

**MODES OF COMMUNICATION AND ACADEMIC PERFORMANCE OF
LEARNERS WITH HEARING IMPAIREMENTS IN MBEERE DISTRICT,
KENYA.**

A Case study of St. Luke's School for the deaf.

A research Report

**Submitted to the Institute of Open and Distance Learning
Kampala International University**

**In partial fulfillment of the requirement
For the award of the Degree of Bachelors in Special Needs Education.**

BY

By NJIRU CHARLES BERNARD



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Declaration

I, NJIRU CHARLES BERNARD, do hereby declare that Modes of *'Communication and academic performance of learners with hearing impairments in Mbeere District, Kenya'* is entirely my own original work, except where acknowledged and that it has not been submitted before to any other university or institution of higher learning for the award of a degree.

Signed 

Date 26th /08/08

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Approval

This research report has been submitted for examination with my approval as the candidate's university supervisor.

Signed 

Name Henkys Oliver Date 26. Aug 2018

Dedication

This research paper is dedicated to my family; my ever patient, encouraging and loving wife, **Milcah** and our two daughters: **Risper** and **Sheilla**.

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In carrying out research, it is usually not a one man's undertaking. It usually calls for concerted efforts from all the people concerned. It is against this background that the researcher wants to thank all those who assisted him in one way or another.

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Definition of Key Concepts

The following are some key concepts found in this study paper.

Deaf- children whose hearing loss is so severe that they cannot hear and understand speech even if the sound is made louder for them through hearing aids.

Disability- any loss or reduction of functional ability to perform an activity in the manner or within the range generally considered normal for a human being within the cultural context.

Finger spelling- the manual representation of the letters of the alphabet by 26 different hand positions.

Handicap- a disadvantage or restriction of activities which results from disability or from society's attitude towards a disability.

Hard of hearing- children who despite the hearing loss have enough useful hearing left to enable successful procession of linguistic information through audition.

Hearing impairment- a collective term used to refer to hearing losses or disability, which may range in severity from mild to profound, and includes the subsets of deaf and hard of hearing.

Residual hearing- the partial hearing or the useful hearing left after an individual acquires hearing loss that enables one benefit from a hearing aid.

Sign bilingualism- an approach to the education of the deaf children in which the language of the Deaf community (BSL) and the language of the hearing community (English) are used together.

Special needs- conditions or factors that hinder normal living and development in an individual.

Total communication- a philosophy which makes use of the full spectrum of language modes which include child developed gestures, the language of signs, speech reading, finger spelling, reading, writing and residual hearing.

Abbreviations

B.S.L- British Sign Language

Dr. – Doctor

H.I – Hearing Impairment/Impaired

I.O.D.L – Institute of Open and Distance Learning.

K.C.P.E – Kenya Certificate of Primary Education

K.I.E – Kenya Institute of Education

K.I.U – Kampala International University.

M.C.E – Manually Coded English.

N.G.O.S – Non- Governmental Organizations

P.G.S.S. – Puget-Gorman Signed Speech

S.E – Signed English

S.S.E - Sign Supported English

T.C – Total Communication

Abstract

This study investigated the impact of modes of communication on academic performance of learners with hearing impairments. The paper is made up of five chapters.

Chapter one: The researcher has looked at the background of the problem, statement of the problem, the theory, objectives, research questions set to investigate more on the problem and the significance of the study.

Chapter two: The researcher looked at what others have researched on to come up with the literature i.e., categories, causes of hearing impairment, modes of communication, among others.

Chapter three: It specified the research methodology, respondents, and statistical treatment of data, research environment, data collection procedures and others.

Chapter four: It is the analysis and interpretation of data got from the field. It looked into views of respondents concerning issues like, categories of hearing impairment, causes of hearing impairment, modes of communication of such learners and the impact of communication modes on the learning of learners.

Chapter five: This dealt with the discussions, conclusions and recommendations. The researcher discussed the findings, made the conclusions, recommendations and suggested future areas of study.

CHAPTER ONE

THE PROBLEM AND ITS SCOPE

1.0 Overview

This chapter gives a general overview of the study procedures that guide the research to be successful. It is comprised of the following aspects:

1.1 Background of the study

It is very important that every individual, whether “normal” or handicapped gets access to education and good education for that matter. This is so because it is through education that one is enlightened on the issues taking place around the world around him or her. Through the knowledge, skills, attitudes and values one acquires through education, he or she is able to cope with the emerging issues around the world.

