EFFECTIVENESS OF ASSESSMENT FOR PLACEMENT DECISIONS OF LEARNERS WITH HEARING IMPAIRMENT IN LEARNING INSTITUTIONS IN KAJIADO NORTH SUB-COUNTY, KAJIADO COUNTY, KENYA

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E55/22866/2011

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A THESIS SUBMITTED FOR THE DEGREE OF MASTER OF EDUCATION (SPECIAL NEEDS EDUCATION) IN THE SCHOOL OF EDUCATION OF KENYATTA UNIVERSITY

APRIL, 2015
DECLARATION

This thesis is my original work, and has not been presented for a degree in any other university. All information from other sources has been acknowledged.

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DEDICATION

To teachers of learners with hearing impairment, for their dedication to serve these learners, despite many challenges they encounter during their work and to the learners with hearing impairment, for confirming the abilities of those students with disabilities.
ACKNOWLEDGEMENTS

My sincere gratitude and appreciation go to my supervisors, Dr. Beatrice Bunyasi Awori and Dr. Peter M. Chege for their constant and tireless devotion in guiding me throughout the research period. This tireless support during my research work is highly appreciated. I would also like to thank my lecturers in the Department of Special Needs Education Department, who constantly gave me personal encouragement and commitment during the coursework.

I wish to acknowledge the cooperation received from the entire Kajiado Sub-county. I also thank the headteachers, teachers and learners with hearing impairment, parents/guardian and EARC assessors for filling the questionnaires.

Special thanks to Lafayola my dear husband for his excellent support both financially and morally. Special thanks to my children Enoch, Esther, Amos and Sylvia for giving me encouragement to move on despite the challenges I encountered during the study.

To my headteachers, Mr. Kariuki of Nakeel Primary School and Mr. Mungai of Pangani Special School and Learning Centre for their sincere co-operation during my research. Esther Mongare deserves special gratitude for editing my final work.

Finally, may the Almighty God bless all who in one way or another contributed in facilitating the completion of this research work.
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<tr>
<td>DANIDA</td>
<td>Danish International Development Agency</td>
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<td>EARC</td>
<td>Educational Assessment Resource Centre</td>
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<td>EARS</td>
<td>Educational Assessment Resource Services</td>
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<td>EFA</td>
<td>Education for All</td>
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<td>FAPE</td>
<td>Free Appropriate Public Education</td>
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<td>HI</td>
<td>Hearing Impairment</td>
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<td>HL</td>
<td>Hearing Loss</td>
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<td>IAP</td>
<td>Individual Educational Plan</td>
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<td>IBM</td>
<td>Information Business Management</td>
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<td>IDEA</td>
<td>Individual with Disabilities Education Act</td>
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<td>IEP</td>
<td>Individual Educational Programme</td>
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<td>INTSPSCS</td>
<td>Integrated Special Schools</td>
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<td>KISE</td>
<td>Kenya Institute for Special Education</td>
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<td>KSD</td>
<td>Kenya Society for the Deaf</td>
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<td>LVAS</td>
<td>Large Vestibular Aqueduct Syndrome</td>
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<tr>
<td>MH</td>
<td>Mentally Handicapped</td>
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<td>MoE</td>
<td>Ministry of Education</td>
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<td>MR</td>
<td>Mental Retardation</td>
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<td>NCEOP</td>
<td>National Committee on Educational Objectives and Policies</td>
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<td>SN</td>
<td>Special Needs</td>
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<td>SNE</td>
<td>Special Needs Education</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<td>SP UNITS HI</td>
<td>Special Unit Hearing Impairment</td>
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<td>Special Unit Mentally Handicapped</td>
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<td>SP.UNITS</td>
<td>Special Units</td>
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<td>SPED</td>
<td>Special Education</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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ABSTRACT

It is important to improve special education assessment and placement for learners with hearing impairment. It should be characterized by its effectiveness in quality and relevance for meeting the challenges of education for our new generations in this new millennium. This study focused on the effectiveness of assessment for placement decisions of learners with hearing impairment in learning institutions in Kajiado North sub-county, Kajiado County, Kenya. The study specifically examined placement options for learners with hearing impairment, factors influencing placement of learners with hearing impairment, qualifications of the assessors and equipment and tools used in the assessment for placement decisions of learners with hearing impairment. A descriptive study design was used. Random sampling technique was used for sampling the special trained teachers and learners with hearing impairment. Purposive sampling technique was used in sampling the 2 educational assessors and 10 headteachers whereas convenient sampling technique was used to select parents/guardians of learners with hearing impairment who were directly involved in the assessment for placement decisions of learners with hearing impairment. The target population was 257 whereas a total sample size of 78 respondents was used, that is, 30% of the target population. Data were collected using questionnaires, and observation checklist with particular respondents being the two Special Needs Education assessment personnel, headteachers from regular primary schools with special units, and the two special schools, trained special teachers from regular primary schools and special units, parents of learners with hearing impairment. Piloting was done in ILBislli School in Kajiado Central Sub-County. To enhance the reliability and validity of the study instruments, test-retest technique was employed and Spearman-Brown formula used to compute the reliability coefficient which was 0.75 therefore the results were considered reliable. Validity Items were sampled from all the domains by consulting experts to ensure that content area was adequately sampled for determination whether co-variation existed between cause and effect variables. Data were analysed quantitatively and qualitatively thematically according to the objectives. The results were presented using simple statistics like; frequency tables, pie charts and bar graphs. The study revealed that there was only one special unit as a placement institution for learners with hearing impairment. Others were private integrated special institutions. Factors such as; parental preference, availability/locality of the school, cost, communication barrier and lack of special trained personnel for learners with hearing impairment influenced placement of learners with hearing impairment. The study further found that there were no personnel in the Educational Assessment Resource Centre (EARC) who were trained in audiological assessment, or specialized in the area of hearing impairment, a situation that greatly undermined their effectiveness in the assessment for placement decisions. In terms of policy, this study recommends for the training of more specialized in the respective fields of special education, establishment of well-equipped EARCs, as well the establishment of multi-disciplinary teams to spearhead the assessment of learners with disabilities and special needs.
CHAPTER ONE

1.0 Introduction

This chapter contains; background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance, limitations and delimitations, assumption, theoretical and conceptual frame work, and operational definitions of terms.

1.1 Background to the Study

This study focused on the effectiveness of assessment for placement decisions of learners with hearing impairment in learning institutions in Kajiado North Sub-County, Kajiado County, Kenya. Hearing impairment refers to a partial or total inability to hear, (Staten, 2011) which affects the development of language in children and mastery of work-related activities in adults (Lasak, et al., 2014). Assessment is termed as the process of gathering information, analyzing it, and making viable judgment while placement is putting a learner in the most appropriate educational setting or positions (Gargiulo, 2006). Learners with hearing impairment are those who have a problem with a sense of hearing. WHO (2012) estimates that about 360 million people or 5.3% of the world population suffer from hearing disability problem. The report further states that 91% and 9% of hearing impairment cases have been reported by adults and children respectively. In terms of gender, the WHO (2012) reveals that more males than females are affected by hearing impairment. Specifically, 56% of the males experience hearing problems, while 44% of the females have this problem. With regard to regional prevalence in both children and adults, hearing impairment is greatest in South Asia, Asia Pacific and Sub-Saharan Africa.
in that order, (WHO, 2002). The burden that hearing impairment poses to countries is said to be twice larger in developing countries. For instance, it is observed that in developing countries, learners with hearing impairment rarely receive any schooling (WHO, 2002).

In the United States, assessment for placement is done by a team of professionals such as; special education teachers, parents, psychologists, school nurse and other medical professionals, social workers and counsellors (Niparko, 2000). Their system of special education allows for placement on a continuum, ranging from full mainstreaming to a state school for learners with hearing impairments (HI). In Japan, learners with HI are placed in special classrooms called tsukyu or in regular classrooms. Special schools are reserved for severe cases (Cawthon, 2001). In Germany, most learners with Special Needs (SN) are assessed and placed in special schools according to different categories of disabilities and those with HI have their own special schools (Houghton, 2003). It is worthwhile to note that learners with HI are properly examined and placed in the most appropriate programmes for proper learning and transition into adulthood.

In China, a diagnostic team of doctors and school psychologists, special educators and school administrators do the assessment and placement, and in making decisions for placement for learners with HI, family situations and parental opinions are considered (Carlberg & Kavale, 2004). In the United Kingdom, the Education Act No 1981 stipulates that a parent or a guardian of the child who has a disability must give consent for a child to be referred for assessment (Moores, 2002). The permission is granted in writing and parents are involved in the assessment and placement process.
In Africa for instance, Ademokoya (2008) carried out a research on placement of students with HI in Nigeria. The study revealed that almost all students with HI were placed in special units or special schools despite their academic level, communication mode and degree of hearing loss (HL). This means placement decision in Nigeria is not determined because of a learner’s ability and needs, but on availability of special education and related services, availability of space or parental prevalence and convenience. Whether this is the case with Kajiado North Sub-County under study raises issues worth investigation. South Africa follows the same trend like that of the USA.

Assessment for placement decisions of learners with hearing impairment in Kenya can be traced back to the late 1950s following the establishment of Kenya Society for the Deaf (KSD), with Nyangoma and Mumias schools for the learners with hearing impairment being the first placement institutions (Adoyo, 2007). The number of children with hearing impairment was estimated in 2008 to be about 23,000 countrywide (NDCS, 2008). The organization further reported that only 3,600 or 16% of persons with hearing impairment were placed in special schools, implying that about 84% of these learners were either placed in mainstream schools or are not enrolled in schools at all. Educational Assessment Resource Centres (EARCs) have the responsibility of assessing and placing learners with special needs. In 2003, it was reported by The Taskforce for Special Needs Education Appraisal Exercises that most of the EARC’s personnel were merely trained special education teachers without any further training on assessment, and that most of the Educational Assessment Resource Centres lacked critical assessment equipment and tools. Additionally, the Ministry of Education (MoE) National Special Education Policy
Framework Draft (2009) revealed that there was inadequate skilled labour for the assessment for placement decision of learners with special needs education (SNE).

The fact that most EARCs were run by personnel who were inadequately trained and ill-equipped raises questions about the effectiveness of assessment for placement decisions of learners with special needs more so those with hearing impairment in these centres. This revelation raised concern that the current study was out to investigate. The Ministry of Education Policy for Special Education (2009) stipulates the responsibilities of the EARCs as follows; identification and assessment of learners with disabilities, guidance and counseling for parents of children with special needs, running courses for parents of children with special needs, establishment of special needs units in regular schools and making referrals of children with special needs to special schools, units and integrated programmes or for medical examination and treatment, among many others not mentioned.

The report of National Committee on Educational Objectives and Policies (NCEOP), Gachathi Report (1976), suggests that coordination of diagnostic activities is one of the ways of improving and explaining SNE in Kenya. The need for appropriate and early assessment was identified by the Ministry of Basic Education as far back as 1981. A draft policy paper (yellow document) by the Ministry of Education states that inexpert assessment resulted in improper placement (Ndurumo, 1993). In an effort to solve this problem delineated in the policy paper of Gachathi Report (1976), the Ministry of Education in 1984 established educational assessment and resource services (EARS) in
districts throughout the country. It was funded by Danish Government through DANIDA and the Government of Kenya. In Kajiado North District, EARC was started in the year 2009. However, there is concern as to whether this is being implemented in the country and more so the Sub-County under investigation. This focus raises concern and prompted this study.

Later in 1988, EARS was established in Kenya Institute of Special Education (KISE) due to the great need for assessment services for learners with disabilities. A plan was drawn in the late 1988 to represent those services to the districts in the country then. On 16/1/1987, there was an agreement between Danish Government concerning the extension of EARS projection (MoE, 2003). Before the establishment of EARCS trainings, education of children with handicaps was begun once a learner reached a school age instead of much earlier. One half to one third of all special needs in many special schools were incorrectly placed due to lack of assessment before admission and only a small proportion of children with handicaps received training and formal education (MoE Taskforce for Special Needs Education Appraisal Exercises, 2003). Whether there are learners with hearing impairment who are incorrectly placed in Kajiado Sub-County due to lack of assessment raises concern which required investigation.

Report of the Presidential Working Party on Education Manpower Training for the Next Decade and beyond (Kamunge Report of 1988) reported that by September 1988, over 28,000 children had been assessed in 40 centres. According to the MoE Taskforce for special needs education appraisal exercises (2003), there were 72 EARS in Kenya, 52 had
physical facilities and some assessment tools while twenty had neither the physical nor the tools to carry out the assessment process.

Assessment for placement of students with disabilities has been shaped by a variety of disciplines, forces and trends. Assessment has evolved over time from the late 19th century to the beginning of the 21st century and this has been influenced by the changes in education, psychology and medicine (McLoughlin & Lewis, 2005). McLoughlin & Lewis, (2005) further state that, for many years educators were hampered by the use of medical models in the assessment of students with disabilities. Students were diagnosed with a condition such as mental retardation or learning disabilities and an educational treatment was prescribed based upon knowledge about the condition rather than the characteristics of the individual student.

By the end of World War II, services for students with disabilities grew tremendously vis-à-vis growth in assessment procedures, particularly the tests. Unfortunately, many misuses and abuses of assessment procedures have accompanied the growth of these assessment procedures (McLoughlin & Lewis, 2005). Whether this has been the case in the assessment procedures in Kajiado North Sub-County raised concerns that were to be investigated.

To improve the fortunes of learners with hearing impairment, Cheng, Chow, and Tsui, (2001) advocate for the improvement of access to education and vocational rehabilitation services for these people as well as raising awareness especially among teachers, employers, and critical state agencies on the plight of persons with hearing impairment.
The authors emphasize the need for proper formal education for persons with hearing impairment as a pre-condition for their employment and social valuation. Unlike normal learners, the education of learners with hearing impairment by virtue of their unique challenges begins with educational needs assessment for placement decision (Colleen, 2008). This has prompted worldwide educational reforms to focus on the development of high quality assessment criteria and structures, based on the recognition that poor assessment for placement decisions may result in lost opportunities, spoiled life chances and children giving up on their life-long learning (Hargreaves, 2000).

Contributing to the significance of effective assessment for placement and decisions of learners with hearing impairment, Turnbul and Turnbul (2006) assert that, education of learners with hearing impairment is a complex process, which requires assessment for placement decision structures that not only guarantee quality and relevance but also one which is able to respond to the changing needs and demands of contemporary education, (Gargiulo, 2006). Hargreaves (2000), Turnbul and Turnbul (2006) and Gargiulo (2006) advocate for the need for effective assessment for placement decisions of learners with hearing impairment. They have not addressed themselves on what it takes for an effective assessment for placement decisions of learners with hearing impairment to be achieved. The current study intended to assess the effectiveness of assessment for placement decisions of learners with hearing impairment in Kajiado North Sub-County.
1.2 Statement of the Problem

Persons with hearing problem constitute about 5.3% (WHO 20012) of the world’s population. The burden that people with hearing impairment pose to society is quite huge, with many adults with hearing impairment having a much higher unemployment rate. However, even among those who are employed, a higher percentage of them are in the lower employment grades compared with the general workforce. Low levels of education and training have often been cited as the root cause of the socio-economic disadvantaged position of persons with hearing impairment in the society. Improving access to rightful education and vocational training has been cited as one of the foremost steps toward reversing the current trend and enhancing the socio-economic standing of persons with hearing impairment.

