportunity to go to school. Also many children with disabilities were not going to schools before, now with FPE they go even if they are beyond 6 years hence the large number above 15 years still in school. Also disability can make them take longer in
schools because of coping problems. This means that in Kenya today, it is compulsory for girls and boys between the ages of six and thirteen years of age to attend school. The Government also has adopted the principle of child-friendly schooling, and accepts that schools shall not exclude, discriminate or stereotype on the basis of difference, respects diversity and ensures equality of learning for all children (Republic of Kenya, 2010). It further accepts that schools shall respond to diversity by meeting differing circumstances and needs of children based on gender, social class, ethnicity and level of ability. However, due to high enrolment in schools many challenges remain and there are concerns about the quality of education declining because of the increased intake. For instance, the Ministry of education manages the curriculum development and setting the running costs of the schools. However, the management of schools is left to the school committees and head teachers who are responsible for the day to day running of the schools. This as a result negatively influences learners since most of the schools were not able to cater for the needs of all learners especially those with special needs e.g. hearing impairment.

Table 4.2 illustrates age distribution of education officers, headteacher, teachers and parents
Table 4.2: Age distribution of education officers, headteachers, teachers and parents

<table>
<thead>
<tr>
<th>Age bracket</th>
<th>Education officers</th>
<th>Headteachers</th>
<th>Teachers</th>
<th>Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>18-28 yrs</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>29-39 yrs</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>40-50 yrs</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>20.0</td>
</tr>
<tr>
<td>Over 51 yrs</td>
<td>5</td>
<td>100.0</td>
<td>4</td>
<td>80.0</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>100.0</td>
<td>5</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The distribution of participants according to the age bracket was as follows. All (100.0%) of the education officers and majority (80.0%) of the headteachers were over 51 years, 46.7% of the teachers were aged between 40-50 years while 60.0% of the parents were aged between 18 and 28 years. Most of the school administrators were above 40 years. This implies that majority of the administrators were of mature age and have experience in their careers. Perhaps younger teachers are few because they prefer looking for less demanding and well paying jobs.

4.2.3 Work experience of headteachers

Figure 4.2 shows headteachers’ responses on duration served as the school head
As Figure 4.2 shows, 1 (20.0%) headteacher had served as a school head for 6-10 years, 3 (60.0%) had served for 11-15 years while the remaining 1 (20.0%) had worked as headteacher for 16 years and above. This implies that majority of the headteachers had served as a school heads for a long time to have a reliable information on factors influencing proper implementation of inclusive education especially for learners with special needs.

4.2.4 Qualification of Participants in Special Needs Education

The participants were trained in different areas of education and had attained different academic achievements. Those levels included, Certificate, Diploma in education, Degree and Masters. Table 4.3 presents academic qualifications of study participants (headteachers and teachers)
Table 4.3: Headteachers’ and teachers’ academic qualification

<table>
<thead>
<tr>
<th>Education level</th>
<th>Headteacher</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Master’s</td>
<td>1</td>
<td>20.0</td>
</tr>
<tr>
<td>Degree</td>
<td>2</td>
<td>40.0</td>
</tr>
<tr>
<td>Diploma in Education</td>
<td>2</td>
<td>40.0</td>
</tr>
<tr>
<td>P1 Certificate</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5</td>
<td>100.0</td>
</tr>
</tbody>
</table>

As indicated in Table 4.3, of all the headteachers who took part in the study, 2 (40.0%) had attained Diploma in Education, 2 (40.0%) had degree while the remaining 1 (20.0%) had Master’s qualification. As for the teachers, 60.0% of them had P1 certificate, 33.3% of them were diploma holders in education while 1 (6.7%) was degree qualifier. Perhaps this is due to the tendency of graduate teachers leaving the teaching profession in search of greener pastures.

Though both headteachers and teachers had high academic qualifications this does not imply that they are effective in their work especially teaching learners in an inclusive setting. Previous researchers show that general education teachers may attempt to meet the needs of students with disabilities but often feel ill-prepared to do so, are constrained by their standardized view of instruction and curriculum, believe that mainstreamed students should enter content-area classes ready to learn the same material at the same level of other students, and do not make any significant changes to their curriculum development or instructional approaches (Schumm and Vaughn, 1992; Soodak, et. al, 1998).
Table 4.4 illustrates number of headteachers and teachers trained on special education.

Table 4.4: Headteachers' and teachers' responses on special education

<table>
<thead>
<tr>
<th></th>
<th>Headteacher</th>
<th></th>
<th>Teacher</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Trained on special needs education</td>
<td>1</td>
<td>20.0</td>
<td>8</td>
<td>53.3</td>
</tr>
<tr>
<td>Not trained on special needs education</td>
<td>4</td>
<td>80.0</td>
<td>7</td>
<td>46.7</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>100.0</td>
<td>15</td>
<td>100.0</td>
</tr>
</tbody>
</table>

As shown in Table 4.4, only 1 (20.0%) headteacher and 8 (53.3%) teachers were trained on special education. The remaining 4 (80.0%) headteachers and 7 (46.7%) teachers had undergone regular training, meaning that they were not trained to teach learners with special needs. This shows that majority of the headteachers and a significant number of teachers were not trained on special education. Special needs education training may help teachers in coping better with children with disabilities and also identifying learning resources required by these learners. However, lack of training among teachers and headteachers may slow down the implementation of inclusive education. The implication is that, children with hearing impairment in regular schools perform poorly since besides having no facilities; teachers were also not trained on special needs. Among the 8 teachers trained on special education, 5 (33.3%) have specialized in hearing impairment while 3 (20.0%) were specialized in other areas such as deaf blind impairment and mentally handicapped. The main areas covered in hearing impairment were usage of sign language and speech reading.
4.3 Factors hindering the Implementation of Inclusive Education for LHI

The first objective sought to determine the factors hindering the implementation of inclusive education. To address this objective Education Officers, headteachers, teachers, parents and learners with hearing impairment were asked to state the hindrances that they face. Their responses are as shown below.