Many people around the world have always had the notion that persons with special needs cannot benefit from education. They have always thought that by educating the handicapped, it is just a waste of resources. But this has been disapproved by the tremendous work the handicapped persons who are educated are doing. For instance, there are many who have excelled in academics. A person like Dr. Ndurumo has received education to the level of doctoral degree. He has written various books such as *Exceptional children: development Consequences and Interventions*. This is a clear indication how persons with disabilities can benefit from education.

It is vital to detect the sensory deficits of young children as early as possible. This is more so to the hearing impaired where failure to detect them may result to massive language deficits. Language is very necessary for every individual in order to fully participate in the day to

day affairs of the society. Education of the hearing impaired is geared towards making them benefit from spoken language, which is very necessary for the full participation in societal activities. This is so because majority of the people are hearing and therefore tend to use spoken languages as their means of communication. The hearing impaired persons are faced with a myriad of challenges as they try to interact with their hearing peers. This is because they are not able to use spoken language effectively instead they tend to use other modes of communication such as sign language, finger spelling, gestures, mimicry, lip-reading, pantomime, total communication philosophy just to mention a few. This is also seen in schools where communication philosophy just to mention a few. This is also seen in schools where communication between the learners with hearing impairments and their hearing teachers is not quite effective. Because of this, you will find that teachers are not able to impart knowledge and skills effectively to their learners. Hence, the modes of communication then are going to affect the academic performance of the learners with hearing impairments.

Due to language barrier that exists between the learners with hearing impairments and their hearing teachers, sometimes it is difficult to communicate effectively. This makes it difficult for the teachers as some would even shy away from their learners due to incompetence in sign language and other modes of communication used by the hearing impaired. As a result of all this the researcher wants to find out whether this could be the reason why the academic performance of learners with hearing impairments has been wanting.

1.2 Theoretical Framework

Learners with hearing impairments perform poorly when compared with their hearing peers.

According to Ndurumo (1993: 162), hearing impaired students perform woefully below hearing students academically. This is in spite of the specialized strategies and methods used in teaching them.

Kinaga in Ndurumo (1993:153) reveals that research on academic achievements shows that hearing impaired children lag behind hearing children academically. However, the extent to which they lag behind based on severity of hearing loss does not yield a clear – cut correlation. The role which the school environment plays in academic achievement has also been taken into account. For instance, Kinaga in Ndurumo (1993) states that, "Educational occupation and any other differences occur as a result of society's inability to adequately help deaf people develop and use their abilities rather than the result of inherent deficiencies in their abilities. The problems of hearing impaired child can be created by the environment or those who are charged with his care, rather than the child".

The family climate also has a significant effect on a hearing impaired child's learning. Meadow in Ndurumo (1993:153), for instance, observed that 90% of hearing impaired children are born to hearing parents. As a result, the home environment is predominantly oriented towards the restoration of hearing in order to make the deaf child worthy of integration into the hearing society. The hidden motive behind this goal is that the deaf child is not accepted as long as he is deaf. This is because parents find themselves incompetent in the management of deafness and the deaf child. This type of family environment, coupled with that of the school where the oral methods, hearing aids, speech – reading and auditory training are emphasized, deprives the deaf child of the opportunity to acquire language naturally through sign language. As a

1.4 Purpose of the study

The main purpose of this study was to investigate and examine the reasons as to why the academic performance of learners with hearing impairments is usually not at par with their hearing peers. The researcher also wanted to find out if the modes of communication used by the hearing impaired in the process of learning do affect their academic achievements.

After identifying those modes of communication and how they affect their academic performance, the researcher gave suggestions and recommendations on how to assist those learners with special needs in Education. This leaves the students better placed to realize their academic dreams.

1.5 Objectives of the study.

The following are the objectives which guide this study:

1.5.1 General Objective

To investigate the impact of modes of communication on the academic performance of learners with hearing impairments.

1.5.2 Specific objectives

1. To find out the categories and causes of hearing impairments.
2. To establish the modes of communication used by learners with hearing impairments and their teachers.
3. To assess the performance level of learners with hearing impairments in comparison with their hearing peers.
4. To investigate the effect of the modes of communication on the academic performance of learners with hearing impairments.

academic achievements since it as a result of poor communication that they do not perform well in the examinations.

The teachers of the learners with hearing impairments will also benefit from the recommendations put forward by the researcher in that they might find better means to communicate with their learners. This will give them the confidence which they sometimes lack when interacting with their learners. In this way they will be better teachers and will be able to assist them even more.