Education of persons with hearing impairment unlike the hearing depends on effective assessment and appropriate placement as assessment is the process of gathering information, analyzing it, and making viable judgment for placement. Effective assessment for placement decisions has been seen to be possible through multi-disciplinary team. In many countries including Kenya, assessment for placement decision of learners with hearing impairment is facing serious challenges including inadequate trained personnel, inadequate assessment equipment and tools as well as insufficient placement options. The determinant of quality assessment for placement in the EARC is not clear since the current method and equipment used for assessment for placement decision of learners with HI is not appropriate. Assessing learners without using audiological equipment and tools does not place these learners correctly. Qualification of
the assessment team is not well-stipulated. This has raised concerns about the effectiveness of the assessment for placement decisions of learners with hearing impairment in Kajiado North Sub-County. Therefore, the proposed study investigated the effectiveness of educational assessment and placement for learners with hearing impairment in Kajiado North Sub-County.

1.2.1 Purpose of the Study

The purpose of the study was to find out the effectiveness of assessment for placement decisions of learners with hearing impairment in Kajiado North Sub-County, Kajiado County. The study also sought to establish the professional qualifications of assessment personnel, multidisciplinary team involved in assessment, equipment and tools used for assessment, factors affecting placement and placement options for learners with hearing impairment.

1.3 Objectives of the Study

This study was guided by the following objectives:

i. To establish the effectiveness of placement options for learners with hearing impairment that exists in Kajiado North Sub-County.

ii. To investigate the factors that influence placement of learners with hearing impairment in Kajiado North Sub-County.

iii. To assess the effectiveness of the personnel involved in assessment of learners with hearing impairment in Kajiado North Sub-County EARC.
iv. To determine the effectiveness of equipment and tools used to assess and place learners with hearing impairment in Kajiado North Sub-County EARC.

1.4 Research Questions

The study sought to answer the following research questions:

i. What are the effective placement options for learners with hearing impairment in Kajiado North Sub-County?

ii. What factors influence placement of learners with hearing impairment in Kajiado North Sub-County?

iii. How effective are the personnel involved in Assessment for placement decision for learners with hearing impairment in Kajiado North Sub-County EARC?

iv. How effective are the equipment and tools used to assess and placement of learners with hearing impairment in Kajiado North Sub-County EARC?

1.5 Significance of the Study

The findings from this study are presumed to bring about the following contributions to the different groups of stakeholders in the education sector. Information from the study may create more insight and understanding on the effectiveness of assessment for placement decisions of learners with hearing impairment promoting their teaching, learning and transition process in schools in the district and in the country as a whole. This will add to body of knowledge on the issue of effectiveness of assessment and placement to educators. It may also avail data that will help policy-makers in the education sector with relevant information for improving policy formulation in the area of assessment for placement of learners with HI. The study will help education
stakeholders’ special education coordinators, Quality Assurance and Standards Officers (QASO) to improve on quality standards of the assessment for placement programmes for learners with HI in the Sub-County and in the country as a whole.

Data from the study will further help in proposing workable strategies that can facilitate effective implementation of assessment for placement practices for learners with HI. Education officials can find information to refer to in their quest to improve these programmes and teaching of learners with HI, especially at the Sub-County and national level. From the study, teachers can gain information on where learners with HI should be placed. Curriculum developers and other administrators can understand the level of effectiveness of assessment and placement of learners with HI. Based on this study, academic theorists particularly those in education can use the study’s findings as the basis for constructing new theories in order to promote knowledge in educational assessment and placement of learners with HI.

1.6. Limitations and Delimitations of the Study

1.6.1 Limitations of the Study

Persons with hearing impairment like other persons with disability face certain stereotypes and challenges that make it difficult for their parents to grant open and unlimited access to them. This posed a serious challenge and limitation to the study during the sampling of learners with hearing impairment in the study area. Such inaccessibility to these learners especially by unfamiliar person such as the researcher
also hindered the research in some instances from personally collecting data from learners with hearing impairment.

1.6.2 Delimitations of the Study

Geographically, the study restricted itself to Kajiado North Sub-County of Kajiado County professionals in the EARC, headteachers of the regular primary schools with special units, and special schools. Special trained education teachers in schools and special units, parents of learners with HI and learners with HI. Records of learners with hearing impairment were the main source of secondary data. The study limited itself to learners with hearing impairment, placed in various learning institutions in the Sub-County. Thematically, the study confined itself to actual placement options for learners with hearing impairment, factors influencing placement of learners with hearing impairment, qualifications of personnel assessing learners with hearing impairment, equipment and tools used for the assessment of learners with hearing impairment.

1.7 Assumptions of the Study

The following assumptions were made:

Respondents would give accurate, truthful and honest answers to the items that were in the questionnaires. There would be learners with HI who had been assessed and placed, equipment, and tools used for assessment of learners with hearing impairment, personnel involved in assessment for placement decision options for learners with hearing impairment.
1.8 Theoretical and Conceptual Frameworks

1.8.1 Theoretical Framework

This study was guided by Labelling Theory. Labelling theory is traceable to the works of Becker (1973). Labelling theory was preferred for this study because it reveals that, people obtain labels from how people view their behaviours. According to Bala (2004), labelling is assigning a child with a condition to a general category in the classification system. There are both positive and negative sides to labelling (Ademokoya, 2006b). The positive part of labelling is that it leads a learner to improved legislation, improved communication and development of advocacy, but on the negative side, there are possibilities of stigmatization, peer rejection and wrong placement of learners with disabilities based on inappropriate assessment (Ademokoya, 2008). This theory builds a subjective conception of the self but others penetrate the reality of that individual’s life (Wright, 2007). The theory hypothesizes that the labels applied to individuals influence their behaviour particularly the application of negative or stigmatism. Labelling promotes deviant behaviour, becoming a self-fulfilling prophecy that an individual who is labelled has little choice but to conform (Wright, 2007). The essential meaning of labelling theory is that people become deviant because majority of the population and authority concerned attach certain labels to their behaviour.

The implication of this theory to the study at hand is that during assessment, learners with HI are labelled and they end up being wrongly placed in a bleak environment (Aguayo & Coady, 2001). They are depowered and marginalized and have no opportunity for advancement and largely remain voiceless because of inbuilt misplacement. Ademokoya
(2008), points out that an erroneously labelled child with special needs would be inappropriately placed and unsuitably instructed. He metaphorically describes this as a process of handicapping the already handicapped person.

1.8.2 Conceptual Framework

This conceptual framework was modelled along the objectives of the proposed study, the literature reviewed and theory adopted for the study. Assessment for placement decision of learners was examined in the context of influencing factors, qualifications of the assessors, assessment equipment tools, and placement options. Factors influencing assessment for placement decisions were analyzed in the context of availability of learning institutions, parental preference, cost of education and availability of trained personnel. Qualifications of the assessors were examined in terms of level of training, area of specialization and perceived personnel competence. This study looked at assessment equipment tools in terms of their types, availability and adequacy, while placement options were examined in the context of special schools for HI, SP-units for HI, mainstream and vocational. Figure 1.1 shows how this study conceptualized the relationship between the independent and dependent variables.
Figure 1.1: Conceptual framework on assessment and placement

Source: Adapted and modified from Becker (1973)
From the model, learners with HI are identified and referred for assessment, to determine those eligible for placement into the special units, regular classrooms and special schools, with an aim to providing them with special education. Jarvis (2002) defines this identification as the process of seeking out and locating all learners who are deaf and hard of hearing from birth through 21 years.

Research studies have indicated that the earlier a child is identified as having a hearing loss and provided special services and a means of communication (Faeza 2008), the greater the chances are for that child to meet normal or near normal developmental milestones (Oyegumi & Adejumo, 2011). The study is also supported by Carlberg and Kavale, (2004), who assert that the expected outcome of the assessment for placement decision process is to achieve improved services and achievements; pupils acquire knowledge, skills, improved education standards in the rightful placement and proper transition to career, and adulthood. However, if the process of assessment is ineffective, a learner is labelled to misplacement, school dropouts, poor services and poor transition into adulthood for learners with HI (Bala, 2004). Kargun and Akamete (2004) assert that learners with hearing impairment experience many transitions similar to those of their typically developing peers, in addition to their own unique ones such as, the diagnosis of a disability, starting a treatment or special education, decision of placement, entrance into adolescence or adulthood which is very stressful and difficult for many families.

The study held that the highly trained personnel and those drawn from the relevant areas competently stand a better chance of carrying out a better assessment for placement
decisions of learners with hearing impairment. However, highly trained personnel even with relevant training and appreciable degree of competence can only succeed in their work if they are provided with relevant and adequate assessment equipment and tools, which must be readily available whenever their use is required. Otherwise, even the most highly trained personnel would not achieve much when faced with chronic shortage or complete absence of relevant assessment equipment and tools. While personnel qualifications and assessment tools are important, certain factors must be put in place for effective assessment for placement decisions of these learners. The study wanted to find out what factors influenced the placement of learners with HI in Kajiado North Sub-County.

Availability of learning institutions, cost of education and parental preference are important factors that may have a positive or negative effect bearing in mind that the learners, even if properly assessed and placed, may be affected with these factors. The recommendations of the assessors in terms of where the learners need to be placed may or may not be strictly implemented depending on the availability of the institution, parental choice and cost of education. Assessor’s recommendations on placements are likely to be implemented in cases where learning institutions are available, parents have raised no objections or where the costs are affordable. On the contrary, such recommendations may be ignored when the recommended learning centres are absent, parents have raised objections, or the costs of education in the recommended centres are prohibitive. In such instances, the assessed learners may be placed in the available
learning institutions that are also affordable and also preferred by parents even if they do not meet the required eligibility for placement in a particular institution.

This study maintains that an assessment of learners with HI will only be considered effective if its results lead to appropriate institutional placement, appropriate classroom positioning, quality learning outcomes, and proper educational /technical support. On the other hand, an assessment is ineffective if it yields inappropriate results such as wrong institutional placement and classroom positioning, poor learning outcomes that leads to inappropriate educational /technical support. It is worthwhile to note that learners with HI were properly assessed and placed in the most appropriate programmes for proper learning in other counties, if assessment was effective or ineffective for proper placement for of learners with HI was to be investigated in Kajiado North Sub-County.
1.9  Operational Definitions of Terms

**Assessment:** The gathering of information for making a decision about a learner whether he/she is eligible for special education services or not (Gargiulo, 2006).

**Deaf:** The inability to hear.

**Effective Assessment:** It is the use of appropriate process procedure, personnel, and equipment in order to avoid misplacement of learners with special needs or disabilities (Gargiulo 2006).

**Hard of Hearing:** A hearing loss with some residual hearing.

**Hearing impairment:** Partially or totally inability to hear.

**Multidisciplinary Team:** A team of specialists from different fields who evaluate a learner suspected to have a special need or disability (Gargiulo, 2006).

**Placement:** The admission of a learner to appropriate programme for learning. It can be school or class for his/her educational needs.

**Special education:** A system of education that caters for the special needs for learners with disabilities.
CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

The chapter reviews literature related to the study. In the study, the review of related literature was in relation to the research on hearing impairment, objectives raised in chapter one, that is; educational placement options for learners with HI, factors influencing placement, personnel involved in assessment placement, equipment, and tools used for assessment for learners with HI.

2.1 Hearing Impairment

2.1.1 Aspects of Hearing Impairment

Hearing impairment is the most frequent sensory deficit in human populations, affecting more than 250 million people in the world (Collins, Andrew & Marrsol, 2002). The consequences of HI include inability to interpret speech sounds, often producing a reduced ability to communicate, delay in language acquisition, economic and educational disadvantage, social isolation and stigmatization. HI is a generic term including both deaf and hard of hearing, which refers to persons with any type or degree of hearing loss that causes working difficulty in a traditional way (Gargiulo, 2006). He asserts that it can affect the whole range or only part of the auditory spectrum, which is for speech. The term deaf is used to describe people with profound hearing loss such that they cannot benefit from amplification (Kaufman & Kaufman, 2004). Moores (2010) asserts that, hard of hearing equipment is used for those with mild to moderate hearing loss, but can
benefit from amplification consequences of HI. The implication here is that without proper assessment and placement, the learners with HI are greatly disadvantaged. This therefore leaves a major gap, which this particular study investigated.

2.1.2 Categories of Hearing Impairment and Their Causes

Its type, severity, and the age at onset categorize HI (Filiz, 2002). It may exist in only one ear (unilateral) or in both ears (bilateral) (Moores & Martin, 2006). Miller (2006) states that, there are essentially two distinguishable categories of children with hearing loss; those who are intellectually and physically normal and those with overlays of disability. However, according to Katz and Stitchery (2006), there are three main types of hearing impairment, namely; conductive hearing loss, sensorineural hearing loss, and a combination of the two called mixed hearing loss.

2.1.2.1 Conductive Hearing Loss

A conductive hearing loss is present when the sound is prevented from reaching the inner ear, the auditory nerve (Katz & Stitchery, 2006). This can be due to external ear canal malformation, dysfunction of the eardrum or malfunction of the bones of the middle ear (Collins et al., 2002). People with conductive hearing loss may notice their ears being full or plugged (Eccarius, 2002). Those people may speak softly because they hear their own voice loudly (Eccarius, 2002). He further states that, an audiologist and a physician to explore medical and surgical options should evaluate all people with conductive hearing loss. Karen and Johnson (2002) add that conductive hearing loss due to earwax, middle ear infection and fluid, are often temporary and resolve following medical treatment.
Surgery of the middle ear is often an option for some conductive hearing losses and may result in restoring some hearing.

Conductive hearing loss can also be permanent if there has been a permanent damage to any of the middle ear components or due to disease of the middle ear. For persons with permanent conductive hearing loss, hearing aids and/or implantable bone-anchored hearing implants may be an option, (Sorkin & Zwolan, 2004).

2.1.2.2 Sensorineural Hearing Loss
A sensorineural hearing loss is one resulting from dysfunction of the inner ear, which includes the cochlea, the auditory nerve that transmits the impulses from the cochlea to the hearing centre in the brain or damage in the brain (Collins et al., 2002). According to Moores & Martin (2006), the most common causes for sensorineural HI are damage to the hair cells in the cochlea edge, hair cell damage, head trauma, ear infections, tumors and ototoxic drugs such as gentamycin, congenital malformations, and inner ear infection. Sensorineural hearing loss is permanent and there is currently no cure. The best treatment option for sensorineural hearing loss is to be fit with hearing aids (Gargiulo, 2006). For severe-to-profound sensorineural hearing loss, cochlear implants may also be an option when traditional hearing aids are unsuccessful (Sorkin & Zwolan, 2004).

2.1.2.3 Mixed Hearing Loss
Mixed hearing loss is a combination of conductive and sensorineural condition. It is caused by chronic ear infection, defect in the eardrum, or middle-ear ossicle damages, or both. A mixed hearing loss happens when there is loss in the middle or outer ear, and a
sensorineural hearing loss in the inner ear involving either the cochlea or the auditory nerve (Katz & Stitchery, 2006). Mixed hearing loss results from anything that causes conductive or sensorineural hearing loss. One situation where mixed hearing loss occurs is in the large vestibular aqueduct syndrome (LVAS) (Katz & Stitchery, 2006). This usually involves just sensorineural hearing loss, but it can also have a conductive component.

2.1.3 Assessment of Hearing Impairment

Being hearing impaired or hard of hearing makes hearing difficult, but does not preclude the understanding of speech through the ear alone, with or without a hearing aid. The assessment and diagnosis of hearing loss are the initial steps in the treatment and education of the child with HI (Chute, 2006). When symptoms are observed of HI, the first step is always a referral for an audiological assessment. In Kenya, learners are referred to an Educational Assessment and Resource Centre (EARC), previously the Educational Assessment and Resource Services (EARS) as one of its functions. Whether the same is done in the Kajiado North Sub-County under study raises a question which requires investigation.