**Table 4.5: Education Officers responses on factors hindering implementation of inclusive education**

<table>
<thead>
<tr>
<th>Hindrances</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of trained teachers on special needs education</td>
<td>4</td>
<td>80.0%</td>
</tr>
<tr>
<td>Understaffing</td>
<td>4</td>
<td>80.0%</td>
</tr>
<tr>
<td>Negative attitude towards inclusive education</td>
<td>4</td>
<td>80.0%</td>
</tr>
<tr>
<td>Lack of teaching and learning facilities</td>
<td>3</td>
<td>60.0%</td>
</tr>
</tbody>
</table>

As shown in Table 4.5, Eighty (80%) of the Education Officers reported that lack of trained teachers on special needs education, understaffing and negative attitudes towards inclusive education as the major hindrances towards implementation of inclusive education. Another 60% reported lack of teaching and learning facilities as a hindrance.
Table 4.6: Headteachers’ responses on factors hindering implementation of inclusive education

<table>
<thead>
<tr>
<th>Hindrances</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of funds</td>
<td>5</td>
<td>100.0</td>
</tr>
<tr>
<td>Negative attitude towards education of LHI in an inclusive setting</td>
<td>5</td>
<td>100.0</td>
</tr>
<tr>
<td>Lack of parental involvement in children education</td>
<td>4</td>
<td>80.0</td>
</tr>
<tr>
<td>Poor management of available resources</td>
<td>3</td>
<td>60.0</td>
</tr>
</tbody>
</table>

As shown in Table 4.6 the headteacher reported the factors hindering implementation of inclusive education as: lack of funds (100%), Negative attitude towards education of LHI in an inclusive setting (100%), lack of parental involvement (80.0%) and poor management of resource (60.0%).

Table 4.7: Teachers’ responses on factors hindering implementation of inclusive education

<table>
<thead>
<tr>
<th>Teachers</th>
<th>8</th>
<th>53.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of teaching and learning facilities</td>
<td>8</td>
<td>53.3</td>
</tr>
<tr>
<td>Lack of adequate training on special needs education</td>
<td>8</td>
<td>53.3</td>
</tr>
<tr>
<td>Understaffing</td>
<td>6</td>
<td>40.0</td>
</tr>
</tbody>
</table>

As shown in Table 4.7 teachers reported factors hindering implementation of inclusive education as: Parents’ negative attitude towards inclusive education (80.0%), Lack of teaching and learning facilities (53.3%), lack of teaching and learning facilities (53.3%) and Understaffing (40.0%).
### Table 4.8: Parents’ responses on factors hindering implementation of inclusive education

<table>
<thead>
<tr>
<th>Hindrances</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient funds</td>
<td>15</td>
<td>100.0</td>
</tr>
<tr>
<td>Communication barrier between the parent and the child</td>
<td>10</td>
<td>66.7</td>
</tr>
<tr>
<td>Lack of awareness on appropriate placement</td>
<td>10</td>
<td>66.7</td>
</tr>
<tr>
<td>Lack of parental responsibility</td>
<td>8</td>
<td>53.3</td>
</tr>
</tbody>
</table>

As illustrated in Table 4.8, parents reported factors hindering implementation of inclusive education as: insufficient funds (100.0%), communication barrier between the parent and the child (66.7%), lack of awareness on appropriate placement (66.7%) and lack of parental responsibility (53.3).

### Table 4.9: Learners with hearing impairment responses on Factors hindering implementation of inclusive education

<table>
<thead>
<tr>
<th>Hindrances</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of trained teachers in special education</td>
<td>10</td>
<td>90.9</td>
</tr>
<tr>
<td>Stigmatized by other pupils, teachers and parents</td>
<td>9</td>
<td>81.8</td>
</tr>
<tr>
<td>Negative attitude from the community members and parents towards educating LHI</td>
<td>7</td>
<td>63.6</td>
</tr>
<tr>
<td>Lack of assistive devices e.g. hearing devices</td>
<td>6</td>
<td>54.5</td>
</tr>
<tr>
<td>Understaffing</td>
<td>5</td>
<td>45.5</td>
</tr>
</tbody>
</table>

As shown in Table 4.9 majority of the learners with hearing impairment reported that the major factors that hinder the implementation of inclusive education were: lack of trained teachers on special education (90.0%), stigmatization from other learners, teachers and
parents (81.8%) and negative attitude from the community members and parents towards educating learners with hearing impairment (63.6%). Other factors mentioned included; lack of assistive devices in the schools and understaffing.

4.4 Adjustments made in Regular Public Schools to Accommodate LHI

School systems should be adjusted to meet the needs of all children (UNESCO, 1997). Some of those systems included; communication, instructional methods and teaching strategies, adaptation of classroom environment and use of resources among others (Sabba and Sachler, 1997).

The second objective of the study was to determine adjustments made in regular public schools to accommodate learners with hearing impairment. To address this objective, study participants (parents, teachers and headteachers) were asked to indicate adjustments made in schools in terms of resources available in schools, instructional methods and adaptive devices for LHI. The following were results obtained.

4.4.1 Adjustments in the School Systems

Schools that move successfully towards inclusive ways of working provide evidence of good leadership (Ainscow, 1999). Headteachers as the school manager should therefore ensure that for a successful inclusion of children with hearing impairment, the school should have a supportive system for staff and pupils; collaboration of teachers; curricular modifications; adaptation instructions and restructuring of classes and effective use of existing resources. In relation to this view, the study sought to identify adjustments that were made by the school heads to ensure conducive learning environment for all learners. Presented in Table 4.10 are responses given.
Table 4.10: School adjustments by headteacher

<table>
<thead>
<tr>
<th>School</th>
<th>Restructuring of the timetable</th>
<th>Minimizing environmental noise</th>
<th>Funds allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>√</td>
<td>√</td>
<td>-</td>
</tr>
<tr>
<td>School B</td>
<td>√</td>
<td>-</td>
<td>√</td>
</tr>
<tr>
<td>School C</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>School D</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>School E</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

As Table 4.10 shows, out of 5 headteachers who participated in the study, only 2 headteachers reported that class time tables were adjusted such that they suit all learners regardless of their level of ability and also teachers have enough time for content delivery. Classroom timetable were restructured to ensure that some lessons were prolonged especially when teachers were using visual aids to teach. This helped learners with hearing impairment to have enough time to shift their attention from visual teaching to auditory (hearing). The table also illustrates that one school ensured that there was conducive learning environment for all learners by ensuring classes that had learners with hearing impairment were sited away from the road to avoid noise from the surrounding environment. Moreover, one headteacher ensured that some funds were allocated to cater for teaching and learning facilities for all learners including those with special needs (assistive device).