The parents of children with hearing impairments will benefit from the findings of this study because there will be suggestions on the better means of communicating with their children. In this way, the parents will be able to guide, counsel and assist their children in various ways as the communication barriers will be minimized if not eradicated.

Other likely beneficences of this study include the government and especially the Ministry of Education and more so the Kenya Institute of Education (K.I.E). From the recommendations suggested by this study, the K.I.E will be able to formulate better policies and especially come up with better curriculum to cater for the needs of the learners with hearing impairments. This will enable such learners to benefit from the new curriculum to be formulated. Organization such as Non-governmental organizations (NGO's) which are involved in funding programs for the deaf will benefit from the recommendations of this study. Suggestions will be put forward on how they can improve their services that are directed in helping these children.

1.9 Review

In this chapter, the researcher tried to look at the reasons why the learners with hearing impairments do not perform at the same level with their hearing peers academically. He chose to base his study in Mbeere

District of Kenya and selected the only school for the deaf in the district. That is, St. Luke's special school for the deaf. He also tried to spell out who the beneficiaries of the study findings might be and how they might benefit. The next chapter reviews the related literature to the variables of the study.

3. Modes of communication used by the hearing impaired.
4. Performance level of the hearing impaired learners.
5. Effects of the modes of communication on the academic performance of the hearing impaired learners.

2.1 Classification of Hearing Impairments

Hearing impairments can be classified according to three main criteria. This is according to:

- 1.The part of the ear affected.
- 2.The degree of the hearing loss.
- 3.The age of onset.

2.1.1 Classification according to the part of the ear affected

The ear is divided into three parts: the outer, the middle and the inner ear. According to Mwaura and Wanyera in Njiru (2003:9), any damage or infection to any part of the ear causes hearing impairments. There are three types of hearing impairments according to the part of the ear affected. These are:

- 1.Conductive hearing loss
- 2.Sensori – neural hearing loss
- 3.Mixed hearing loss



2.1.1.1 Conductive hearing loss

Conductive hearing loss occurs when the damage or infection is either in the outer or middle parts of the ear. According to Mwaura et al (2002), this results in mild to moderate hearing loss. Those with this type of hearing loss have residual hearing left and can hear and understand spoken language with the help of suitable hearing aids.

2.1.1.2 Sensori – neural hearing loss

Mwaura et al (2002), says that this impairment occurs when the damage is in the inner ear. This results in severe to profound hearing loss with little residual hearing left. Children with this type of hearing loss usually do not acquire and use spoken language. They can however use hearing aids to help them become aware of environmental sounds.

2.1.1.3 Mixed hearing loss

This refers to a combination of conductive and sensori – neural hearing losses. This then means that both the outer and middle ear and inner ear are affected at the same time. (Mwaura et al, 2002).

2.1.2 Classification According to the Degree of Hearing Loss

Mwaura et al (2002), groups hearing impairments into four main categories depending on how mild or severe the hearing loss is. These categories are:

1. Mild hearing loss.
2. Moderate hearing loss.
3. Severe hearing loss.
4. Profound hearing loss.

2.1.2.1 Children with mild hearing loss

According to Mwaura et al in Njiru (2003), a child with mild hearing loss can follow normal conversation if there is no noise in the room but will need to sit near and face the speaker. Weak voices are also difficult to understand for those with mild hearing loss.

2.1.2.2 Children with moderate hearing loss

A child with moderate hearing loss understands a conversation only if it is very loud and clear. Such a learner will only be able to follow the

conversation if the room is very quiet. This means that among other things, the learner should face the speaker so as to lip-read. As the learner only hears sounds that are very close, he/she may miss a considerable amount of speech going on around him/her (Mwaura et al 2002).

2.1.2.3 Children with Severe hearing loss

As stated by Mwaura et al (2002), a child with severe hearing loss may have difficulty hearing in all situations. He /she may be unable to follow normal conversation however quiet the room is. The learner is unable to develop language and speech in a natural way.

2.1.2.4 Children with Profound Hearing Loss

Profound hearing loss is the most extreme hearing loss. A child may not hear even very loud or any speech at all. According to Mwaura et al (2002), such a learner relies mainly on visual cues instead of hearing as the main means of communication. In such circumstances, total communication should be used.

2.1.3 Classification According to the Age of Onset

There are two types of hearing impairments according to the age of onset as stated by Mwaura et al (2002). These are:

- **Pre-lingual deafness**

This is the deafness present at birth or occurring before the child develops speech and language.