2.1.4 Assessment Process

Ndurumo (1993) and McLoughlin & Lewis, (2005), assert that assessment of children with disabilities start with identification. According to federal special education laws, the education agencies are responsible for identification of learners with disabilities and this is done through screening (Niparko, 2000). Screening is a form of assessment where a
general assessment tool is being used to identify children with special needs and disabilities (Niparko, 2000). McLoughlin & Lewis, (2005), states that when teachers identify learners with disabilities in school, pre-referral activities are applied in an attempt to ameliorate the problem. When pre-referral interventions do not bring about desired changes, the learner is referred for special education assessment (Gargiulo, 2006). The parents of the child are notified concerning the assessment of their child and are required to give their consent in writing (Roger & George, 2006).

The identification is followed by the determination of eligibility for special education (Gargiulo, 2006). When the assessment procedures have been carried out, results are reported by the multidisciplinary team members including the child's parents. They make legal decisions about eligibility for special education services (Gargiulo, 2006). He further explains that if the learner is eligible for special education services, individualized assessment plan (IAP) is designed. An IAP describes the steps in assessment and the procedures used in each step. After assessment, results must be reported to the parents whether the student is eligible for special services or not.

The third step in assessment is programme planning which involves development of individualized educational programme (IEP) which must take place within 30 days of the determination that the student has a disability and is in need of special education services (McLoughlin & Lewis, 2005). Placement of students with disabilities is governed by the principle of Least Restrictive Environment (LRE). The last step of assessment is
programme implementation and evaluation of the IEP. However, there is concern as to whether this is being implemented in the Kajiado North Sub-County.

2.1.5 Labelling of Learners with Hearing Impairment

According to Bala (2004), labelling is assigning a child with HI to a general category in the classification system. He further explains that, there are both positive and negative sides of labelling, where the positive part of labelling of a learner leads to improved legislation, improved communication and development of advocacy, but on the negative side, there are possibilities of stigmatization, peer rejection and wrong placement of learners with disabilities based on inappropriate assessment. Labelling in the assessment process is easy as there are characteristics that overlap in children suspected of having different types of disabilities (Kihoro, 2010). For example, children with HI and those with autism may exhibit very similar characteristics by just looking at them. Hence, providing a specific education programme based on a label alone is obviously an inappropriate step.

2.2 Educational Placement Options for Learners with Hearing Impairment

This was the first objective of the study. Educational placement is putting a learner with special needs in the most appropriate educational setting or position (Gargiulo, 2006). He states that individuals with hearing impairment can receive their education in a number of settings generally classified into two categories, regular public and special programmes. On the other hand, Gargiulo (2006) observes that in the United States, some placement options for learners who are deaf and hard of hearing may include; public school classrooms, resource room support, separate classrooms in public schools, separate non-
residential schools, public or private, separate residential schools, public or private, home-bound or hospital environments as illustrated by US Department of Education, 2007) in Figure 2.1.

Figure 2.1: Percentages of enrolment of learners with hearing impairment in USA

Source: Adapted and modified by Gargiulo (2006)

The figure above shows the various educational institutions attended by learners with hearing impairment. According to Gargiulo (2006), 85% of learners with hearing impairment attended regular public schools. Supporting on the same, Gallaudet Research Institute (2005), on their observation about placement of these learners revealed that, approximately half of children who are deaf and hard of hearing in the USA are placed in a regular classroom setting with hearing children, and may be served, depending on the IEP, by an itinerant teacher of the deaf or other professionals. Gallaudet Research Institute (2005) further observes that, an estimated of 40% children who are deaf and
hard of hearing are placed in regular classroom settings and received sign language interpreting services. Whether these placements and services were in provision for learners with hearing impairment in the sub-county under the study, left a major gap, which this particular study was to address.

Adoyo (2004) observes that educational placement options for students with hearing impairment in Kenya include special schools, separate classrooms in regular schools, and regular education classrooms. Similarly, Gargiulo (2006) found that some learners with various forms of impairment such as the deaf and hard of hearing were placed in public school classrooms. Currently, there are over 1100 units and 100 public special schools in the country which include vocational and technical institutions that cater for learners with special needs and disabilities (MoE, 2009), this is in relation to 26,885 learners with disabilities in 2003 (Koech Report, 1999).

Kiriungi (2000) carried out a study on teachers’ views on placement options of learners with hearing impairment in schools in Central Province of Kenya with a target population of 19,500 learners. He used a descriptive survey research design. The study revealed that the majority of the teachers were not able to communicate effectively with learners who were HI. Most teachers were not trained to teach these learners in an inclusive setting. However; this study concentrated on four sub-counties and the result may not be generalised but its findings merit attention for further investigation for confirmation. This would suggest that a learner with hearing loss would have trouble in the classroom situation if not properly placed.
Ademokoya (2008) in a study on the placement of students with HI in Nigeria found that, they were placed in special units or special schools despite their academic level, communication mode, and degree of hearing loss (HL). Adoyo (2004) observes that educational placements for students with hearing impairment in Kenya include special schools, separate classrooms in regular education schools, and regular education classrooms alongside students without hearing impairment. Adoyo (2007) adds that, 30% of deaf children in Kenya are not attending school. In view of this, the current study sought to investigate the effectiveness of placement options for learners with HI in Kajiado North Sub-County.

2.3 Factors Influencing Placement of Learners with HI

Factors influencing placement of learners with HI was the second objective the study investigated. Literature indicates that a myriad of factors influence the placement of learners with HI. It is however, difficult to identify the relation of the various variables involved in the educational placement of these learners. Faeza (2008) did a research on factors that could influence grade 1 school placement for learners with profound HI. The study used a descriptive survey design, retrospective record review and questionnaires. The findings indicated that parental preference, educational recommendation by professional, geographic site, availability of the school, mode of communication employed at school, school accommodated by learners with special needs, and cost implications that influenced school placement. The study however, was conducted in a different setup from the present one and it focused and inclined towards different aspects
while this study focused on the effectiveness of assessment for placement decision of learners with HI in general.

Kihoro (2010) did a study on factors affecting assessment for placement decisions of children with mental retardation (MR). His target population comprised of 19 respondents in Nyeri EARC, Central Province, Kenya using a descriptive research design. The study revealed that there was misplacement of few learners with mental retardation, the assessment lacked basic assessment tools, multidisciplinary team, and qualified personnel. The study, however, was carried out on a different disability. It did not mention any placement options, which were available and the qualifications of the personnel involved in the assessment. The present research sought to explore and fill the knowledge gap where information remained scanty.

In Kenya, various factors affect placement. MoE Taskforce of Special Education in Kenya (2009) found that there was unqualified workforce in the EARC's, and lack of facilities. It concluded that the assessment was inappropriately done, leading to labelling and misplacement of learners with disabilities. Special teachers who are not trained in assessment performed the Assessment for placement decisions of learners with disabilities in the EARC's. The teachers conducted their services with the knowledge acquired when they trained as special education teachers. This prompted the researcher to investigate the factors that led to misplacement of learners with HI in Kajiado Sub-County.
2.4 Personnel Involved in Assessment of Learners with HI

This was the third objective of the study. Audiological assessment forms the basis for habilitation and rehabilitation for learners with HI in enabling them to become more productive to the society and live an independent life. It is only through effective audiological assessment that their hearing acuity can be ascertained and early intervention initiated (Muriithi, 2012). Audiological assessment is a process of assessing performance of an individual with hearing impairment in terms of hearing and the degree of hearing loss, (Gargiulo, 2006). The testing usually is conducted in a soundproof room. The person being tested wears a set of headphones or a headband and each ear is tested separately. The result is shown on an audiogram, a graph that represents hearing levels from low to high frequencies (Chute, 2006). This means whoever is administering the audiometric assessment must be trained on how to use an audiometer and carefully interpret the audiogram on the degree of hearing loss. The result is used not only to determine the hearing level (Chute, 2006) but also to assist differentiate diagnosis, suggest possible methods of treatment, monitor the rehabilitation (Muriithi, 2012), and to guide the correct educational placement of the learners with appropriate programmes (Faeza, 2008).

Hearing and auditory function have significant impact on the development and use of language and communication which can affect academic progress and outcomes for students. Apart from regular and special needs teachers of different kinds, the success of learners with disabilities in schools requires the involvement of different professionals who assist in identification, referral, diagnosis, treatment, and provision of appropriate educational services.
(Eleweke & Rodda, 2002). Therefore, it is the position of educational assessors who are uniquely qualified to facilitate support for students with hearing difficulties in the educational system (Tampa, 2005). In addition to identification of a student’s hearing loss, Tampa, (2005) states that, the educational audiologist must have knowledge and skills regarding the impact of hearing loss on learning, relevant educational goals and benchmarks, and experience with strategies and technology for support within the classroom for both the student and the teacher. Educational audiology services should be comprehensive, collaborative, and designed to address the student’s individual communication, academic, and psychosocial needs (Tampa, 2005).

In this regard, the Individuals with Disabilities Education Act (IDEA, 2004), defines the practice of audiology in educational settings as follows; identification of children with hearing loss, determination of the range, nature, and degree of hearing loss, including referral for medical or other professional attention for the habilitation of hearing impaired. There is also counselling and guidance of children, parents, and teachers regarding hearing loss and determination of children’s educational placement among many others. In addition, Muriithi (2012) asserts that audiological assessment forms the basis for habilitation and rehabilitation for learners with HI.

For assessment for placement decisions to be effective, it requires the use of a team responsible for developing a comprehensive assessment package that evaluates broad developmental domains as well as the specific areas of concern (Bala, 2004). A team exists only in the sense that each professional shares a common goal, Gargiulo (2006).
According to Gargiulo (2006), one of the personnel is the general education teacher who contributes valuable information about student’s social skills in dealing with their peers. Other professionals include; the special education trained teachers who gather formal information, communication and behaviour of the child. Parents of students with disabilities often participate in assessment process. They provide information about the student’s correct performance, past educational informal data on academic skills and performance in areas such as experience, health, history and progress through the stages of development. Gargiulo (2006) further posits that in assessment, parents and professional roles are intertwined by supporting and enriching each other. However, Mukuria and Korir (2006), aver that in Kenya, parents are never involved in the assessment for placement decision process of their learners with disability.

Another person involved in assessment is a psychologist who gathers data to help determine whether students are eligible for special education programme. Speech and language pathologist is responsible for evaluating the communication skills of students and providing direct instructional services. Medical information about the student is derived from the student’s physicians, the school nurse and other medical specialists. According to Gargiulo (2006), this information may include vision and hearing screenings, the student’s health history as well as his or her current physical status. Social workers and counsellors are also part of the assessment team. Their work is to provide information about the social and emotional status of the students. An audiologist measures the degree of HI and its impact on communication (Siegel, 2000). An audiological assessment provides individual data regarding hearing ability for tonal and
speech stimuli, auditory function and amplification, Gargiulo (2006). These diagnostic assessment data are combined with assessment of listening in the classroom (Luckner & Bowen, 2006), including classroom acoustics to determine (Moores, 2010). The implication of the hearing loss is for educational placement.

According to Oyegumi (2004), the information from all the professionals will lead to the kind of placement programme for the learners with hearing impairment. Bala (2004) calls them a multidisciplinary team. In Kajiado North Sub-County EARC, these professionals are not well-stipulated, since there are only two assessors who do the assessment for placement decisions of learners with disabilities. This leaves a major gap, which this particular study addressed.

Evidence has shown that several universities in Kenya have training programmes for special needs teachers. However, literature has established that, training programmes for specialist personnel such as educational audiologists, psychologists, speech and language pathologists and communication support workers such as interpreters are not available in most of them (Nyakondo, 2007). Recently, Kenya Institute of Special Education has started training sign language interpreters. It is in view of the above discussion that this study attempted to investigate the personnel involved in the assessment for placement decisions of learners with HI in Kajiado North Sub-County.

2.5 Equipment Used for the Assessment of Learners with HI

Equipment used for the assessment of learners with HI was the fourth and last objective of the study. Assessment begins with careful planning followed by the selection of
appropriate tools or equipment (Gargiulo, 2006). The tools and equipment selected for assessment will determine the kind of information to be gathered in order to make viable judgement for placement.

Nyakondo (2007) did a study on effectiveness of the use and management of audiological equipment in assessment and rehabilitation of primary school pupils with HI in Nyanza Province, Kenya. He used a descriptive survey design. The findings of the study revealed that the assessment centres and schools lacked modern and suitable audiological equipment. The study focused on the use and management of audiological equipment but there is also concern on effective assessment of learners with HI and factors that affect their placement. It was, therefore, necessary for the researcher to establish whether the tools and equipment that existed in the EARC and schools affect the assessment for placement decisions of learners with HI.

Muriithi (2012) did a case study on challenges facing educational assessment in Kenya. The study evaluated audiological assessment process at audiology section in Kenyatta National Hospital. The objective of the study was to find out how different variables like human personnel, audiological facilities, equipment and audiological procedures interrelate during the entire assessment process. The literature reviewed in the study revealed that the earlier the assessment by qualified professionals using the right audiological procedures and right audiological facilities and equipment, the better the results. The findings of Muriithi’s study (2012) revealed that, there was inadequacy of professionals in the audiology section, lack of audiological facilities and equipment that
limited the audiological procedures and services provided in the hospital for people with HI. This study was carried in a different context from the current one. Muriithi’s study was specifically on challenges facing educational assessment in Kenya. The current study was to investigate the effectiveness of assessment for placement decisions of learners with hearing impairment. This left a major gap which this particular study addressed.

Taskforce for Special Needs Education Appraisal Exercises did not address audiological assessment, unlike in the UK where great effort is exercised in the field of audiology. Factors such as parental prevalence, lack of schools, geographical factors have been noted to influence placement of learners with HI. There is much uncovered in relation to ensuring effectiveness assessment for placement decisions of learners with HI by scholars in Kenya. After reviewing the literature, the researcher was convinced that there was need to find out the effectiveness of educational assessment for placement decisions of learners with HI in Kajiado North Sub-County, Kajiado County.

2.6 Summary of Literature Review
From the reviewed literature, various authorities on the aspects of hearing impairment and categories of hearing loss by other scholars were presented. Literature was reviewed according to the objectives of the study. Gaps that were identified included, limited educational institutions for learners with HI, lack of trained personnel for educational assessment for placement decisions of these learners. It was also noted that the educational assessment lacked basic assessment tools and equipment. Multidisciplinary team was not put in place during assessment of learners with HI. There was misplacement of learners with disabilities and more so those with HI. The review of
literature identified that there was lack of trained personnel in even basic audiological equipment. There is much uncovered in relation to ensuring effectiveness assessment and placement of learners with HI by scholars in Kenya. The researcher was convinced that there is need to find out the effectiveness of educational assessment for placement decisions of learners with HI in Kajiado North Sub-County, Kajiado County.
CHAPTER THREE
METHODOLOGY

3.0 Introduction
The chapter describes the methodology that was adopted by the researcher in order to reach the sampled population collect and analyze data to answer the research questions. It consisted of the research design, variables, target population, sampling techniques and sample size, data collection techniques, data analysis; research instruments, validity and reliability, logistical and ethical considerations.

3.1 Research Design
The descriptive research design was adopted in conducting the study. Research design refers to the procedures used by the researcher to explore relationship between variables (Borg & Gall, 1996). According to Mugenda and Mugenda (2003), a descriptive survey design reports the way things are through a systematic collection of data from members of a given population. Descriptive design allows the researcher to gather information, summarize, present, and interpret the situation on the effectiveness of assessment for placement decision of learners with HI in institutions in Kajiado North Sub-County.