However, one of the headteacher interviewed could not imagine how he could allocate funds to meet needs of one learner in the school. The head teacher commented that;

'You want me to focus my attention on the needs of one LHI and forget about the 400 or more learners in my school? Impossible! I would rather have the LHI transferred to a special boarding school like the others of their 'kind.'
Boarding schools are well equipped and have qualified teachers (Head teacher, 7th October 2011, school B).

In agreement with the findings, Kauffman and Stinson (1993) observed that deafness is a low incidence disability and hence the child may be the only individual with a hearing loss in a classroom. The head teachers may therefore, not find it economically viable to adjust systems to support the LHI. In addition, Lawrence (1993) viewed inclusion as a means of saving money by dumping learners with special needs in regular classroom since special schools were deemed expensive to maintain. This sentiment implies that school administrators (headteacher and teachers) had a negative attitude towards inclusive education. Result findings revealed that they preferred transferring pupils’ with hearing impairment in special schools instead of providing them with assistive devices. This was a clear indication that in some schools, schools administrators were not stimulating learning environment for learners with hearing impairment. Further, this is an indication that money allocated to children with disabilities is misappropriated and never gets to them. Consequently, this negatively influenced pupils’ sense of belonging in schools leading to high rate of absenteeism and eventually low academic performances and school dropout.
4.4.2 Adjustments in the Classrooms

Table 4.11 shows classroom adjustments that were made by teachers.

Table 4.11: Class Adjustments

<table>
<thead>
<tr>
<th></th>
<th>Sitting arrangements</th>
<th>Individualized Education programmes (IEPs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>✓</td>
<td>0</td>
</tr>
<tr>
<td>School B</td>
<td>✓</td>
<td>0</td>
</tr>
<tr>
<td>School C</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>School D</td>
<td>✓</td>
<td>0</td>
</tr>
<tr>
<td>School E</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2</strong></td>
<td><strong>0</strong></td>
</tr>
</tbody>
</table>

From Table 4.11, it can be observed that only 2 teachers considered learners with hearing impairment in the classrooms when making sitting arrangements. They reported that they ensured that learners with hearing impairment sat near in front and in some situations they modified the classroom sitting arrangement in a circular pattern to allow pupils to observe and interact with the each other. Sitting in front of classrooms helped learners to capture words from the teacher clearly and also a teacher can be in a position of capturing pupil’s attention. However, results in the table illustrates that none of the teacher from the five sampled schools prepared an individualized education programmes for learners with learning impairment. The IEPs are the programmes that teachers prepare in order to achieve a specific long term and short term individual objectives of a learner with special needs. The programme also ensures that learners are periodically evaluated in order to modify or adjust the objectives to meet their needs. Schools that do not prepare IEPs for learners with special needs are not able to identify or address a student’s unique need. The schools will not be able to support learners in general education curriculum and in
reaching the same learning standards as learners with hearing impairment. This will have a negative impact. This will fail to prepare learners for adult living.

The major reasons that were given included; there was a problem of understaffing in most schools and therefore teachers could not be able to give individualized attention. It further emerged that there was high rate of absenteeism among LHI which affected the implementation of IEP. This influenced most of the teachers to ignore the individualized education programmes and thus affected the performance of the class as whole. The major reasons that could contribute to truancy among these learners were poor academic performances as most of learners were unable to follow teachers’ instructions and also poor communication development with other pupils. This however, may lower level of esteem among them and hence resulting to high rate of absenteeism in schools.

4.4.3 Instructional Methods used by Teachers to teach LHI in regular schools

Table 4.12 shows instructional methods used by teachers to teach learners with hearing impairment in a regular school.

Table 4.12: Instructional Methods for LHI

<table>
<thead>
<tr>
<th>Instructional method used</th>
<th>No. of teachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing</td>
<td>11</td>
<td>73.3</td>
</tr>
<tr>
<td>Speech reading</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>Sign language</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>Any other form of communication</td>
<td>1</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Following teachers’ responses on instructional methods used to teach learners with hearing impairment. Table 4.12 shows that 11 (73.3%) teachers preferred writing, 2 (13.3%) teachers used speech reading, 1 (6.7%) each used sign language and any other
form of communication. This implies that majority of the teachers’ preferred using written text instead of other forms of instructional methods (sign language, speech reading, and oral test). Written text ensured that all learners were treated equally and were in a position of getting written notes. However, due to lack of skills on use of sign language and speech reading, majority of the teachers may also prefer using written text when communication subject content among learners with and without hearing impairments. This implies that teachers were not adequately equipped with skills required to teach in an inclusive education and this may hamper academic performances of all learners and especially those with hearing impairment.

4.5 Resources Available in EARC and in schools for Implementation of Inclusive Education

The third objective was to establish available resources both in Assessment Resource Centers (EARC) and schools in Murang’a County. To address this objective, the study first sought to find out facilities and resources available in the EARCs where LHI were assessed for placement.

4.5.1 Availability of Facilities and Resources in EARC

Facilities as listed in the observation checklist included; resource room for audiology, occupational therapy, physiotherapy and assessment. Hearing is tested using a device known as an audiometer which determines whether someone can hear within the normal range and if not which portions of hearing (high, middle or low frequencies) affected and what degree. Physiotherapy is a technique that is concerned with the remediation of impairments, disability and the promotion of quality life through examination, evaluation and diagnosis. Occupational therapy focuses on adapting the environment, modifying
tasks, teaching skills and educating the patients in order to increase participation in performance of daily activities. Assessment is the check up for the disability. The study further established availability of screening room, otoscopes and hearing aids in the 5 sampled centres. Otoscope is a medical device which is used to observe the ear canal for any obstruction whether caused by objects or growths. Table 4.13 illustrates results of the analysis

Table 4.13: Facilities/ resources at EARC's

<table>
<thead>
<tr>
<th>Facilities/ resources at EARC</th>
<th>Available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
</tr>
<tr>
<td>Resource room for audiology e.g. audiometers</td>
<td>2</td>
</tr>
<tr>
<td>Resource room for occupational therapy</td>
<td>0</td>
</tr>
<tr>
<td>Resource room for physiotherapy</td>
<td>0</td>
</tr>
<tr>
<td>Resource room for assessment</td>
<td>1</td>
</tr>
<tr>
<td>Screening rooms</td>
<td>0</td>
</tr>
<tr>
<td>Otoscopes</td>
<td>0</td>
</tr>
<tr>
<td>Hearing aids e.g. Behind The Ear (BTE), In the Pocket (IP) In Canal, or Cochlea implant.</td>
<td>2</td>
</tr>
</tbody>
</table>