- **Post-lingual deafness**

This is the deafness which occurs after the child has developed speech and language mainly after the age of three years.

2.2 Categories of Hearing Impairments

It is important to note that those children with mild to moderate loss are classified as "hard of hearing" while those with severe to profound hearing loss are referred to as deaf".

2.2.1 Children who are hard of hearing

Mwaura et al (2002), describes these as the ones who despite the hearing loss have enough useful hearing left (residual hearing). He says that this hearing ability can enable them to hear speech and acquire spoken language normally. However, for them to hear speech well, the sound must be amplified (made louder). This can be done by:

1. Speaking to them a bit louder than normal.
2. Placing them near the front of the class or near to the speaker.
3. Ensuring that the surrounding is quiet.
4. Making sure that they look at the speaker's face or lips (for lip-reading)
5. Wearing suitable hearing aids.

These children who are hard of hearing usually suffer from conductive hearing impairments.

2.2.2 Children who are deaf

Children who are deaf are those whose hearing loss is so severe that they cannot hear and understand speech even if the sound is made louder for them through amplification. According to Mwaura et al (2003:13), a hearing aid may only assist them to be aware of some environmental sounds such as those made by moving vehicles. Children who are deaf usually suffer from either sensori – neural or mixed hearing impairments.

2.3 Causes of Hearing Impairments

Hearing impairments may occur at different times in life. This can be in three stages namely:

- Pre-natal stage (before birth)
- Peri-natal stage (during birth)
- Post –natal stage (after birth)

2.3.1 Pre- natal stage

As stated by Mwaura et al (2002), some children may have hearing impairments occurring before birth. Such a child is then said to have a congenital hearing impairment. Some of the factors that may contribute to the unborn baby's hearing impairments are:

1. heredity
2. poor nutrition – due to unbalanced diet and lack of vitamins during pregnancy.
3. venereal diseases such as syphilis and gonorrhea.
4. HIV/aids
5. infections of the mother during pregnancy such rubella (German measles) and those involving very high fever.
6. exposure to x-ray especially during the first three months of pregnancy.

7. mother –child blood incompatibility (rhesus factor)
8. congenital malformation of the ear and ear canal (atresia)
9. accidents affecting the expectant mother

2.3.2 Peri –natal stage

According to Mwaura et al (2002), the most common causes of hearing impairments at this stage are:

1. prolonged delivery /labour resulting to oxygen deficiency to the baby's brain and head injuries.
2. pre-mature birth
3. low –birth weight
4. lack of oxygen to the baby during birth
5. neo- natal jaundice
6. misuse of delivery instruments such as forceps (forceps delivery)
7. venereal diseases such as syphilis and gonorrhea
8. accidents affecting the baby during delivery.

2.3.3 Post –natal stage

Hearing impairments may occur any time after birth. According to Mwaura et al (2002), some of the causes of hearing impairments at this stage are due to:

1. diseases such as meningitis, malaria, measles, mumps, otitis media and other severe recurring ear infections.
2. misuse of drugs (medicine)
3. accidents causing injuries to the head and brain damage.
4. brain tumor
5. trauma
6. long and frequent exposure to loud noise.
7. exposure to poisonous agents and chemicals such as pesticides, food and medicine poisoning.

8. excessive sudden noise.
9. blockage of external auditory canal.
10. presbycusis (old age)

2.4 Modes of Communication Used By the Learners With Hearing Impairments

All children have the right to a language and developed communication system which enables them to communicate effectively in a variety of settings and for a variety of purposes, including accessing education. Once a child has been diagnosed with a significant hearing loss his/her parents may be confronted with making a decision about the mode of communication to use. In order to participate fully in making this decision, parents should have clear and unbiased information about the possible options.

The choice on the mode of communication to use may depend on a number of factors:

1. the family situation and home language.
2. whether the child has additional special education needs.
3. degree of hearing loss.
4. accessibility to a peer group using the same mode of communication.
5. range of education placement available.
6. philosophical arguments and possible outcomes of the different approaches.

Broadly speaking, the modes of communication can be categorized into three main groups:

1. Auditory /oral
2. Manually coded English

3. Sign bilingualism.

2.4.1 Auditory / Oral Approach

The majority of the hearing impaired children will have sufficient hearing (hard of hearing), through the use of appropriate audiological aids, to develop understanding of spoken language and to acquire intelligible speech. It is expected that they will follow a similar process of language acquisition to that of hearing children.

This approach includes the following:

The natural aural approach; This fosters the development of spoken language. Meaningful interaction and conversation encourage the growth of auditory discrimination skills using everyday experience rather than through direct teaching.