3.2 Study Variables
The independent variables of the study were placement options, factors that influenced placement, assessment equipment, tools used for assessment. Qualification of professional training of the personnel involved in assessment for placement decisions of learners with HI. The dependent variable of the study was the effectiveness of proper/improper placement of learners with HI.
3.3 Study Area

The study was conducted in Kajiado North Sub-County, Kajiado County, Kenya. Kajiado North Sub-County is one of the four sub-counties that form the large Kajiado County. The Sub-County is situated in the outskirts of Nairobi about 25 kilometres from the city. The Sub-County is gazetted as hardship area. Hardship area is classified based on the level of environmental hostility. Much of the Sub-County is semi-arid with little rains and perpetual drought, which make life for the masses very difficult, not only to basic needs but also to education more so to learners with special needs.

![Map of Kajiado North Sub-County](image)

Figure 3.1: Map of Kajiado North Sub-County

3.4 Target Population

There were 90 public primary schools, 8 special units, and 2 special schools in Kajiado North Sub-County, with a population of 33,555 learners, 420 were learners with
disabilities of which 85 were learners with HI by the time the research was carried out. There were 80 special trained teachers in the Sub-County and 80 parents/guardians. The population of parents was got from the total number of learners with HI in addition of two parents who had four children with HI and two respectively. This population was used because it had direct information about learners with hearing impairment.

3.5 Sampling Size and Sampling Techniques

3.5.1 Sample Size

A sample is a subset of a particular population (Mugenda & Mugenda, 2003). Therefore, a sample was used to make a generalization of the characteristics being investigated within the entire population. The researcher used purposive sampling to select the headteachers of schools with special units and special schools, the two assessors in the EARC. Mugenda and Mugenda (2003) add that purposive sampling allows a researcher to use cases that have the required information with respect to the objectives of his or her study. Convenient sampling was used to select parents/guardians of learners with HI.

The study used Ministry of Education’s table to determine the sample size for the special trained teachers, learners with HI, and parents/guardians of learners with HI. It was suitable because this study used descriptive design research; the sample size was 30% of the target population (Ministry of Education, 2003). The sample involved the two special schools, eight special units and 27 regular primary schools. The two special schools were purposively selected because they were the only ones in the location of study for learners with special needs. The study target population comprised 257 respondents. They
included all the 80 special trained teachers who were from the eight special units, the two special schools, and 27 regular primary schools. Ten headteachers, out of whom 8 of them were from the special units while the other 2 were from the 2 special schools. The 2 trained assessment educational officers who were involved in the implementation of assessment for placement decision programme for learners with disabilities and 80 parents/guardians of learners with HI and 85 learners with HI who were in different institutions in Kajiado North Sub-County. The total number of parents was got from various institutional records and learners themselves in the sub-county under study.

Kajiado North Sub-County had 80 special trained teachers out of whom 24 (30%) were sampled. Out of 85 learners with HI 24 (30%) were sampled while 18 (30%) of 80 parents/guardians were sampled. The 10 headteachers and the 2 educational assessors were purposively selected. The sample size was 78 respondents. Due to the problem of attrition, the study included 10% of the sample size to take care of any possible attrition. Simple random sampling was used to select the learners with HI and special teachers, while convenient sampling was used to select parents as indicated on Table 3.1.
The researcher felt that this sample size would give equal representation of the target population from each group to get adequate information.

### 3.5.2 Sampling Techniques

Sampling is the process of selecting a sub-set of cases in order to draw conclusions about the entire set (Orodho, 2003). In the study, purposive sampling was used to select the 10 headteachers from the eight special units and two special schools, the two educational assessors in the EARC. Purposive sampling technique was used to select respondents who had specific characteristics necessary for the purpose of the study (Hedge, 2003). Simple random sampling was used in selecting the special trained teachers and learners.
with HI because it ensured that each member of the target population had an equal chance of being included in the sample. Special trained teachers and learners with HI were selected using simple random sampling whereby all the listed of each category was made, each was assigned a consecutive number on a piece of paper. The papers were folded and then the numbers were placed in a basket and thoroughly shuffled to ensure that they were fully mixed to conceal identity. The number of the teachers that was picked were the ones who participated in the study, the same with learners with HI in every institution that was presented. Convenient sampling was used to select parents/guardians. This was because of the nomadic kind of life led by most parents/guardians, which made it difficult to access them in the Sub-County. Some learner respondents with HI were leaving in children’s home Tania integrated. There were other learners with HI who were doing pre-vocation in saloons and tailoring shops.

3.6 Research Instruments

Questionnaire was the main instrument for data collection. In addition, observation checklist was used. Each item in the questionnaire was developed to address a specific issue of the objective or research questions (Mugenda & Mugenda, 2003). The research objective of the study formed the basis from which the research instruments were constructed. In data collection, the researcher used four sets of questionnaires, one set for headteachers, second set for special trained teachers, the third for learners with HI in the two special schools, sampled regular primary schools, and the eight special units, parents/guardians of learners with HI, and the assessors. To supplement questionnaire data, an observation checklist was used to observe the assessment environment. The
questionnaire had both closed-ended and open-ended items. Qualitative and quantitative data collection methods were used to avoid response and information bias. This was to ensure validity, reliability and accuracy of information derived (Orodho, 2003).

3.6.1 Questionnaires

Questionnaires were used because they could collect large amounts of information in a quick space of time (Orodho, 2003). Questionnaires ensure that confidentiality and information needed are easily narrated (Kombo & Tromp, 2006). Questionnaires were free from bias and answers were in the respondent’s own words. Questionnaires were given to headteachers of the special units and special schools, which were purposively selected. They were also given to the learners with HI both who knew and did not know how to read and write from the two special schools, special units, and randomly selected regular primary schools. The research assistant who knew sign language read, and explained the items in sign language. Further, the questionnaires were given to the special trained teachers in the special schools, primary schools with special units and regular primary schools that were randomly selected. The two assessors in the EARC and parents/guardians of learners with HI were also given questionnaires.

3.6.2 Observation Checklist

To get more information in the EARC, the researcher used observation checklist. The following were observed; the availability of assessment room, assessment tools and equipment, retrospective records and other needful materials. The observation checklist was preferred as it verified the truth of the statement made by the respondents in the context of questionnaire schedule. In addition, the information obtained under this
method related to what was currently happening on the ground (Cohen, Mahion & Marison, 2000).

3.7 Pilot Study

Piloting was necessary in order to enhance validity and reliability of the instrument chosen (Mugenda & Mugenda, 2003). The pilot study enabled the researcher to modify research instruments before the actual study took place. For instance, unclear directions, cluster questions, and wrong phrasing of questions were open and cross-checked. Pilot study was conducted in the Il-Bissil School in Kajiado Central Sub-County and it was not included in the actual study. The school was a regular primary school with a special unit for HI. The piloting involved the 3 EARC personnel in Kajiado Central Sub-County, the headteacher, 5 special trained teachers in the school, 4 parents of learners with HI and 15 learners with HI who were present.

3.7.1 Validity

To ensure content validity, the research instruments were reviewed after the pilot study by the researcher to ascertain their accuracy in capturing the concept under study. In addition, professional consultation was sought from the experts who made sure goals were clearly defined and operationalized making sure that tools were matched with the study objectives. The researcher examined each item in terms of its relevance to the variables under investigation and the research objectives. The researcher used four sets of questionnaires, one set for headteachers, second set for special trained teachers, the third for learners with HI, parents/guardians of learners with HI, and the assessors. To
supplement questionnaire data, an observation checklist was used to observe the assessment environment

3.7.2 Reliability

Reliability is the consistency of an instrument to yield the same result at different times (Frankel & Wallen, 2003). To test reliability of instruments, the researcher used test-retest technique which involved administering the same instruments twice to the same group of subjects (Mugenda & Mugenda, 2003). In this study, the instruments for collecting data were administered twice within a period of two weeks and the scores of both tests were correlated and reliability established using the Spearman rank order correlation coefficient (Rho) formula.

\[ Rho= \rho = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}. \]

Where: Rho is Spearman correlation index

\( D \) is the difference in ranks for a pair of scores

\( N \) is the number of scores within each distribution.

A reliability measure of 0.75 was established. According to Mugenda and Mugenda (2003), a correlation coefficient greater or equal to 0.75 shows a high reliability of the instruments.

3.8 Data Collection Techniques

After getting clearance and a research permit from Kenyatta University, the researcher proceeded to seek permission from the Ministry of Higher Education, Science and Technology. The researcher sought further permission from the Sub-County Education
Officer to conduct research in the EARC, 2 special schools, 8 special units, and 90 regular primary schools that were involved in the study. The researcher had one trained research assistant who knew both Maasai and sign language. The two languages were very important in the research, because there were those parents who did know any other language other than mother tongue (Maasai) and the researcher was dealing with persons with HI so, she needed a sign language interpreter.

The researcher trained the research assistant on the use of research instruments. The researcher with the assistant went to the schools, assessment centre, and 5 homes to collect data through the administration of questionnaires to the headteachers, specially trained teachers, learners with HI, the assessors and parents/guardians of learners with HI. The researcher and the assistant visited the 2 churches where most people with HI attend in the sub-county. I met some of the learners with HI who gave me their parent’s phone numbers whom I talk to and requested that I may visit them, of which they agreed and gave me dates. The researcher and the assistant visited 5 homes in duration of two days due to the fact that the homes were far apart. The researcher with the assistant explained to the respondents about the time constraint. They included the assessors, headteachers, special trained teachers, parents/guardians of learners with HI and learners with HI.

In addition, the respondents were requested to indicate if they were willing to participate by signing the consent note. Each and every respondent signed the consent form before the actual questionnaire as an agreement to participate in the research.
Headteacher/parent/guardian had to consent. Headteachers and parents/guardians signed the consent form on behalf of learners with HI who were underage. Since convenient sampling technique was used parents/guardians signed their consent either at home, church or at school depending on where they were found. There were 5 parents who signed the consent forms at home, 5 in school, 2 in the shop and 6 in the church after service.

3.9 Data Analysis

Data analysis was based on the research objectives. Data collected from the questionnaires were coded, edited, organized and analyzed using Statistical Package for Social Sciences (SPSS) (IBM Statistics Version 20) software before analysis. As Martin and Acuna (2002) observe SPSS is able to handle large amounts of data and given its wide spectrum of statistical procedures purposefully designed for social sciences, it is quite efficient. Data were analysed qualitatively and quantitatively. Descriptive statistics were used to analyze quantitative data derived from closed-ended questions by calculating frequencies and percentages. The findings were presented using frequency tables and pie charts. The qualitative data derived from open-ended questions were analysed thematically based on the research objectives formulated at the beginning of the study.

3.10 Logistical and Ethical Considerations

After getting clearance and a research permit from Kenyatta University, the researcher proceeded to seek permission from the Ministry of Higher Education, Science and
Technology, issues on research, that is, confidentiality and anonymity were addressed before conducting the study. To ensure confidentiality, the participants were assured that the information was confidential and it was only for the purpose of the research. To address the issue of anonymity, the participants were requested not to reveal their names on the research instruments. Since convenient sampling technique was used, parent/guardians signed their consent either at home, church or at school depending on where they were found. There were 5 parents who signed the consent forms at home, 5 in school, 2 in the shop and 6 in the church after service.
CHAPTER FOUR
RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents questionnaire return rate, demographic information, data analysis, and discussions of the effectiveness of assessment for placement decision of learners with hearing impairment in Kajiado North Sub-County. The contents of the chapter were in line with the four objectives that were set for the study. Section one of this chapter dealt with establishing placement options for learners with hearing impairment that existed in Kajiado North Sub-County. Section 2 investigated the factors that influenced placement of learners with hearing impairment. Section 3 dealt with the effectiveness of the personnel involved in Assessment for placement decisions for learners with HI in the EARC. Section 4 identified the effectiveness of equipment and tools used to assess assessment placement decisions of learners with HI in Kajiado North Sub-County EARC.

The data were analysed according to the objectives of the study. From the analysed data, interpretations were made to come up with the findings of the study. The findings were discussed by comparing them with some of the previous scholars to draw concrete conclusion.
Table 4.1: Questionnaire return rate

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Sample Targeted</th>
<th>No. Collected</th>
<th>Percent Return Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headteachers</td>
<td>10</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>Special teachers</td>
<td>24</td>
<td>24</td>
<td>100</td>
</tr>
<tr>
<td>Assessors</td>
<td>2</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>Learners with HI</td>
<td>24</td>
<td>24</td>
<td>100</td>
</tr>
<tr>
<td>Parents</td>
<td>18</td>
<td>18</td>
<td>100</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>78</strong></td>
<td><strong>78</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 4.1 shows that out of the 10 headteachers, who were purposively selected representing 100%, filled and returned the questionnaires. All special trained teachers sampled, 24 equivalents to 100% filled and returned the questionnaires. The two assessors filled and returned the questionnaires. Questionnaires administered to the learners (100%) were returned and used. Eighteen parents conveniently selected filled and returned their questionnaires. Response rate was 100%. This was a good representative as supported by Mugenda and Mugenda (2003) who assert that a response rate of 50% is adequate for analysis and reporting; whereas a rate of 60% is good and a response rate of 70% and over is excellent. Therefore, the response rate was excellent for this analysis.

4.1 Demographic Characteristics of the Respondents

This study covered a number of background information of the respondents. The following are; detailed analysis of the respondents’ profile or background information.
Kirtom, 2000) cited in Mutungi and Nderitu (2014) assert that, researchers obtain demographic information from the study subjects to understand sample characteristics and to determine if samples are representative of the populations of interest.

### 4.1.1 Gender of the Respondents

Gender is an important variable in a given social situation which is variably affected by any social or economic phenomenon and globalization is not an exception to it (Mutungi & Nderitu, 2014). Hence, the variable gender was investigated for this study. Data related to gender of the respondents are presented in Table 4.2.

**Table 4.2: Gender representation of the respondents**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Headteachers</th>
<th>Teachers</th>
<th>Assessors</th>
<th>Parents</th>
<th>Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
<td>F</td>
</tr>
<tr>
<td>Male</td>
<td>8</td>
<td>80</td>
<td>8</td>
<td>30.8</td>
<td>02</td>
</tr>
<tr>
<td>Female</td>
<td>2</td>
<td>20</td>
<td>10</td>
<td>69.2</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100</td>
<td>18</td>
<td>100</td>
<td>02</td>
</tr>
</tbody>
</table>

From Table 4.2 gender representation captured both male and female headteachers with more male than female, which attributed to the gender disparities in the Sub-County among the headteachers. These data show that majority 8(80%) of the headteacher respondents were males compared to 2(20%) of female headteachers. Likewise, there was a disparity in the representation of other respondents, these were, the special trained teachers, parents/guardians learners with hearing impairment and assessors. The conclusions that can be drawn from these data is that majority of the respondents were females compared to males. However, this disparity did not affect the respondent’s
provision of information about the effectiveness of assessment for placement decisions of learners with HI in Kajiado North Sub-County since the researcher got the information that was required for the study.