As shown in Table 4.13, 2 (40.0%) study participants reported that resource room for audiology was available in two centres. One (20.0%) education officer further reported that there was a resource room for assessments in one centre while 2 (20.0%) reported that there was a hearing aid (Behind The Ear) in two centres used as samples but were not given out to LHI. However, all education officers reported that there were no; resource room for occupational therapy, resource room physiotherapy, screening rooms and otoscopes in all the five sampled centres. This shows that most centres lacked crucial facilities needed for learners with disability. In agreement with the findings, Ndurumo
(1993) had pointed out that many EARCs lacked facilities to carry out assessments. Similarly, Ministry of education reported that 90.0% of the EARCs in Kenya were making inappropriate placement decisions due to lack of necessary facilities (Republic of Kenya, 2003).

### 4.5.2 Availability of Facilities and resources at schools

The resources at school as listed in the observation checklisst include teaching/learning materials such as projectors, computers and CDs for the purpose of teaching interactive skills in KSL. Adaptive devices like different hearing aids, speech trainers and human resource.

#### Table 4.14: Facilities and resources at schools

<table>
<thead>
<tr>
<th>School</th>
<th>Otoscopes</th>
<th>Hearing device</th>
<th>Learning materials</th>
<th>Speech trainers</th>
<th>Specialist Teacher</th>
<th>Teacher aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>School B</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>School C</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>School D</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>School E</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

As indicated in Table 4.14, only school B had a hearing device and a teacher trained on hearing impairment the other 4 did not. The table also shows that none of the five (5) schools studied had purchased otoscopes, hearing device for LHI, speech trainers or teacher aides. This is an indication that most of schools were ill equipped with teaching and learning facilities needed for learners with special needs. This negatively influenced academic performances of learners with special needs and this was compounded with the fact that most of the teachers were not in a position to handle and deliver subject content
to learners with special needs since they are not trained to do so, and also they have no teacher aids or assistants to help them deal with these children with special needs. This implies that inclusive education had a negative impact towards learners with special needs. To confirm the above findings, some of the headteachers stated that; there was inadequacy of resources in schools and since money allocated by the government was not enough they opted to buy resources for other learners.

'The money allocated by the government is hardly enough. Why should I buy a hearing aid for one learner that is going to cost over Ksh 15,000? This money is enough to buy text books for more than 20 other pupils' (Head teacher School A 7th October, 2011).

This shows that lack of enough funds and attitudes towards disability was a major barrier influencing proper implementation of inclusive education in public primary schools. It is no wonder this headteacher considered the largest needs of group that could benefit from the available resources and ignored the smaller group of learners with hearing impairments. The high cost of and ignorance of assistive devices for LHI influenced the school administrators to purchase teaching and learning facilities for other learners in schools. This could be in part because of knowledge on disability by the largely untrained teachers and headteachers of most hence having no idea of the resources required to assist learners with hearing impairments.

'How can you order for things you do not even understand what they are, or what their purpose was?' (Head teacher School D, 11th October 2011)

To verify the above comment from two headteachers, 33.3% of the teachers reported that they were not aware of the resources needed for LHI, 2 (13.3%) teachers claimed that resources were expensive while the remaining 8 (53.3%) felt that it was not important to purchase assistive devices for LHI. The following comment was from one of the teachers.
‘There is no need of buying these things. The LHI should be taken to special schools where donors provide such things. In any case who will take care of them or even operate the devices?’ (Teacher School D, 11th October 2011)

This indicates that teachers’ negative attitude and lack of skills on special education were the major constraints for the inclusive education. Results revealed that majority of the teachers had negative attitude towards inclusive education and hence felt that it was not important to purchase assistive devices for LHI. It also emerged that majority of them were not trained on special education, meaning they lacked skills and understanding of the disability. This negatively influenced teachers attitude towards these learners and also interest of finding out resources required to teach LHI. This implies that, it was unlikely for LHI to receive satisfactory education and as a result leads to poor academic performance. In relation to the findings, Mwaura (2001) conducted a study of teachers’ attitudes on teaching the hearing impaired children together with the hearing. In his findings, Mwaura postulated that attitudes could be the greatest barrier or the greatest asset to the development of integrated schools. They may influence the challenges to be chosen and goals to be achieved if education for all is to be achieved.

The study further sought to determine how parents participated in provision of adaptive devices among learners with hearing impairments. In response, 10 (66.7%) of the parents interviewed were of the view that government is funding for Free Primary Education and therefore it was not their responsibility to provide learners with adaptive devices. The following was a remark given one parent;

‘We were told education is free .I won’t give anything unless I get money from Constituency Development fund (CDF). After all where will the child get employment?’ (Parent School C, 8th October 2011)’
Based on the response above, it was clear that parents viewed learners with hearing impairments as consumers who will not be of any economical benefit in future that is 'nginini ni cia hathara' developing a feeling that LHI could not be employed after schooling. This shows that parents were neither encouraging learners nor supporting their education, instead they were stigmatizing them. Moreover, 5 out of 15 parents of learners with hearing impairment confirmed that they contributed toward provision of learning resources because they had other 'normal' children learning in the same school. However, they proved that they did not give follow up their contributions in the schools since it was the responsibility of the school manager to control and manage school resources. Presented below is a comment from one of the parent;

'Whatever contribution I give to the school it is the responsibility of the headteacher to divide it among all my children learning in this school' (Parent School A, 8th October 2011)

The findings indicated that parents were not interested with how the resources were managed in terms of resources among learners with hearing impairment and those without the disability. This implies that parents were not fully involved in children education and especially those with disability. This negatively influenced learners' interest in education leading to low academic achievement and finally school drop out.
4.6 The effect of the Degree of Hearing Loss on Education

The third study objective was to find out the effect of the degree of hearing loss on learners. To ascertain this objective, learners were asked to indicate whether they perceive any sound in the classroom. In response, 7 (63.6%) learners were able to perceive sound though not clear while 4 (36.4%) did not perceive any sound. Table 4.10 illustrates level of sound perception among learners.