### 4.1.2 Age of the Respondents

Age of the respondents is one of the most important characteristics in understanding one’s views about the particular problems, by and large, age indicates level of maturity of individuals and becomes more important to examine the response (Kimberlee, 2012). Age also determines one’s status, position and occupation in life, thus becoming an important variable in the study. The demographic attribute of age has importance through linkages with individual’s experience and personal accumulated knowledge. The study surveyed respondents of all age groups. Majority or 21 (27.2%) of the respondents were aged between 29-39 years. Persons aged between 18 and 28 accounted for about 19 (23.8%) while 40-50 years were 16 (20.8%) of the respondents. The current study also surveyed those aged below 18 years who mostly were learners who accounted for 14 (17.8%) of the respondents. Persons aged over 50 years had the least representation in the study where they accounted for just 8 (10.4%) of all the sampled respondents as indicated in Table 4.3 below.
Table 4.3 *Respondents by age group*

<table>
<thead>
<tr>
<th>Age group</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 18 years</td>
<td>14</td>
<td>17.8</td>
</tr>
<tr>
<td>18-28 years</td>
<td>19</td>
<td>23.8</td>
</tr>
<tr>
<td>29-39 years</td>
<td>21</td>
<td>27.2</td>
</tr>
<tr>
<td>40-50 years</td>
<td>16</td>
<td>20.8</td>
</tr>
<tr>
<td>Over 50 years</td>
<td>8</td>
<td>10.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>78</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

4.1.3 Level of Formal Education of the Parent/Guardian Respondents

Education level of an individual may be an impetus or constraints on how they perceive and cater for people with special needs in society including those with hearing impairment (Mutungi & Nderitu, 2014). It is on this premise that the study considered parents/guardian respondents’ level of education as one of the demographic profiles for analysis. As Figure 4.1 shows, majority of the parents/guardian respondents had formal level of education; a significant proportion of the parent/guardian respondents had attained primary, secondary and college level of education. There were also a small fraction of the parents/guardian respondents with university level of education. Parents/guardian respondents with no formal education constituted 33(43%). Those with primary, secondary and college levels of education accounted for 16(21%), 12(15%) and 11(14%) of all the sampled parents/guardian respondents. University level of education had been attained by just 5(7%) of the respondents.
This study observed that the migratory nature of pastoralist Maasai community had made some of them not to attend formal schooling due to lack of permanent settlement. While recent years have seen the use of mobile schools to boost the education of pastoralist communities such as those in the study site, a number of them still remain lowly educated. This partly explains why some of the parent/guardian respondents were either lowly educated or had no formal education.

### 4.2 Placement Options for Learners with HI in Kajiado North Sub-County

This study examined placement options for learners with hearing impairment. While examining the placement options, the study focused on key thematic areas. They included: the school placement options available in the Sub-County, classroom placement, adherence to placement options and respondents’ perceived satisfaction with placement options. The study established that there were various learning institutions...
spread across the Sub-County, which included two integrated private special schools, one public special unit for learners with hearing impairment, 7 special units for MR and 4 regular classrooms which were handling learners with HI. The study also revealed that a significant proportion 53(61%) of 85 learners with hearing impairment were placed in the two private integrated special schools present in the Sub-County. This was followed by 16(24%) of 85 learners with hearing impairment who were placed in special units whereby only 8(9%) learners with HI were placed in the special unit for HI. About 4(10%) of the learners with hearing impairment were placed in mainstream while 4(5%) were in vocational institutions as shown in Figure 4.2.

![Placement options for learners with hearing impairment](image)

**Figure 4.2: Placement options for learners with hearing impairment**

It is important to note that, learners with hearing impairment were placed in these institutions despite their disability. In fact, the study revealed that, the respondents were all categorical that there was only one special unit for learners with HI in the entire Sub-
County with the rest being regular schools, special unit for learners with mental retardation, and ‘integrated special schools’ where learners with HI were placed. When we talk of an integrated school, it means learners with special needs learn with regular students but they are offered special services (Gargiulo, 2006) for example, a sign language interpreter for learners with HI in this case.

The study revealed that, the two integrated special schools were private institutional homes and had learners with different disabilities with minimal special trained teachers, however, the fact that a significant percentage of learners with hearing impairment were placed in non-special institutions for learners with HI is neither new nor unique to Kajiado North Sub-County. Supporting the findings of the study, Ademokoya (2008), posits that, in Nigeria, almost all students with HI are placed in special units or special schools despite their academic level, communication mode and degree of hearing loss due to lack of enough institutions for students who were deaf.

Adoyo (2004), in support of the study observes that educational placement options for students with hearing impairment in Kenya include special schools, separate classrooms in regular schools which are the special units in this study, and regular educational classrooms. Similarly, the findings of this study are supported by Gargiulo (2006), who observes that learners with hearing impairment were placed in special units within mainstream schools despite their disability and degree of hearing loss.

The implication of the findings in this study as supported by Odoyo (2004) and Gargiulo (2006) is that there is a chronic shortage of special schools for learners with hearing
impairment not only in Kajiado North Sub-County but also in other parts of the world. It is evident from the current study that the available schools in the Sub-County met the demands of special needs for learners with HI, which include a sign language interpreter and a special trained teacher and least restrictive environment (IDEA, 2004). Furthermore, the study revealed that the two integrated special schools were private institutions and did not specifically cater for learners with hearing impairment but homes and institutions catering for all kinds of vulnerable children.

From the study findings, placement was not effective in Kajiado North Sub-County. This is supported by the IDEA (2004) guidelines which state that, meeting the unique communication and related needs of a child who is deaf is a fundamental part of providing a Free Appropriate Public Education (FAPE) to the child. IDEA (2004) further supports the current study by stating that, any setting, including a regular classroom, that prevents a child who is deaf from receiving an appropriate education that meets his or her needs, including communication needs, is not LRE for that individual child. Equally supporting this study is Karen (2012) who states that, placement decisions must be based on the child’s Individualised Educational Programme (IEP). Thus, the consideration of LRE as part of the placement decision must always be in the context of the LRE in which appropriate services can be provided. The author further supports the study by arguing that any setting which does not meet the communication and related needs of a child who is deaf or hard of hearing, and does not allow for the provision of FAPE, cannot be considered the better placement option for that child.
From the statement by the two assessor respondents in the Sub-County, EARC indicated that there was shortage of learning institutions for learners with hearing impairment. In view of this shortage, the assessors were prompted to place some of the learners with hearing impairment into institutions with special education without considering the kind of disability and degree of hearing loss.

From the findings, the study revealed that, insufficient schools for learners with HI in Kajiado North Sub-County resulted into placement of learners with HI into special units for learners with mental handicaps. This is quite surprising revelation, a situation most likely resulted into ineffective placement. It is unfortunate that this kind of placement was done against the regulations as stipulated by IDEA (2004) in support of the study that, academic level of the learner, communication and opportunities for direct communication with peers are the three main issues in considering placement of learners with HI.

In supporting the study Ademokoya, (2008) asserts that, the successful education for our learners with HI is accomplished when their academic, social, cognitive, and communicative needs are met. The Author further support the study by stating that, in this way, the mission of special education is fulfilled to prepare learners with HI for employment and independent living. Only then, will the efforts of educating deaf and hard of hearing students can be fulfilled (Faeza, 2008). Supporting the findings of this study Mutungi and Nderitu (2014) assert that, majority of learners with special needs and disabilities in Kenya do not access right educational services due to lack of enough special schools leading to wrong placement.
4.2.1 Mode of Placement of Learners with HI

There was need to understand how learners with hearing impairment were placed into these institutions in Kajiado North Sub-County and thereby being admitted to the institutions. The current study revealed that there were two broad modes of placements in the institutions. They were parents/guardians of learners with HI who sought admission and referrals by the EARC. As Figure 4.3 shows, the study revealed that most of the learners with hearing impairment were placed through the parents/guardian who sought admission into these learning institutions. They never followed the right channel. The study revealed that majority 7 (70%) of headteacher respondents indicated that parents/guardian of learners with hearing impairment sought placement in their institutions. However, some were placed in these institutions through referrals by the EARC which constituted 3 (30%) of placement for learners with hearing impairment in Kajiado North Sub-County.

![Figure 4.3: Placement mode for learners with HI](image)

**Figure 4.3: Placement mode for learners with HI**
The findings of the current study on the mode of placement is not in support of Tobey, Rekart, Buckely and Geers, (2004), who found referrals by educational professionals as the main mode of placement for learners with special needs. The author argues that recommendations by educational professional in this case EARC assessors, increases the likelihood of appropriate placement of learners with special needs. Underscoring the significance of such referrals, Rossy (2009), Mitchel (2004) supports the study by asserting that educational professionals are better placed to identify learner’s specific problems of hearing impairment, which allows them to have such learners placed in relevant learning institutions. The current study attributes high incidences to parenal placement other than the EARC.

4.2.2 Classroom Placement of Learners with HI in the Mainstream/Special Unit

The current study has already revealed that there was only one special unit for learners with HI in the entire Kajiado North Sub-County. This meant that a significant proportion of learners with hearing impairment were placed in least restrictive environment. It then became important to understand how these learners with hearing impairment were placed especially in regular classrooms and special units for learners with mental retardation. The study, therefore, sought to establish the seating position in the classroom environment accorded to these learners while taking their lessons in regular schools and special units for learners with mental retardation. Baine (2006) in support of the study states that, learners with hearing impairment who are placed in mainstream learning centres should be placed at the appropriate position within the classroom. Supporting on the same study, Jannette (2006), states that teachers should encourage students with
hearing impairment to sit in front of the lecture theatre where they will have an unobstructed line of vision. The special trained teacher respondents in Figure 4.13 indicated how they placed learners with HI in the classroom environment.

![Bar Chart]

**Figure 4.4: Classroom placement for learners with HI**

Findings of the study revealed that the overwhelming 22 (91%) of learners with HI sat with friends while 1 (4.50%) sat in front while another 1 (4.50%) sat at the back. The present study reveals that majority of the learners with HI despite their disability could sit with friends at any position in the classroom environment.

In support of the study findings, Kiriungi (2000) asserts that, a learner with any hearing loss would have trouble in the classroom situation if not properly placed. Tobey, et al., (2004) argues that, the decision regarding classroom placement is usually made based on a combination of factors such as teacher’s recommendation and degree of hearing loss. However, Kiriungi (2000) in support of the study advocates that learners with HI who are
in regular classroom should sit in front and receive sign language interpreter so that they can gain skills and competence in their learning. The study provided evidence, which suggested that there was misplacement of learners with HI in the classroom situation in Kajiado North Sub-County. The current study finding is supported by Gargiulo (2006) who asserts that, students with hearing loss should be given priority seating so that they will have a better opportunity to hear as well as have visual access to the teachers mouth for lip-reading or see their interpreter if they have one.

The findings revealed that there were no regular schools with learners with HI in Kajiado North Sub-County with a sign language interpreter from all the headteacher respondents. In supporting the current study Cawthon (2001), found a positive correlation between teachers and educational interpreters in a study of two inclusive classrooms, with deaf students who used sign language interpreters, one kindergarten and first-grade combination class and one second and third-grade combination class. Cawthon (2001) interviewed the two mainstream teachers regarding their philosophies of interpreter’s roles and responsibilities. Both teachers reported having a team approach to educating their deaf students, with the educational interpreter being a critical member. They said that, the interpreter has as much input as anyone else.

Teachers reported to be using interpreters not only for the facilitation of communication, but also for monitoring and modifying behavior, assisting transitions, and interacting with students regarding curriculum implementation (Cawthon, 2001). Baine (2006) suggests that because of the exceptional demands of teaching content curriculum to deaf students,
sign language interpreters should be considered important and must be put in place. Mutungi and Nderitu (2014) in support of this study, share the same views that the physical placement alone of students with special needs into regular school does not solve the problems unless special service is given. The study reveals that, learners with HI who were placed in special units for mental handicap special/ integrated schools and regular primary schools in Kajiado North Sub-County, their service provision was questionable.

4.2.3 Adherence to Classroom Placement of Learners with HI

It was necessary to inquire from the expert largely special trained teachers on the extent to which they felt that there was adherence to the placement guidelines of learners with hearing impairment especially those pursuing learning in mainstream schools. 2(8.6%) of the special trained teacher respondents pointed out that, to an extent, there was some adherence to guidelines on the placement of learners with hearing impairment in mainstream schools. Following this was one special trained teacher representing (4.3%) of the respondents who was convinced, guideline on the classroom placement of learners in mainstream schools was being adhered to. However, some of the respondents indicated that, adherence to guidelines was least followed. Respondents who noted that these guidelines were least extent and least followed were 10 (43.5%) and 10 (43.5%) of the respondents respectively. One (4.3%) special trained teacher who participated in the study could not tell whether the guidelines on placement of learners with hearing impairment in mainstream schools were being adhered to or not as shown in Table 4.4.
Table 4.4: Adherence to classroom placement of learners with HI

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great extent</td>
<td>2</td>
<td>8.6</td>
</tr>
<tr>
<td>Extent</td>
<td>1</td>
<td>4.3</td>
</tr>
<tr>
<td>Neutral</td>
<td>1</td>
<td>4.3</td>
</tr>
<tr>
<td>Least extent</td>
<td>10</td>
<td>43.5</td>
</tr>
<tr>
<td>No extent</td>
<td>10</td>
<td>43.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

The study revealed that, most learning institutions where learners with hearing impairment were placed did not adhere to the guidelines on how such learners ought to be placed in the classroom environment. Table 4.4 findings of the current study is supported by Ndurumo (1993), who noted that learners with disabilities were largely misplaced, a situation that he advised should be re-assessed and reviewed. The Ministry of Education also in support of the study, about a decade ago had raised this concern, when it argued that integration was seen as an attempt to modify the learners with disabilities to fit in the ordinary schools, classroom placement but the mode of communication did not favour learners with hearing impairment (MoEST, 2003). The need to adhere to the guidelines on placement of learners with hearing impairment has been equally supported the current study in IDEA (2004) that, learners with HI should be placed in positions with least restrictions and access to their teachers given their unique communication needs, which places them apart from other learners without hearing impairment.
In support of this study, Jannette (2006) asserts that deafness involves the most basic of human needs, the ability to communicate with other human beings. It is essential for the well-being and growth of deaf and hard-of-hearing children that educational programs recognize the unique nature of deafness and ensure that all deaf and hard-of-hearing children have appropriate, ongoing, and fully accessible in classroom environment and educational opportunities. Supporting the same, Faeza (2008), claims that many deaf and hard-of-hearing children use an appropriate communication mode, sign language, which may be their primary language, while others express and receive language orally and aurally, with or without visual signs or clues. Still others, typically young deaf and hard-of-hearing children, lack any significant language skills. Jannette (2006) also states that, given their unique communication needs, deaf and hard-of-hearing children would benefit from the development and implementation of educational programs for children with low-incidence disabilities. It is worth noting that the study revealed there was lack of sign language interpreter in any of the institutions in Kajiado North sub-county.

4.2.4 Satisfaction with Placement Options by Parents

How respondents felt satisfied with the placement option was considered in the current study as an important aspect for analysis. Results in Figure 4.7, revealed the respondent’s response on their perceived satisfaction with placement options for learners with hearing impairment in Kajiado North Sub-County. The results showed that 4(19.1%) and 9(52.50%) of the respondents were very satisfied and satisfied with placement practices for learners with hearing impairment in the Sub-County. About 2(12.70%) and 3(15.70%) of the respondents were least satisfied and not satisfied.
Figure 4.5: Perceived satisfaction with learners placement by parents

It is apparent from Figure 4.5 that about two thirds of the parent/guardian respondents were satisfied with placement options of learners with HI in Kajiado North Sub-County. The study has equally established that some of the learners with hearing impairment were placed in non special education institutions in Kajiado North Sub-County which are least restrictive environment, thus revealing a shortage of special schools in the Kajiado North Sub-County. Based on these limitations and shortage of special schools for learners with HI, parent/guardian respondents appeared convinced that placement was largely being done in the right way without bias or discrimination. The study thus attributes parent/guardian respondents greater satisfaction with placement practices in the Sub-County because they were done impartially. This therefore, informed their assertion that they were so far satisfied with the placement options and practices for learners with hearing impairment in the sub-county. In support of the study Karen (2012) states that in
any case parents/guardian should be informed about the placement of their learners with hearing impairment and their consequences. In this case, parents/guardian needed to have been informed of the consequences of misplacement of their children and make a final decision.

4.3 Factors Influencing Placement of Learners with HI

Analysis of the factors influencing the placement of learners with hearing impairment in Kajiado North Sub-County was the second objective of this study. Respondents cited several factors that influenced placement of learners with hearing impairment. Factors that were mentioned were availability of learning institutions, parental/guardians’ preference, cost of education, locality of the school, availability of qualified personnel, assessment equipments, tools and referrals by the EARC.

4.3.1 Availability of Learning Institutions

The study revealed that resources such as learning institutions, which was the key consideration for placement of learners with hearing impairment (Gargiulo, 2006), were found to be in short supply. It is clear from Table 4.3 that 41(52%) of the respondents agreed that availability of learning institutions influenced the placement of learners with hearing impairment. About 32(41%) of the respondents reported that availability of learning institutions influenced the placement of learners with hearing impairment. A small proportion of the respondents 5(6%) felt that availability of learning institutions was least influential in the placement of learners with hearing impairment in the Sub-County. However, one representing (2%) of the respondent considered availability of
learning institutions as not being an influential factor in the placement of learners with hearing impairment as shown in Table 4.5.

**Table 4.5 Availability of learning institutions for placement of learners with HI**

<table>
<thead>
<tr>
<th>Importance</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very influential</td>
<td>32</td>
<td>41</td>
</tr>
<tr>
<td>Influential</td>
<td>41</td>
<td>52</td>
</tr>
<tr>
<td>Least influential</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Not influential</td>
<td>1</td>
<td>2.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>78</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

It is clear from the results in Table 4.5 that, most of the respondents considered availability of schools as a factor that influenced the placement of learners with hearing impairment in Kajiado North Sub-County. The study had already established in Figure 4.2 that learners with hearing impairment were placed in various learning institutions including regular schools, special unit for learners with mental retardation and integrated special schools. It is evident that there was only one special unit for HI in the entire Kajiado North Sub-County, which implied that not all learners with hearing impairment could be placed in that particular learning institution. Informed by this shortage, assessment officers in the Sub-County opted to place learners with hearing impairment in learning institutions that were readily available, even if such institutions could not address their unique learning needs as learners with hearing impairment.
Findings of this study is supported by Tobey et al., (2004) who assert that locality of the school can influence placement of a learner with hearing impairment. Tobey et al., (2004) further states that most schools for learners with hearing impairment are far from home which implies that proximity of the school would influence the school selection for placement by parents. Baine (2006) equally supporting the findings of the study maintains that learners with hearing impairment must be placed in their special schools, where they are guided and supported by a specialist in order for them to receive the maximum benefits of education. The author further in support of this study asserts that, level of learners with hearing impairment can be better than the normal hearing students, if only given more supportive services in their special school and concluded that the hearing impaired students could be academically more serious than the normal counterparts.

4.3.2 Parental/Guardian’s Preference

Faeza, (2008) who is supporting the current study assert that, Parents/guardians play an important role in the lives of their children including the choices made about their education. It was important, therefore, for the study to establish whether parental/guardians’ preference influenced the placement of learners with hearing impairment in Kajiado North Sub-County. As table 4.6 shows, the study revealed that, majority 65(83.3%) and 9(12.1%) of the respondents said that parental preference influenced the placement of learners with hearing impairment. About 3(4.1%) and less than 1% of the respondents indicated that parental preference least influenced the placement of learners with hearing impairment.
Table 4.6: Parental/guardian’s preference and placement of learners with HI

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Extent</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Least Extent</td>
<td>3</td>
<td>4.1</td>
</tr>
<tr>
<td>Extent</td>
<td>9</td>
<td>12.1</td>
</tr>
<tr>
<td>Great Extent</td>
<td>65</td>
<td>83.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>78</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

It emerged from the results in Table 4.6 that, parental preference influenced the placement of learners with hearing impairment. Most parents preferred placement of their children closer to their homes. This made a number of parents to influence the headteachers and assessors to place their children in schools in their locality that they found appropriate and convenient for them despite of their disabilities. Findings of this study, was supported by Rossy (2009), Carlberg and Kavale (2004) who assert that, parents play a major role in the placement decision process. The authors observe that while other professionals such as doctors and teachers can offer advice on the child, parents deserve the right and hold the ultimate responsibility on key decisions about the placement of their children, because at the end, a child is the parental heir. Findings of this study were equally supported by Tobey et al., (2004), who asserts that parents have a right in the choice of educational placement of their children. The study was further supported by Faeza, (2008) who states that, parents should be the decision-makers regarding school placement for their children with disabilities.
4.3.3 Cost of Education

Cost of education was another factor that influenced placement of learners with hearing impairment. Cost is at the heart of any form of education with no exception of learners with hearing impairment. Hegarty (2002), in support of the findings of this study assert that, unlike the hearing learners where the cost of education is the same, with minimal variations, the case for learners with special needs is different. It is on this basis that issues to do with the cost of education became an important area of inquiry. This study thus sought to establish how the cost factor influenced the placement of learners with hearing impairment in Kajiado North Sub-County. The study revealed that 40(51.2%) and 35(44.4%) of the respondents indicated cost of education as a factor that strongly influenced and influential in the placement of learners with hearing impairment, however, 2(2.7%) of the respondents considered the issue not influential. Nevertheless, the cost of education as least important consideration in the placement of learners with hearing impairment was reported by 1(1.7%) of the respondents.

Table 4.7: Cost of education

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly influential</td>
<td>35</td>
<td>45</td>
</tr>
<tr>
<td>Influential</td>
<td>40</td>
<td>51</td>
</tr>
<tr>
<td>Least influential</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Not influential</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>78</td>
<td>100</td>
</tr>
</tbody>
</table>
The study revealed that majority 75(76%) of the respondents agreed that lack of finance influenced placement of learners with hearing impairment while the cost of education is generally high, that of learners with special needs such as those with hearing impairment is even higher. For instance, this study is supported by another study done in the United States which found that the average cost to educating a child with disability was twice that of educating a child without disability (Hegarty, 2002). In support of the current study Mutungi & Nderitu (2014) states that, what is disheartening in developing countries such as Kenya is the fact that, budget allocation to special education sub-sector is one of the lowest. This study is further supported by Charema (2007) who observes that, one of the challenges in the implementation of special education leave alone inclusive education in both developed and developing countries are lack of sufficient funding. The author further asserts that, the extra cost of educating children with disabilities was often passed over to the parents. Further support of the study IDEA (2004) assert that, faced with inability to meet these extra costs, most parents often found themselves misplacing their children in non-least restrictive enviroment even if it meant that these schools were unfit for their children’s disability. The study revealed that one of the parent/guardians indicated that her child was in a special unit for MH due to lack of finance to join a special school for the HI. This concured with (Ruben, 2000) who supports the study by stating that, the costs of rehabilitation, special education and un-employment is due to disorders of hearing, voice, speech, and language which have been projected as $154-186 billion, approximately 3% of the gross national product of the USA in 1999. In
support of the study (Grosse, 2007) assert that, the present calculated lifetime educational cost of hearing loss is $115,600 per child.

This study is equally supported by UNESCO (1994), which established that, funding for special needs provisions was not a priority of government policy and expenditure in developing countries, as it was considered too costly and individuals with special needs were the minority. Consequently, financial provisions for education and other needs of individuals with disabilities were largely met by non-governmental organizations (UNESCO, 1994). Further in support of the study Eleweke and Rodda (2002) state that, due to lack of awareness of the potentials of people with disabilities, expenditure on services for them is considered "a waste of scarce funds" and that even with the best training some of them will perpetually remain "tax-eaters" and never becoming "tax-payers".

4.3.4 Availability of Qualified Personnel

This study revealed the availability of qualified special trained teachers in schools, as one of the factors that influenced placement of learners with hearing impairment in Kajiado North Sub-County. Table 4.8 illustrates that the availability of special trained teachers in schools for learners with hearing impairment, influenced placement of learners with hearing impairment. Majority of 44(56%) of the respondents strongly agreed while 16(20.1%) agreed that availability of special trained teachers in hearing impairment was indeed a factor that influenced the placement of learners with hearing impairment in the Sub-County. As opposed to 2(3%) respondents who strongly disagreed, 14(18%) of them
disagreed that availability of qualified personnel was a factor that influenced placement of learners with hearing impairment in the Sub-County. 2(3%) of the respondents could not deny or confirm that availability of qualified personnel influenced the placement of learners with hearing impairment in the Sub-County.

Table 4.8: Availability of qualified personnel

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>44</td>
<td>56</td>
</tr>
<tr>
<td>Agree</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Neutral</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Disagree</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>78</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

It is clear from the results that the qualification of personnel was an influential factor in the placement of learners with hearing impairment in Kajiado North Sub-County. The findings of this study were supported by Dossett and Munoz (2003), who have extensively argued that teachers are a critical factor in the attainment of quality education. Quality education has been seen to be influenced by three major factors; school-related factors, student-related factors, and teacher-related factors (Dossett & Munoz, 2003). Among these three, teacher-related factors have generated a great deal of attention both at policy and scholarship levels. Goldhaber (2004) also supports the study by observing that, the most important factor contributing to poor student achievement
may be unqualified teachers. Further in support of the study, Frankie-Dolor (2002) asserts that, of all the pre-requisites for effective management of a learning institution, the most vital is the qualification of the teacher.

In support of the study, Garrick, Duhaney & Salend (2000), Moog (2002) and Wamae & Kang’ethe-Kamau (2004) observe that educators who have knowledge of and experience with learners with special needs could influence the accommodation and placement of learners with special needs. The study revealed that it was only 2(2.5%) of all the educational personnel respondents who were trained in the area of hearing impairment. This implied that most institutions were without special trained teachers to cater for learners with hearing impairment.

The current study is equally supported by Leshore (2008), who found out that, 3.2% of all learners in primary schools in Uganda who were hearing impaired, their needs were not adequately met. This was due to lack of trained personnel, which was illustrated by their high dropout rate, with only one third surviving from primary one to primary seven due to inadequate trained personnel. At one point, the study revealed that one parent transferred a learner with HI from school A to school B due to lack of trained personnel in communication. The respondents in this study seemed to have identified the important function of teachers with appropriate knowledge and skills for teaching learners with hearing impairment. Staten (2011) in support of the study assert that, for one to deal with a deaf student, he/she should be skilled and knowledgeable in communication. Communication is a crucial part of serving those who are deaf (Moores, 2010). Staten
(2011) further support the study by stating that, communication with individuals with hearing loss is not a one size that fits all proposition. Consequently, whether it is using written notes, video relay service, or interpreters, it is important to access the least restrictive communication methods to most appropriately communicate with individuals who are deaf (p. 136).

4.3.5 Referral from the Educational Assessment Resource Centre (EARC)

The role played by EARC in the placement of learners with hearing impairment in Kajiado North Sub-County was another important issue that this study examined. From table 4.9, it is clear that an overwhelming number of the respondents considered referrals by the EARC as a factor that influenced placement of learners with hearing impairment. The study revealed that 39(50%) and 31(40%) of the respondents conceded that EARC advice influenced the placement of learners with hearing impairment in Kajiado Sub-County, but referrals by EARC as least influential in the placement of learners with hearing impairment was reported by 6(8.0%) of the respondents and 2(3%) not influential.

Table 4.9: Referral by EARC as a placement consideration

<table>
<thead>
<tr>
<th>Influential</th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very influential</td>
<td>39</td>
<td>50</td>
</tr>
<tr>
<td>Influential</td>
<td>31</td>
<td>40</td>
</tr>
<tr>
<td>Least influential</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Not influential</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

| Total             | 78        | 100      |
It is clear from Table 4.9 that majority of the respondents felt that referrals by EARC influenced placement of learners with hearing impairment in Kajiado North Sub-County. The findings of this study is supported by Tobey et al., (2004), who states that, recommendations made by the professionals involved in the management of the learner with hearing impairment are recognized as important determinants of school placement of such learners. This study revealed that most of heads of various learning institutions surveyed confirmed that they considered referrals from EARC very seriously during placements but parents/guardians influence affected as indicated by some headteachers. It is also true that EARC personnel are better placed to know which learners will best be served in which learning institutions. What these results imply is that some learners were placed without the referrals of EARC officers. The current study is supported by Oyegumi (2004) who asserts that, hearing assessment should be made mandatory in the Universal Basic Education policies, as prerequisite to school entrance. This then raised questions as to whether these learners were placed in the right institutions that can effectively handle their learning challenges.

![Pie Chart](image)

*Figure 4.6: Placement of learners with HI in the schools*
In support of this study, Gargiulo, (2006) indicates that one of the functions of the special trained teacher apart from teaching is to identify and refer a learner suspected to have a disability for further screening and confirmation of eligibility for special education but not placement. In this case, the study revealed that, the overwhelming 20(85.70%) of learner respondents with HI were placed by special trained teachers as opposed to 4(14.30%) who were placed by headteachers without recommendations from the EARC as presented in Figure 4.6.

In conclusion, the finding of this study were supported by the study that was conducted in South Africa by Faeza, (2008) who found that parental preference, availability of the school, school accommodation and cost implications, influenced school placement of grade 1 learners with HI. This revealed a situation likely to have resulted into ineffective placement of learners with hearing impairment in schools in Kajiado North Sub-County.

4.4 Effectiveness of the Personnel Involved in Assessment for Placement Decision

The third objective of this study was on the effectiveness of the personnel involved in Assessment for placement decision of learners with hearing impairment in Kajiado North Sub-County EARC. Personnel in the EARCs there main responsibilities include; assessment, guidance and placement. On personnel qualifications, this study has presented issues relating to level of training, areas of specializations, adequacy of the personnel as well as their competence as perceived by the respondents.
4.4.1 Level of Professional Training

Personnel involved in assessing learners with hearing impairment in different capacities in Kajiado North Sub-County had diverse levels of training. Figure 4.7 shows level of training of the personnel.

![Figure 4.7: Level of professional training of EARC officer](image)

The findings in Figure 4.7 revealed that, the special trained teachers’ who were holders of bachelors degree level in special education accounted for 10(47.60%) of the personnel, while 5(23.80%) of these personnel had a diploma in special education. Personnel trained at master’s degree level constituted of 3(13%), those teachers who were trained in other areas constituted of 3(13%). There was yet another group of personnel teaching learners with hearing impairment who were P1 holders, who constituted about 1(4.8%) of the teacher respondents. The P1 teachers were involved in the study because they were teaching learners with HI in the private “integrated” special schools that were part of the
The study is supported by Adoyo (2007) who asserts that there is another category of teachers who although trained in general education have not trained in special education and are helping in special institutions due to inadequacy of special trained teachers.

### 4.4.2 Area of Specialization

In supporting this study Mutungi & Nderitu (2014) assert that, whereas every assessor with requisite level of training could have the opportunity to serve in Assessment for placement decision of learners with Special Needs, the same cannot apply to the assessment of learners with hearing impairment. This is due to its technicality in both teaching and assessment. It is on this basis that the current study further looked at the areas of specialization of the personnel involved in the teaching and assessment for placement decision of learners with hearing impairment in Kajiado North Sub-County.

![Figure 4.8: Area of specialization](image-url)
The study revealed that majority 18 (75%) of the special trained teacher respondents were specialized in the area of mental retardation, while 2(9%) were trained in hearing impairment. The rest 1(4%) were trained in autism and visually impairment respectively. 2(8%) constituted other areas of specialization. The current study revealed that one of the assessors was specialized in the area of mental retardation and another in visual impairment.

The above results demonstrated a huge proportion of learners with hearing impairment in Kajiado Sub-County who were being supported by unqualified personnel. The fact that only 2(9%) of the personnel involved in the teaching, assessment for placement decision of learners with hearing impairment in Kajiado North Sub-County were trained in the relevant area suggested that the needs of these learners remained unmet. The study findings revealed that none of the two assessors was specialized in the area of hearing impairment.