Table 4.15: Sound Perception among LHI

<table>
<thead>
<tr>
<th>Sound Perception</th>
<th>No. of LHI</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceives unclear sounds</td>
<td>1</td>
<td>9.0</td>
</tr>
<tr>
<td>Perceive only when sitting next to teacher</td>
<td>3</td>
<td>27.3</td>
</tr>
<tr>
<td>Perceives only when teacher faces the learner</td>
<td>3</td>
<td>27.3</td>
</tr>
<tr>
<td>Cannot perceive any sound</td>
<td>4</td>
<td>36.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

As Table 4.15 shows, 3 (27.3%) learners perceived sounds when teacher shouted, 3 (27.3%) perceived sounds only when they were near teacher while 1 (9.0%) slightly perceived sound. However, the 4 (36.4%) learners who never perceived any sound confirmed that they tried to use the sign language that they have developed among themselves to interact with other learners and teachers. The major problem was that majority of the pupils and teachers could not understand sign language and hence they ended up being discriminated. This influenced learners' sense of belonging in the school leading to low self esteem and as a result low academic performances. Learners who were profoundly deaf could not understand anything. Most of them were transferred from
one school to another. One of the 4 learners expressed concern that they were always transferred from regular school to special school nearby and vice versa.

‘One time I am learning at regular school, after 2 terms am transferred to special boarding school for LHI. In that school I learn sign language and feel better. But my mother says when she has no money I have to come and learn in this school (LHI School B, 13th October 2011)

This affected LHI academically as most of them had poor school attendance and hence lagged behind other pupils. Consequently, teachers developed a negative attitude towards these learners and sometimes opted to exempt the LHI from attempting the midterm and end of term examinations in order to avoid lowering the overall performance of the pupils. Out of the possible 500 marks most schools are expected to have a Mean Standard Score (MSS) of 250 and above. The higher the MSS score, the more the school is perceived to perform better. Therefore, LHI may not score according to the school’s expectations and therefore affect the ranking of the school.

To support the above comment, learners’ performance in end of year class evaluation tests the previous three years in school B was categorized as follows. Out of the 11 learners, 3 (27.2%) performed below average that is they scored less than half of the expected 500 mark. Four (36.4%) were always last in the merit list while the remaining 4 (36.4%) never sat for exams. One of the learners who never sat for exam commented that:

‘What is the need of sitting for an exam when you know you will be the last? I have never heard what the teacher says. Teachers don’t bother with me’ (LHI School B, 13th October 2011)
Another learner felt that teachers were not sensitive to their needs in the delivery of curriculum.

‘When we are learning English comprehension is the worst time. The teachers looks at the book when am trying to look at the teachers lips. By the time am looking at the passage the teacher is again explaining to the other learners. I end up not following anything (LHI School B, 13th October 2011)

This is an indication of the teacher poor skills of handling learners with hearing impairment among teachers, lack of encouragement from teachers and low performances in previous tests frustrated learner to sit for examinations. This affected retention rate of pupils with hearing impairment in schools hence leading to school drop out.

4.7 Stakeholders’ Collaboration in support of inclusive education

The school stakeholders who include headteacher, education officers, teachers, parents and learners should engage each other in the support of inclusive education. Most of the engagement is done during Parents’ Teachers Association (PTA) meetings. From the discussions of the findings the following table illustrates the different roles by the stakeholders in the involvement in implementation of inclusive education.
Table 4.16: Stakeholders’ Involvement in Inclusive Education for LHI

<table>
<thead>
<tr>
<th>Activity</th>
<th>Stakeholders’</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Head teacher</td>
<td>Teachers</td>
<td>Parents</td>
<td>Education officers</td>
<td>Learners</td>
</tr>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Stakeholders discussion on provision of resources required for LHI in schools</td>
<td>2</td>
<td>40.0</td>
<td>2</td>
<td>13.3</td>
<td>2</td>
</tr>
<tr>
<td>Stakeholders discussion about the academic performance of LHI</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>6.7</td>
<td>1</td>
</tr>
<tr>
<td>Not at all involved in matters affecting LHI</td>
<td>3</td>
<td>60.0</td>
<td>12</td>
<td>80.0</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>100.0</td>
<td>15</td>
<td>100.0</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 4.16 shows that 2 (40.0%) headteachers and 2 (13.3%) of the teachers and parents each; in PTA meetings participate in the discussions on provision of resources required for LHI in schools while 2 (13.3%) of the parents reported they also discuss about the same. However, none of the Education Officers or learners reported to have participated in the discussions. Regarding discussion about the academic performance of LHI, only 1 (6.7%) of the teachers and 1 (20.0%) of parents reported to have participated. Results also show that 3 (60.0%) of the headteachers, 12 (80%) of the teachers and parents each reported not to have been involved at all in matters affecting LHI.

The following is a comment from one of the parent who never attended PTA meetings.

"I do not like my child to be in this school. But at the same time I don’t have money to take my child to a special boarding school. I believe the special boarding school is better. I can attend meetings together"
with other parents with children like mine (Parent School C, 8th June 2011).

Many parents also aired the same hence portraying their negative attitudes towards inclusive education and/or the education of their children with hearing impairments. Similar observations were made by Geaheart (1994) on inclusive education. Another possible reason could be that the education issues affecting their children were never addressed in such meetings for parents at the school level.

The roles of each stakeholder in a school provide an integral part to the entire organization. Collaboration assists in that there is strength in numbers where workload and resources can be shared. There is also diversity of talents and reduction of burden on any one partner as observed by (Miles, 2008).

4.8 Stakeholders Preference for Placements of LHI

From the study it emerged that the Stakeholders prefered different placement for LHI.

Table 4.17 shows different preference placements.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Regular school</th>
<th>%</th>
<th>Special school</th>
<th>%</th>
<th>Special unit</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head teachers</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>7.8</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Teachers</td>
<td>3</td>
<td>5.8</td>
<td>9</td>
<td>17.6</td>
<td>3</td>
<td>5.8</td>
</tr>
<tr>
<td>Parents</td>
<td>3</td>
<td>5.8</td>
<td>9</td>
<td>17.6</td>
<td>3</td>
<td>5.8</td>
</tr>
<tr>
<td>Education Officers</td>
<td>2</td>
<td>3.9</td>
<td>1</td>
<td>1.9</td>
<td>2</td>
<td>3.9</td>
</tr>
<tr>
<td>LHI</td>
<td>3</td>
<td>5.8</td>
<td>8</td>
<td>15.6</td>
<td>0</td>
<td>5.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11</strong></td>
<td><strong>21.3</strong></td>
<td><strong>31</strong></td>
<td><strong>60.5</strong></td>
<td><strong>9</strong></td>
<td><strong>23.2</strong></td>
</tr>
</tbody>
</table>
Preference of placement of LHI in special boarding schools came out very strongly. Out of the 51 participants, 31 (60.5%) had perception that learners with hearing impairment should be transferred in special school, 11 (21.3%) preferred regular schools while 9 (17.6%) preferred special unit. The major reasons which made 11 participants to prefer regular schools were; learners with hearing disability would learn more from classmates who are willing to help, some children would appreciate living with LHI and hence making them develop high esteem in their life. This acceptance is an indication of positive attitudes towards inclusive education though the majority 60.5% felt that special schools were better. The following are the reasons they gave; in special schools, learners have an opportunity to access quality education since they were given individualized education, addressing specific needs, there are trained teachers on special education, learners were provided with adapted equipments and materials, learners are provided with adapted resource rooms and school curriculum is designed to suit needs for every learner.

Generally, based on the findings in Table 4.10, it emerged that most of the respondents had a negative attitude towards inclusive education and therefore, preferred that learners with hearing impairment should be educated in special schools and special units. In contrary to the findings, Republic of Kenya (2003) recommended that only the LHI with severe hearing loss should be placed in special boarding schools while those with mild hearing loss should be placed in regular schools.

4.9 Classroom Observation

The following observations were made in the classroom. Only two schools had LHI placed in the front of the class. But that did not help much because the teacher kept on
moving around the class as the teaching took place. That was very uncomfortable because learners kept on tracking the teacher’s movement. All the learning materials were displayed at the back of the classroom such that as the teacher kept on referring to them the LHI was distracted. Most of the time the LHI missed the instructions as the teacher moves around the classroom. This made the LHI to lose interest in the lesson. The windows of the classrooms observed faced the main path where other learners were passing by. Those learners acted as distracters to LHI who required uninterrupted concentration. The methods used for communication required movements of the hand and body. Therefore any other movement apart from teacher caused distraction (environmental noise). Generally the classroom environments were not friendly to LHI.

The fifth objective of the study was to determine strategies that can be put in place to improve inclusive education system in Murang’a County. To address this objective, the following suggestions were made by the headteachers and teachers
In order to improve inclusive education system, the following suggestions were made by headteachers and teachers: More than 80% of the headteachers and teachers suggested that parents and community members should be sensitized on the importance of educating learners with hearing impairment. Eighty percent of the headteachers and 76% the teachers further suggested that the government through the Ministry of Education should allocate more funds to cater for all learners with special needs. In support of this the DEO proposed that the community should get involved in supporting special schools through provision of teaching/learning resources.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary, conclusion and recommendations made based on the study findings. It further gives areas for further research.

5.2 Summary of the study findings

The main objective of the study was to find out factors affecting inclusive education for learners with hearing impairment in public primary schools in Murang’a county. The study respondents were 5 headteachers, 15 teachers, 5 education officers, 15 parents and 11 learners with hearing impairment hence yielding a total of 51 respondents. The following are the main study findings:

5.2.1 Factors hindering the Implementation of Inclusive Education for LHI

Majority of the headteachers reported that the major factors hindering implementation of inclusive education were lack of funds (100%), negative attitude towards education of LHI in an inclusive setting (100%), lack of parental involvement (80.0%) and poor management of resource (60.0%). On the other hand (80.0%) of the education officers reported lack of trained teachers on special needs education, understaffing and negative attitudes towards inclusive education as the major hindrances towards implementation of inclusive education. Majority of the teachers also reported Parents’ negative attitude towards inclusive education (80.0%) as a major hindrance while 100.0% of the parents reported lack of funds as another major factor. Majority of the learners also reported the major factors that hindering the implementation of inclusive education as: lack of trained
teachers on special needs education (90.0%) and stigmatization from other learners, teachers and parents (81.8%)

5.2.2 Adjustments made in Regular Public Schools to Accommodate LHI

5.2.2.1 Adjustments made in school system and classrooms

The study established that the major adjustments that were made by the headteachers were restructuring of the class timetables (40.0%), minimizing background noise (20.0%) and also ensuring some funds are allocated to cater for teaching and learning facilities in schools (20.0%). Additionally, classroom adjustments made by teachers included; modifying classroom seating in a circular pattern to allow pupils to observe and interact with the each other. Minimizing the environmental noise by closing doors to eliminate outside distractions and also restructuring classroom timetable in that no learners were excluded or discriminated. In relation to this, one teacher reported that he/s prepared for written test instead or oral tests and also provide handouts for assignments. However, results in the table illustrates that none of the teacher from the five sampled schools prepared an individualized education programmes for learners with learning impairment.

5.2.2.2 Instructional Methods used by Teachers to teach LHI in regular schools

In relation to the instructional methods used to teach learners with hearing impairment, the study found out that majority (73.3%) of the teachers preferred writing. Written test ensured that all learners were treated equally and were in a position of getting lesson notes. However, due to lack of skills on use of sign language and speech reading, majority of the teachers may also prefer using written test when delivering subject content among learners with and without hearing impairments. This implies that teachers were not adequately equipped with skills required to teach in an inclusive education and
this may hamper academic performances of all learners and especially those with hearing impairment.

5.2.3 Availability of Resources in Education Assessment and Resource Centers (EARC) and Schools

5.2.3.1 Availability of Facilities and Resources in EARC and Schools

The study established that resources that were required to be in an EARCs included; resource room for audiology, occupational therapy, physiotherapy and room for assessment. It further emerged that EARCs should have hearing aids, audiometers and otoscopes. Nevertheless, results findings revealed that out of the five sampled centers only 2 (40.0%) centres had resource room for audiology, 1 (20.0%) had resource room for assessments while 2 (20.0%) had hearing aid (Behind The Ear) used as samples but were not given out to LHI. However, all education officers reported that there were no; resource room for occupational therapy, resource room physiotherapy, screening rooms and otoscopes in all the five sampled centres. This shows that most centres lacked crucial facilities needed for learners with disability.