The study findings further revealed that both EARC assessor respondents were trained neither in functional assessment nor in audiological assessment. Muriithi (2012) in support of this study states that, there is no audiological assessment that could be done without training. In this regard, proper placement of learners with HI was questionable. In support of the study findings, Chute & Mylanus (2006) observe that the consequences of poor Assessment for placement decision leads to a long effect that can damage people with HI’s lives.
The findings of this study are supported by Muriithi (2012) who asserts that audiological assessment forms the basis for habilitation and rehabilitation for learners with HI. In support of the findings of this study, the MoE National SNE Policy Framework (2009) noted that most of the assessment teachers in the EARC were not trained but largely depended on the knowledge they gained when they trained as Special Needs Education teachers. In the event of unavailability of trained personnel in audiological assessment, (Chute & Mylanus, 2006) supports the study findings by stating that, it is evident that one may suggest that there were labelling and misplacement of learners with HI.

The researcher further sought to find out the kind of personnel that were involved during assessment for placement decision of learners with HI at the EARC to ascertain the professionals involved in assessment for placement decision since the current personnel were specialized in different areas of disabilities. According to the assessor respondents, they both indicated that they hardly used other professionals but would place learners with HI to various learning institutions.

There was an implication that the assessors lacked the input of other professionals who would have assisted in proper assessment for placement decision of learners with HI. In support of the study findings Kihoro (2010) who assert that, lack of input of other professionals to plot the course of placement and intervention measures may mislabel the child and end up making wrong placement. Kiriungi (2000) on the other hand in support of the study findings also observe that when one professional does assessment for placement decision, there is a reason to question its effectiveness. This assertion appears
to concur with the findings of this study. This indication suggests that the Assessment for placement decision process at Kajiado North Sub-County EARC lacked the contribution of other professionals whom Gargiulo (2006) term as a multidisciplinary team. Other literature have supported the findings of this study by indicating that a diagnostic team of doctors and school psychologists, special educators and school administrators do assessment in making decisions for placement for learners with HI, (Carlberg & Kavale, 2004).

The researcher felt that the learner’s parents, medical personnel like an educational audiologist, special trained teacher and a social worker would have been involved during assessment process of a learner with HI. Further, with the multidisciplinary team, the assessment result would be discussed objectively for proper placement of learners with HI. In support of the same findings, Bala (2004) states that each member of a multidisciplinary team has a role that cannot be adequately played by another professional since each professional address a specific aspect as far as the child with special need is concerned, in this case a learner with HI. In support of the same Carlberg & Kavale (2004) assert that for any effective assessment for placement decision of learners with HI, a team of professionals may be included, that is curriculum specialist, audiologist, speech language pathologist and a sign language specialist.

4.4.3 Perceived Competence of Personnel

The recipient of these services best understood the extent to which services rendered to the public were effective and efficient. One way of establishing effective service
provision is through the competence of the service providers. It is in this regard that, the study sought to find out from the respondents on the level of competence of the personnel involved in the Assessment for placement decision of learners with hearing impairment.

The findings revealed that a significant proportion of the respondents felt that personnel involved in the Assessment for placement decision of learners with hearing impairment in Kajiado North Sub-County were incompetent. This was indicated by the majority 73(93%) of the respondents who rated them as very low and low in competence, as compared with 3(4%) of the respondents who rated personnel involved in the Assessment for placement decision of learners with hearing impairment as high competent, while the other 2(3%) did not respond.

*Table 4.10: Perceived competence of assessors*

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Neutral</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Low</td>
<td>23</td>
<td>29</td>
</tr>
<tr>
<td>very Low</td>
<td>50</td>
<td>64</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>78</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

It is important to note from Table 4.10 only 2(9%) of personnel involved in the teaching and assessment for placement decision of learners with hearing impairment in Kajiado North Sub-County were trained in the area of hearing impairment. It is further important to observe here that some of the learners with hearing impairment were placed in integrated special schools, regular schools and special units for learners with Mental Handicap. In supporting the study results Mutungi and Nderitu (2014) states that, little
help is provided by Special Needs Education trained teachers in mainstream. Supporting on the same, Siegel (2000) asserts that many teachers believe that children with special needs who need academic modifications would be unable to cope with the level of academic demand in the mainstream school system.

The current study is also supported by Faeza (2008), who asserts that assessment should be based on the specialist advice and their expertise in assessment for placement decision of learners with HI. To support on this study, (Graham, 2007) states that, hearing screening should be conducted under the supervision of a certified audiologist. The study revealed that, of the two assessors, none of them was specialized in the area of hearing impairment, or in audiological assessment.

The current qualification of the assessors in the EARC Kajiado North Sub-County did not qualify them to do any assessment for placement decision for learners with hearing impairment. Supporting the study result findings Oyegumi & Adejumo (2011) states that It is only an audiological evaluation that can determine whether a hearing loss is present and to what degree, and this can only be done by a trained personnel. Equally supporting the study is Faeza, (2008) who states that, whereas upon confirmation of hearing loss, the child should be referred for further assessment to determine the implications of hearing loss and the need for special education and related services. Gargiulo, 2006) supporting the study asserts that, the assessment team must include a specialist in the area of hearing loss, generally an early intervention specialist in deafness and hearing loss, a teacher of the deaf, and/or an educational audiologist.
4.5 Types of Equipment and Tools Used for Assessment of Learners with HI

Findings about equipment and tools used for the assessment of learners with hearing impairment, was the fourth and last objective this study investigated. In supporting this study on equipment and tools, Muriithi (2012) asserts that, at the heart of assessment for placement decision of learners with hearing impairment are the equipment and tools used for the assessment activity. Supporting on the same Mutungi & Nderitu (2014), assert that any person with a hearing loss does not look any different and one cannot detect hearing loss by looking into someone’s ears but by the use of audiological equipment and tools. The implication is that, you cannot assess and place a learner with HI through observation. The study revealed that most learners with HI were assessed through observation as the main tool of assessment due to lack of audiological equipments.

4.5.1 Assessment methods, Equipment and Tools for Learners with HI

This study first sought to establish the extent to which the respondents considered important to have equipments and tools for the assessment of learners with hearing impairment in Kajiado North Sub-County. An overwhelming 74(95%) of the respondents reported that it was important to have assessment equipment and tools for learners with hearing impairment. It was only 2(2%) and 2(3%) of the respondents who felt that it was not important and least important for the EARC to have equipment and tools for the assessment of learners with hearing impairment respectively.
The findings of this study are supported with that of McLoughlin & Lewis, (2005) and Faeza (2008) who approved the importance of equipment and tools in assessment of learners with hearing impairment. The authors identify such equipment as pure tone audiometer, tympanometry, and case history, distractive screening tools as being very essential in the assessment for placement decision of learners with hearing impairment. The findings of the study equally is supported by Murithi (2012), (Tobey, et al (2004), that effective assessment for placement decision of learners with hearing impairment can only be achieved where key equipment and tools are not only available but are also sufficient and in sound and functioning condition.

4.5.2 Availability of Audiological Equipment and Tools

All the respondents who were attached to this study led to investigate whether the equipment and tools were actually available in the EARC.
Table 4.1: Availability of Audiological equipment and tools

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Agree</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Strongly disagree</td>
<td>30</td>
<td>38</td>
</tr>
<tr>
<td>Disagree</td>
<td>41</td>
<td>53</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>78</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

From table 4.12 the study revealed that majority 41(53%) disagreed while 30(38%) of the respondents strongly disagreed that audiological equipment and tools were available in the EARC. The other 4(5%) strongly agreed while 3(4%) agree that audiological equipment and tools were available. The findings of this study is supported by another study by Muriithi (2012), which revealed that limitations of facilities and professionalism affected effectiveness of Assessment for placement decision of learners with hearing impairment in Kenya. The finding in this section was further supported by the report cited by Taskforce for Special Needs Education appraisal exercises (2003) that, there were inadequate equipment and tools for screening and diagnosing learners with special needs in the EARCs. Similarly, in support of this study Kihoro (2010) established that assessment centres and schools lacked modern and suitable audiological equipment. Where standard audiological assessment equipment were not available for use by the assessors, other alternative equipment would be essential. To this effect, availability of other sound equipment used for assessment was determined through observation.
Table 4.12: *Sound equipment used in the EARC Checklist*

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Chime bar</th>
<th>Rattles</th>
<th>Drum</th>
<th>Whistle</th>
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<tr>
<td>Available</td>
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<td></td>
</tr>
<tr>
<td>Not available</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Table 4.12 indicates that, there was no sound equipment that was used in the EARC. The study findings revealed that in the event of unavailability of standardized equipment there was no improvisation done. The space left blank Table 4.12 implied that the EARC did not have that equipment. In this case, the study revealed none was available for assessment of learners with HI. This created a gap in that by not using any of the recommended equipment and tools, learners with hearing impairment were not properly assessed to determine the degree of hearing loss for better placement. From the information gathered through the questionnaires and observation, the study revealed that there were no equipment and tools used, implying that the situation did not qualify any learner with hearing impairment to be assessed and placed in Kajiado North Sub-County. The study findings is supported by Tobey et al., (2004), who states that, there are areas to focus on, in assessing a learner who is suspected to be having hearing impairment in order to be labelled and placed appropriately in a special programme.

The gaps indicated from the findings, implied that there would be misplacement of learners with hearing impairment. Equally in support of the programme is Oyegumi and Adejumo (2011) who assert that, lack of correct audiological facilities, equipment and tools, the assessor cannot determine the learner’s potential hearing loss on speech and
language acquisition, cognitive achievement and social/emotional development. The findings are further supported by Gargiulo, (2006) who states that, in absence of an audiometer and audiometric tools it meant that, the EARC personnel could not adequately address the hearing loss which is the principle determinant for placement of learners with hearing impairment. However, lack of basic assessment equipment for learners with hearing impairment is not unique in Kajiado North Sub-County EARC, as studies elsewhere have similarly supported the current study. For instance, Olaniyan (2004) as cited in Ademokoya (2008) found that audiological assessment was not done on 63 school going children with hearing impairment in Nigeria due to lack of audiological equipment, implying that these learners were admitted to schools without audiological assessment. Muriithi, (2012) in support of the study asserts that, audiological assessment is very important for anyone with hearing problem since it forms the basis of rehabilitation for learners with hearing impairment. In this regard, problem of audiological assessment was not fully addressed.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of the findings, conclusion, recommendations of the study and the extent to which the research objectives had been achieved. The purpose of the study was to investigate the effectiveness of assessment for placement decisions of learners with hearing impairment in Kajiado North Sub-County, Kajiado County, Kenya. Four research objectives were formulated to guide the study. The first research objective sought to establish the placement options for learners with HI in Kajiado North Sub-County. The second objective was to find out the factors that influenced placement of learners with HI. The third objective was to investigate the effectiveness of professional qualifications of the assessment personnel involved in Assessment for placement decision of learners with HI, while the last objective sought to find out the effectiveness of equipment and tools used to assess placement decisions for learners with HI in Kajiado North Sub-County EARC.

The study was conducted using a descriptive design survey, which is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. The sample of the study comprised 2 assessors, 10 headteachers, all the 80 special trained teachers, 80 parents/guardian for learners with HI and 85 learners with HI. The main instruments for data collection in the study were the questionnaires and observation schedule.
5.1 Summary of Findings

This section summarizes the findings of the study thematically as follows:

5.1.1 Placement Options

Findings from the study revealed that there was no special school for learners with HI in Kajiado North Sub-County and special units for learners with HI were limited. For example, data indicated that, all the assessors, the headteachers and about 85.7% of special trained teachers agreed that there was only one special unit for learners with HI in the whole of Kajiado North Sub-County, with 2.5% who indicated one integrated special private school which parents found to be very expensive. Other options were the mainstream classrooms but which were affected by untrained manpower. The learners were normally placed in schools depending on parental preference, locality of the school and availability of special education despite the degree of hearing loss, age, communication and ability of the learner.

5.1.2 Factors that Influence Placement of Learners with HI

Findings from the study indicated that several factors contributed to placement of learners with HI. The findings revealed that parental preference influenced placement of learners with HI. Majority of the parents preferred special unit within the locality. The assessors claimed that, lack of cooperation from parents/guardians contributed to wrong placement of learners with HI. Further, the assessors revealed that most parents/guardians wanted their children to be placed in special units within their locality despite their disability. Finance/cost was implicated as yet another factor that influenced school placement.
The findings also revealed that proximity of the school influenced placement of learners with HI as most of the HI schools were far and residential. Placing of learners without referral from the EARC was another factor that influenced placement of learners with HI in Kajiado North Sub-County. Mode of communication was yet another factor that influenced placement. The findings of the study established other factors that influenced placement like where the headteachers and special trained teachers placed learners with HI without any recommendation from the EARC.

Lack of enough schools for learners with HI influenced their placement. The study findings revealed that there was no special school for learners with HI in Kajiado North Sub-County. The study findings indicated that, lack of trained teachers in the area of HI influenced placement of learners with HI. For example, out of 80 trained special teachers in the Sub-County, only 4.8% were specialized in the area of HI. The findings further revealed other factors such as; cost implications, poverty, child’s distance from home and peer pressure influenced placement of learners with HI.

5.1.3 Qualifications of Assessment Personnel

The findings of the study revealed that there was lack of trained personnel in the audiology section in the EARC. The findings indicated that the qualification of the assessors and training had an impact on the effectiveness of assessment for placement decision of learners with hearing impairment. The assessors lacked knowledge and skills on audiological assessment. The findings revealed that, none of the assessors was trained neither in functional assessment nor in audiological assessment. The findings also
established that use of a multidisciplinary team of assessors was not involved during assessment for placement decision of learners with HI.

5.1.4 Assessment Equipment and Tools for Learners with HI

The findings revealed that there was lack of audiological equipment and tools in Kajiado North Sub-County EARC which limited the audiological procedures and services provided in the EARC. The assessors’ response indicated that they only used observation and a case history for assessment for placement decision of learners with HI.

5.2 Conclusion

Based on the findings of this study, the following conclusions were arrived at; there were limited schools for learners with HI. The only educational options were either mainstream or one special unit for learners with HI in the Sub-County. The assessment centre was not well-equipped. Audiological equipment and other necessary tools for assessment for placement decision for learners with HI were not available. There was no assessment room. There was lack of trained personnel in audiological assessment and involvement of a multidisciplinary team during assessment for placement decision of learners’ with HI. Many factors influenced placement of learners with HI; limited schools for learners with HI, locality of the school, parental preference, proximity, communication barriers, headteachers, and special teachers placing learners with Special Needs without referral letters from the EARC, financial constraints by the parent, and lack of trained personnel in the area of HI in schools and in the assessment centre.
In conclusion the process of assessment for placement decision was not effective. In as far as meeting the requirements of assessment tools and equipment, the study revealed that Kajiado North Sub-County EARC and schools did not have any pure tone audiometer, tympanometer, otoscope and other audiometric tools. The study revealed that assessment was done in the general education office whereby they used observation as the only tool for assessing and placing learners with HI. There were no audiological audiogram records and other records kept for any of the assessed learners with hearing impairment to clarify the HI to determine the reasons behind placement of a learner with HI. It can be concluded that the method the assessors used to place these learners with HI was not appropriate. The quality of the Assessment for placement decision was far from what was expected in view of the tremendous effort by the government and the Ministry of Education to improve the quality of assessment of learners with disabilities in the EARCs.