5.2.3.2 Resources Available in schools to assist LHI in Inclusive Education

The study looked at availability of Otoscopes, hearing devices, learning materials, speech trainers, specialist teacher and teaching aid in schools. However, from the findings it emerged that only 1 school had a hearing device and a teacher trained on hearing impairment. This shows that most of schools were ill equipped with teaching and learning facilities and also most of them lacked trained teachers on special education. This negatively influenced academic performances of learners with special need as most
of the teachers were not in a position of delivering subject content to these learners. This implies that inclusive education had a negative impact towards learners with special needs.

5.2.4 Effect of the Degree of Hearing Loss on Education

Regarding this objective, the study findings showed that 63.6% of the learners were able to perceive sound while 36.4% did not perceive any sound. Three (27.3%) learners perceived sounds when teacher shouted, 3 (27.3%) perceived sounds only when they were near teacher while 1 (9.0%) slightly perceived sound. However, the 4 (36.4%) learners who never perceived any sound confirmed that they tried to use sign language to interact with other learners and teachers. The major problem was that majority of the pupils and teachers could not understand sign language and hence they ended up being discriminated. This influenced learners’ sense of belonging in the school leading to low self esteem and as a result low academic performances. It also emerged that learners with profound cases were transferred from one school to another and this affected their academic performances.

5.2.5 Stakeholders’ Collaboration in support of inclusive education

School stakeholders include headteacher, education officers, teachers, parents and learners. The roles of each stakeholder in a school provide an integral part to the entire organization. The stakeholders were expected to attend Parent Teachers Association (PTA) meetings for the purpose of consultation about performance of learners with hearing impairment, provision of resources in schools. Based on the findings of the analysis, it emerged that only 2(40.0%) headteacher discussed provision of resources while 2 (13.3) of teachers and parents each were also involved. Results also illustrated
that 1(6.7%) of teachers and parents each discussed about academic performance of LHI in PTA meetings. From the findings, it was evident that headteachers’ and parents were not at all involved during consultation about academic performances for LHI. It also emerged that teachers and education officers were not at all involved in consultation about provision of resources required for LHI. This was a clear indication that schools stakeholders were rarely involved in support of inclusive education for LHI. This could be influenced by their negative attitude towards inclusive education and also negative attitude towards LHI.

5.3 Conclusions of the study

Based on the findings the study revealed that the major factors hindering the implementation of inclusive was lack of funds to cater for school management and development, lack of trained teachers in special needs education in the area of hearing impairments, and teachers’ and parents’ attitude towards inclusive education of learners with hearing impairment. Regarding the adjustments of systems to accommodate LHI, the study concludes that only minimal adjustments were made in the schools hence making learning for LHI unfavourable. The study also concludes that there was inadequacy of resources both in EARC and schools therefore inappropriate assessment of learners with hearing impairment could occur leading to wrong placement. The study further concludes that learners with profound cases performed poorly due to the constant transfers from regular schools to special schools and vice versa. The study finally concludes that there was minimal collaboration from the stakeholders and majority of them preferred learners with hearing impairment to be places in special schools.
5.4 Recommendations of the study

Based on the findings of the study, the following recommendations were made;

i. Given that there was a shortage of facilities and resources required for successful implementation of inclusive education, teachers should be trained to be innovative so that they can produce their own instructional materials and adapt to suit the needs of learners with disabilities. This can be achieved through in-service training, workshops and seminars.

ii. In relation to the school adjustments, the study found out that adjustments made in schools could not fully create a stimulating environment to all learners and especially those with hearing impairment. Since the government has currently allocated more funds to purchase learning/teaching materials in special schools, only learners with severe impairments should be retained in special schools while those with mild impairment should learn in regular schools.

iii. The study established that parents and teachers had a negative attitude towards inclusive education. The government through ministry of education should organize campaigns to sensitize all community members on importance of educating learners with hearing impairment. This would help to curb down the stigmatization of LHI in the community and also at school levels.

iv. Study established that schools stakeholders were rarely involved in support of inclusive education for LHI. Regarding this finding, the study recommend that all stakeholders should cooperate and consult one another on the issues related to implementation of inclusive education for LHI. For instance, parents should be encouraged to participate more especially in the provision of assistive devices and
other resources. Moreover, teachers should involve parents in monitoring the academic progress of learners with hearing impairment. This would help in evaluating learners’ strength and weaknesses and also recommending ways of improving the academic performance among learners in an inclusive setting.

v. Having established that most EARCs did not have resources and facilities needed for assessment, the ministry of education should provide facilities to EARCs. This would improve the assessment and placement processes in all centres and also give a clear follow up of the progress of LHI after placement.

vi. The government should restructure teachers’ training colleges so as to include areas of specialization in special needs in education curriculum. Teachers in all training institutes should be taught the dynamics of instructing LHI including sign language in their first year of training before they specialize in other areas. In addition, the new constitution has declared Kenya sign language a national language and therefore the basic sign language should be taught as one of the subjects or unit in all categories of learning institutions. The teachers who are already in the field should be trained either through workshops and seminars or distant learning programmes on special needs education.

5.5 Suggestions for Further Research

Further research should be carried out in the following three areas

i. It emerged from the findings that teachers had negative attitude towards LHI. In relation to this, another study should be conducted to investigate factors influencing teachers’ attitude towards inclusive education Murang’a South District.
ii. In the use of instructional methods in schools, the study found out that most teachers were not able to use sign language. Another study should be carried out to find out the impact of Kenya sign language on teaching and learning process of learners in an inclusive setting.

iii. The study established that LHI were stigmatized at school, the study therefore, recommends further research to be done to establish attitudes of the learners without special needs learning together with their peers with special needs.
REFERENCES


Hutchison, N. L. (2002). Inclusion of exceptional learners in Canadian schools: Toronto, Canada Pentice Hall.


APPENDICES

Appendix 1: Interview guide for the teachers

The data collected from this interview will be used purely for educational purposes. The Information you give will be treated in confidence.

1. Age bracket A. 18 – 28 ☐ B. 29–39 ☐ 40 – 50 ☐ over 51 ☐

2. Gender Male ☐ Female ☐

3. Are there LHI in your class? Yes ☐ No ☐

   If no what are the reasons? .................................................................

   ........................................................................................................

   If yes, do they use hearing aids? Yes ☐ No ☐

   If no, what is/are the reason/s?

   ........................................................................................................

4. Are you trained in the area of Special Needs education? Yes ☐ No ☐

   If yes, specify area of training ..............................................................

5. What are the instructional methods you use to teach LHI? ..............

   ........................................................................................................

6. What adjustments have you put in place to ensure that the needs of

   LHI are addressed in your class? .........................................................
7. Are there any resources in your class to support the LHI

Yes ☐ No ☐

If yes, which ones? .................if no why? ....................

8 Do you interact with parents of LHI? Yes ☐ No ☐

If yes, how often.....  If no, what is the reason? .........................
Appendix 2: Interview Guide for Head Teachers

The data collected from this interview will be used purely for educational purposes. Information you give will be treated in confidence.

1. Age bracket in years. 18 – 28 □ 29–39 □ 40 – 50 □ over 51 □

2. Gender  Male □ Female □

3. How many years have you been a head teacher?

   1-5 □ 6-10 □ 11-15 □ 16 and above □

4. Are you trained in the area of Special Needs education? Yes □ No □

   If yes, specify area of training. .................................................................

5. Are there LHI in your school? Yes □ No □

   If no, is there a reason? ........................................................................

   If yes, how did they get admitted in the school? ...............................

6. What school systems have you adjusted to ensure that LHI are accommodated in your school? .................................................

1. Do you discuss the performance and other activities of LHI in your school with the relevant stakeholders? Yes □ □

   If Yes, why, and how often? Once a term/year □ twice a term/year □

   ............................................................................................................

............................................................................................................

............................................................................................................
8. Are there any adaptive devices that you have purchased for LHI in your school?  [ ] Yes  [ ] No

If yes, which ones ……………..if no, why…………………………..

9. What strategies should be put in place to improve inclusive education system in schools?

…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
Appendix 3: Interview Guide for parents

The information collected in this research is purely for education purposes. The information will be treated with confidence.

1. Age bracket in years 18-28 □ 29-39 □ 40-50 □ over 51 □

2. Gender Male □ Female □

3. How many children with hearing impairments do you have in school?....

4. How did you discover that your child/children is/are hearing impaired?

..........................................................................................................................

5. Why did you bring your child to this school?

..........................................................................................................................

6. Given an opportunity where would you want your child to learn?

Regular schools □ special unit □ special school □

Give reasons for either choice.................................................................

7. Have you ever bought any adaptive device for your child?

Yes □ No □

If no, what are the reasons..........................

8. Do you contribute towards providing learning resources for your child in

School? Yes □ no □
If yes, which ones…………………………………………………………………………………

If no, which reason/s………………………………………………………………………………

8. How do you communicate with your child? ..................
Appendix 4: Interview Schedule for Education Officers

The information collected from this research is for education use. The information you give will be treated with utmost confidence.

1. Gender: male □ female □

2. Age bracket in years 18-28 □ 29-39 □ 40-50 □ over 51 □

3. How often do you assess LHI in your area .................

4. Are there facilities to carry out proper and appropriate assessment for LHI in your office? Yes □ No □
   if yes, which ones ...................................................
   if no, what are the reasons.............................................

5. After assessment which criteria do you use in the placement of LHI to a school?..........................................................
   Level of hearing loss □ parents request □

6. What is the parents' prevalence placement for their children with hearing impairment?
   Regular schools □ Special school □ special unit □
   What reasons do they give for their prevalence?..........................

7. Do you make visits to the regular day schools where LHI are placed to
assess the facilities and systems put in place? Yes ☐ No ☐

If yes, what do you assess? .................................................................

If no, what are the reasons? .................................................................

8. What challenges do you face as you carry out assessment?

...........................................................................................................
...........................................................................................................
...........................................................................................................

9. What strategies can be put in place to improve inclusive education system in schools?

...........................................................................................................
...........................................................................................................
...........................................................................................................
...........................................................................................................
Appendix 5: Interview Guide for learners with hearing impairment

The information from this research will be for the purpose of education needs.

The information you give will be confidential.

Age bracket  7-10 yrs  □ 11-14 yrs  □ 15 yrs and above  □

2. Gender Girl  □ Boy  □

3. Have your hearing level ever been assessed?
   Yes □  No □
   If yes what were you told ..............................................................

4. Do you perceive any sounds? Yes □  No □
   If yes, which ones? ...........................................................................
   If no, How do you interact with the teacher and other learners in school?

5. In your classroom are there arrangements made to enable you learn?
   Yes □  No □  if yes which ones? ..............................
   .........................................................................................

6. Have you ever been given any materials and equipment to support your
   Learning in this school? Yes □  No □
   If yes which ones ...........................................................................

7. If given an option where would you like to go to school?
Special school ☐ regular school ☐ special unit ☐

What are the reasons for your choice? .................................................................

...........................................................................................................................

8. Do your parents attend meetings in your school? Yes ☐ No ☐ ☐

If yes, how often ........................................
Appendix 6: Observation Schedule

1. What adjustment has been done in class?

   A. sitting arrangements
   B. display of learning materials

2. Teacher learner interaction during the lesson

   A lesson presentation method

3. Use of adaptive devices

4. Are the adaptive devices available?

5. Environmental disruptions

6. Any other relevant observable behavior from LHI or teachers in the classroom
Following your application for authority to carry out research on "Factors influencing inclusive education for learners with hearing impairments in public day primary schools in Murangá County, Kenya" I am pleased to inform you that you have been authorized to undertake research in Murangá East district for a period ending 30th October 2011.

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

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

P. N. NYAKUNDI
FôR: SECRETARY/CEO

Copy to:
The District Commissioner
Murangá East District

The District Education Officer
Murangá East District
I, Dr. Mr. Mrs. Miss Institutionality Wanjiku Ngugi, have been permitted to conduct research in the topic: "Factors influencing inclusive education learners with hearing impairments in primary schools in Murang'a County, Kenya" for a period ending 30th October 2011.

Research Permit No. NCST/RRI/121/550/1970
Date of issue  19th September, 2011

Signatures:
Applicant's
National Council for Science and Technology