5.3 Recommendations

This section gives recommendations based on the study findings.

i. The Kajiado North Sub-County EARC should ensure that the audiological assessment room, audiological equipment and tools are available for assessment and also trained personnel in audiological assessment.

ii. Assessors from every discipline should be present plus other professionals from other disciplines in the EARC to form a multidisciplinary team during assessment to avoid labelling and misplacement of learners with hearing impairment. This
may include; an educational audiologist/audiologist, special trained teacher of the learner with HI, social worker, the parent/guardian among others.

iii. The national and county governments should allocate adequate resources as well as trained manpower to schools for learners with HI to ensure proper learning in view of the changes in policy regarding school placement of learners with disabilities in vision 2030.

5.4 Areas for Further Research

The researcher recommends the following areas for further research:

i. The parental influence on placement of learners with hearing impairment to their respective schools.

ii. The effect of poverty on placement of learners with HI to appropriate special institutions.

iii. The analysis of assessment for placement decision of learners with HI by headteachers and special trained teachers for special programmes.
REFERENCES


APPENDIX I

INTRODUCTION LETTER

My name is Hellen Kemunto Nyaundi Nyakundi. I am a post graduate student of Kenyatta University conducting a master’s research in “Effectiveness of assessment for placement decisions of learners with hearing impairments in Kajiado North Sub-County, Kajiado County”.

The focus of the study is to establish the professional qualifications of assessment personnel. Multidisciplinary team and equipment used for assessment and placement options for learners with HI.

Please note that:

1. This involves questionnaires and observation tools
2. Participation in this study is voluntary
3. Indicate by singing or embracing the thumbprint for your willingness of participation in this study
4. The study will maintain confidentiality and it is only for research
5. There is no payment associated with participation

Thank you in advance.

Hellen K. N. Nyakundi

Please indicate your willingness to participate in the study. Yes [ ] No [ ]

Signature ………………………..  Thumbprint
1. Availability of assessment room and its arrangement.

2. The assessment tools and equipment used for assessment.

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Chime bar</th>
<th>Rattles</th>
<th>Drum</th>
<th>Whistle</th>
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</table>

3. Examination of the assessment audiograms in comparison with placement done.
APPENDIX III

QUESTIONNAIRE FOR THE ASSESSORS IN THE EARC

Personal details

The questionnaire is part of an educational study conducted by the researcher in your institution. The information will be treated with confidentiality and will be used only for the purpose of this study. The researcher is therefore, requesting for your honesty and cooperation in answering the questions.

SECTION A: Personal Details Instructions

Background Information

1. Gender: Male □ Female □ Age……………..

2. What is your highest level of professional qualifications? Please tick appropriately

P1 □ Diploma □ Bachelor’s degree □

Master’s degree □ Ph.D □ Others □

Section B

3. Are you trained in special education? Yes □ No □

4. Which is your area of specialization in special education? Please tick.

- Hearing impairment □
- Mentally handicapped □
- Physically handicapped □
- Visually impaired □
- Others specify……………………
If the answer to question four is yes, what is your qualification? Please indicate by ticking.

- Diploma in special needs education
- Degree in special education
- Masters in special education
- Post diploma in functional assessment

5. Are you trained in functional assessment? Yes ☐ No ☐

6. Are you trained in audiological assessment? Yes ☐ No ☐

7. How many relevant placement options are there in Kajiado North Sub-County for learners with hearing impairment?

9. Kindly respond to the statements below by ticking the portion that fits your opinion.

The statements have possible responses on factors that influence placement of learners with hearing impairment in Kajiado North sub-county.

**Strongly Agree 5  Agree 4  Undecided 3  Disagree 2  Strongly disagree 1**

<table>
<thead>
<tr>
<th>Statements for the responses</th>
<th>RANKING</th>
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<td>A Parental influence</td>
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<td>B Locality of the school</td>
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<td>C Availability of special education</td>
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<td>d Degree of hearing loss</td>
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<td>E Lack of trained personnel</td>
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<td>F Lack of assessment/placed without referral from EARC</td>
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<tr>
<td>g Finance.</td>
<td></td>
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</tbody>
</table>
10. Responses on importance of assessment equipment and tools for learners with hearing impairment

- Very important
- Important
- Neutral
- Not important
- Least important

11. Response on availability of audiological equipment and tools for assessment of learners with hearing impairment.

**Strongly Agree 5   Agree 4 Undecided 3  Disagree 2 Strongly disagree 1**

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<th>Statements for the responses</th>
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<td>Available</td>
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<td>Not available</td>
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</table>

12. During Assessment for placement decision of learners with hearing impairment, who are the professional personnel involved? Please state……………

13. Do have an assessment room? Yes [ ] No [ ]

13. How do you grade your Assessment for placement decision of learners with hearing impairment in Kajiado North sub-county EARC? Please tick.

- Very high [ ]
- High [ ]
- Neutral [ ]
- low [ ]

*Thank you for your cooperation*
APPENDIX IV

QUESTIONNAIRE FOR THE HEADTEACHERS

Instruction

This questionnaire is part of an educational study that is being conducted by the researcher in this institution. The information will be treated with confidentiality and will only be used for the purpose of this research study. This researcher is, therefore, requesting for your honesty and co-operation in answering the questions

SECTION A:

Personal Details Instructions

1. Gender: Male □ Female □

2. What is your highest level of your professional qualifications? Please tick the appropriate
   P1 □ Diploma □ Bachelor’s degree □
   Master’s degree □ PhD □ Others specify □

3. Are you trained in special education?
   Yes □ No □

4. State your area of speciality, Mentally Retarded □ Hearing Impaired □
   Visually Impaired □ Physically challenged □
   Others Specify ____________________________

5. Which are the relevant placement options in Kajiado North Sub-County for learners with hearing impairment?

7. How many learners with hearing impairment are there in your school? Specify........
8. How do you get learners with hearing impairment into your school?

Through the EARC ☐    Through the parents/guardian ☐    Others.........

9. Do you have referrals letters from the EARC for admission for the learners with hearing impairment who are presently in school? Yes ☐     No ☐

10. Kindly respond to the statements below by ticking the portion that fits your opinion. The statements have possible responses on factors that influence placement of learners with hearing impairment.

**Strongly Agree 5  Agree 4  Undecided 3  Disagree 2  Strongly disagree 1**

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<th>Statements for the responses</th>
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<td>A Parental influence</td>
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<td>B Locality of the school</td>
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<td>C Availability of special education</td>
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<td>D Degree of hearing loss</td>
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<td>E Lack of trained personnel</td>
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<td>F Lack of assessment/placed without referral from EARC</td>
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<td>g Finance.</td>
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<td>H Referral from EARC</td>
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<td>I Communication</td>
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</tbody>
</table>

11. Responses on importance of assessment and equipment tools of learners with hearing impairment Very important
113

a. Important
b. Neutral
c. Not important
d. Least important

12. Availability of audiological equipment and tools for Assessment for placement decision of learners with hearing impairment in the EARC.

**Strongly Agree 5   Agree 4   Undecided 3   Disagree 2   Strongly disagree 1**

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<th>Statements for the responses</th>
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<td>Available</td>
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</table>

13. How do you grade the present personnel involved in Assessment for placement decision of learners with hearing impairment in Kajiado North sub-county? Please tick

- Very high
- High
- Neutral
- Low
- Very low
APPENDIX V

QUESTIONNAIRE FOR PARENTS/GUARDIANS

Instruction

This questionnaire is part of an educational study being conducted by the researcher. The information will be treated with confidentiality and will only be for the purpose of this research study. This researcher is therefore, requesting for your honesty and co-operation in answering the questions.

1. Gender: Male □ Female □

2. Is your child assessed? Yes □ No □

3. Who placed your child in the school? Teacher □ Hospital □ Special Trained Teacher □ Pre-school teacher □ others …

4. Were you given a referral letter from the EARC? Yes □ No □

5. During the assessment session, how many people assessed your child?

6. Which learning institution was your child placed after assessment?

   Special unit for HI special unity for mentally handicapped □ Special school for HI □ Others specify______________________________________________

7. Was your child placed appropriately to the programme according to his/her special need? Yes □ No □

8. Were you satisfied with the school placement of your child?

   Yes □ No □
9. Kindly respond to the statements below by ticking the portion that fits your opinion.

The statements have possible responses on factors that influenced placement of learners with hearing impairment.

**Strongly Agree 5  Agree 4  Undecided 3  Disagree 2  Strongly disagree 1**

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<td>b Locality of the school</td>
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<td>I Communication</td>
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10. Responses on importance of assessment equipment and tools of learners with hearing impairment

- Very important
- Important
- Neutral
- Not important
- Least important
11. Responses on availability of audiological equipment and tools for assessment of learners with hearing impairment in the EARC.

**Strongly Agree 5  Agree 4  Undecided 3  Disagree 2  Strongly disagree 1**

<table>
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<th>Statements for the responses</th>
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12. How do you grade the present personnel involved in Assessment for placement decision of learners with hearing impairment in Kajiado North sub-county? Please tick

- Very high
- High
- Neutral
- Low
- Very low
APPENDIX VI

QUESTIONNAIRES FOR TEACHERS

Instructions

This questionnaire is part of an educational study that is being conducted by the researcher in this institution. The information will be treated with confidentiality and will only be used for the purpose of this research study. This researcher is, therefore, requesting for your honesty and co-operation in answering the questions.

SECTION A: Background Information

1. Gender: Male ☐ Female ☐ Age ....................

2. What is your highest level of professional qualifications? Please tick the appropriate

   P1 ☐ Diploma ☐ Bachelor’s degree ☐
   Masters degree ☐ PHD ☐ Others specify..........................

3. Are you trained in special education? Yes ☐ No ☐

4. In which area are you specialised? Please tick

   • Hearing impairment ☐
   • Visually impaired ☐
   • Mentally handicapped ☐
   • Physically handicapped ☐
   • Others specify..................................................
SECTION B: Information concerning placement factors that affect learners with hearing impairment

5. What are the placement options for learners with hearing impairment in Kajiado North Sub-County?

6. Placement of learners with HI is done by ............in the school.

7. Learners with hearing impairment are placed in... Position in class when am teaching.

   A position of own choice in class  □
   Near the teacher  □
   Where the learner can easily follow classroom  □
   Seat where the learner can easily watch the teacher’s  □
   Seat with friends despite of the position  □

Others, specify………………………………………………

8. Do you adherence to Classroom Placement of Learners with hearing impairment

   Great extent  □
   Extent  □
   Neutral  □
   Least extent  □
   No extent  □
9. Kindly respond to the statements below by ticking the portion that fits your opinion.

The statements have possible responses on factors that influenced placement of learners with hearing impairment.

**Strongly Agree 5  Agree 4  Undecided 3  Disagree 2  Strongly disagree 1**

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<td>h Availability of school</td>
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<tr>
<td>i Communication</td>
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</table>

10. Responses on importance of assessment and equipment tools of learners with hearing impairment

a. Very important

b. Important

c. Neutral

d. Not important

e. Least important
11. Responses on availability of audiological equipment and tools for assessment of learners with hearing impairment in the EARC.

Strongly Agree 5  Agree 4  Undecided 3  Disagree 2  Strongly disagree 1

<table>
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<th>Statements for the responses</th>
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<td>SD</td>
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<tr>
<td>Not available</td>
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12. How do you grade the present personnel involved in Assessment for placement decision of learners with hearing impairment in Kajiado North sub-county? Please tick

- Very high
- High
- Neutral
- Low
- Very low
APPENDIX VII

QUESTIONNAIRE FOR LEARNERS

This questionnaire is part of an educational study that is being conducted by the researcher in this institution. The information will be treated with confidentiality and will only be used for the purpose of this research study. The researcher is, therefore, requesting for your honesty and co-operation in answering the questions.

Personal Information

1. Gender: Male ☐ Female ☐

2. How old are you................................................

3. Which class are you? Please tick?

   1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

   7 ☐ 8 ☐

   Form 1 ☐ Form 2 ☐ Form 3 ☐ Form 4 ☐ Vocational ☐

4. Are you assessed? Yes ☐ No ☐

5. In which school were you placed after assessment? Please Tick

   A boarding special school for the hearing impairment ☐

   A day special school for all disabilities ☐

   A day special unit for hearing impairment ☐

   A special unit for the mentally handicapped ☐

   Integrated special school ☐

   Others specify........................................................................................................................................
6. Which position do you sit in the classroom? In front ☐ at the back ☐
   Anywhere I decide ☐ with my friends ☐

7. Were you given a referral letter for admission? Yes ☐ No ☐

8. Kindly respond to the statements below by ticking the portion that fits your opinion.
   The statements have possible responses on factors that influenced your placement.

**Strongly Agree 5  Agree 4  Undecided 3  Disagree 2  Strongly disagree 1**

<table>
<thead>
<tr>
<th>Statements for the responses</th>
<th>RANKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Parental influence</td>
<td>SA</td>
</tr>
<tr>
<td>b Locality of the school</td>
<td>A</td>
</tr>
<tr>
<td>c Availability of special education</td>
<td>U</td>
</tr>
<tr>
<td>d Degree of hearing loss</td>
<td>D</td>
</tr>
<tr>
<td>e Lack of trained personnel</td>
<td>SD</td>
</tr>
<tr>
<td>f Lack of assessment/placed without referral from EARC</td>
<td>SA</td>
</tr>
<tr>
<td>g Finance.</td>
<td>A</td>
</tr>
<tr>
<td>h Referral from EARC</td>
<td>U</td>
</tr>
<tr>
<td>i Communication</td>
<td>D</td>
</tr>
</tbody>
</table>
9. Responses on Importance of Assessment and Equipment Tools of Learners with hearing impairment.
   a. Very important
   b. Important
   c. Neutral
   d. Not important
   e. Least important

10. Responses on availability of audiological equipment and tools for assessment of learners with hearing impairment in the EARC.

   **Strongly Agree 5   Agree 4   Undecided 3   Disagree 2   Strongly disagree 1**

<table>
<thead>
<tr>
<th>Statements for the responses</th>
<th>RANKING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SA</td>
</tr>
<tr>
<td>Available</td>
<td></td>
</tr>
<tr>
<td>Not available</td>
<td></td>
</tr>
</tbody>
</table>

11. How do you grade the present personnel involved in Assessment for placement decision of learners with hearing impairment in Kajiado North Sub-County? Please tick.
   - Very high
   - High
   - Neutral
   - Low
   - Very low
APPENDIX VIII

RESEARCH AUTHORIZATION LETTER

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2241349, 20-267 3550,
0713 788 787, 0735 404 245
Fax: +254-20-2213215
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke

When replying please quote
Our Ref: NACOSTI/RCD/14/013/1638

Hellen K. N. Nyakundi
Kenyatta University
P.O.Box 43844-00100
Nairobi.

RE: RESEARCH AUTHORIZATION

Following your application dated 4th September, 2013 for authority to carry out research on “Effectiveness of assessment and placement of learners with hearing impairment in schools in Kajiado North District, Kajiado County, Kenya,” I am pleased to inform you that you have been authorized to undertake research in Kajiado County for a period ending 31st December, 2013.

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

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

M. K. Rugaita, PhD, HSc.
DEPUTY COMMISSION SECRETARY
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Copy to:

The County Commissioner
The County Director of Education
Kajiado County.
APPENDIX IX

RESEARCH PERMIT

THIS IS TO CERTIFY THAT:

Prof./Dr./Ms./MRS./Miss/Institution

Hellen K. N. Nyakundi & Institution

location

P.O.Box 43944-00100, Nairobi.

has been permitted to conduct research in

Location

District

County

On the topic: Effectiveness of assessment and placement of learners with hearing impairment in schools in Kajiado North District, Kajiado County.

for a period ending: 31st December, 2013.

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.

2. Government Officers will not be interviewed without prior appointment.

3. No questionnaire will be used unless it has been approved.

4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.

5. You are required to submit at least two (2) hard copies and one (1) soft copy of your final report.

6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice as per the

RESEARCH CLEARANCE PERMIT

CONDITIONS: see back page.