Structured oral approaches; which are used to encourage one or more of the following:

1. speech acquisition
2. language development
3. optimum use of residual hearing
4. lip- reading (or speech reading)

This approach demands the planning of structured processes involving systematic teaching.

Lip – reading /speech reading; which is the understanding of the speech through the recognition of the facial patterns of different phonemes and groups of phonemes forming words in context. Good language levels will usually aid the ability to lip-read. Many hearing impaired people use both lip reading and their residual hearing to aid communication.

Auditory verbal therapy; which is a parent-centered approach that seeks to develop spoken language through a structured programme based on a highly enhanced auditory and language input. For instance, listening skills are organized on a hierarchy of auditory difficulty from detection to comprehension. In such instances, an Auditory Verbal Therapist helps parents to carry out exercises with their children.

2.4.2 Manually Coded English (MCE) approach

The manually coded English approaches include the following:

Total Communication (TC); which is a philosophy and not a communication method/ approach. It makes use of the full spectrum of language modes which includes child devised gestures, finger spelling, reading, writing and residual hearing.

Finger Spelling; which is the manual representation of the letters of the alphabet by 26 different hand positions. It is integral part of sign language and sign supporting system.

Sign Supported English (SSE); which is a manual support system incorporating signs taken from the British Sign Language (BSL) together with finger spelling. It is used in English word order to supplement spoken words but also attempt to present every element of the spoken utterance. Its aim is to clarify the spoken message and lessen ambiguity.

Signed English (SE); which are signs taken from BSL together with generated signs and markers which are used with finger spelling to give an exact manual representation of spoken English. It is used primarily as a tool for the teaching of reading and writing.

Cued Speech; a one –handed supplement to spoken language devised to clarify the phonemes of language that are ambiguous or invisible in lip-reading.

Paget – Gorman Signed Speech (PGSS): a simultaneous grammatical representation of spoken English for use as an aid to the teaching of language. The signs have been developed within a logical system but do not correspond to BSL national signs.

2.4.3 Sign Bilingualism Approach

This is an approach to the education of deaf children in which the language of the Deaf community (BSL) and the language of the hearing community (English) are used. Generally the child's first language is BSL and the spoken language of the family is learned as a second language. This may be through speech or a combination of speech and signs, written form, or through all of them. It should be noted that in some cases BSL will be the language of the family.

This approach includes:

Sign multilingualism; a more appropriate term where children come from homes where a different language other than English is used.

British Sign Language (BSL); is recognized as a language in its own right and distinct from English. It is the language indigenous to the Deaf community and has been defined as a visual gesture language in terms of both perception and production. Since it is perceived visually within space, signs can be combined simultaneously to convey meaning. Body and head posture, facial expression, lip movement and body language play a distinctive role in contributing to meaning. Finger spelling also has

a supplementary role. (E.g. names of places or people are usually finger spelt). (Adapted from the internet)

2.5 Performance Level of Learners With Hearing Impairments

The children with hearing impairment lag behind hearing children academically. However, the extent to which they lag behind based on severity hearing loss does not yield a clear – cut correlation. The role which the school environment plays in academic achievement has also been taken into account. For instance, Kinaga in Ndurumo (1993: 153), states that: "Educational occupation and any other difference occur as a result of society's inability to adequately help deaf people develop and use their abilities rather than the results of inherent deficiencies in their abilities. The problems of the hearing impaired child can be created by the environment or those who are charged with his care, rather than the child".

The family climate has a significant role to play in the hearing impairments academic achievement. Meadow in Ndurumo (1993: 153), for instance, observed that 90% of children with hearing impairment are born of hearing parents. As a result, the home environment is predominantly oriented towards the restoration of hearing in order to make the deaf child worthy of integration into the hearing society. This is because parents find themselves incompetent in managing the deaf child. In such a family environment, together with that of the school where oral method, hearing aids, speech – reading and auditory training are emphasized deprives the deaf child of the opportunity to acquire language naturally through sign language. As a result their academic performance, where written language plays a significant role is affected.

According to Ndurumo (1993:153), hearing impaired children are often blamed for their inability to grasp information during class room teaching when speech reading is used as the method of teaching. This approach leads to self fulfilling prophecy on the part of teachers and their learners. For instance, teachers themselves expect to fail in imparting information to their learners. The learners, on the other hand expect to fail in grasping information. This leads to another cycle where teachers start to lower their expectation regarding the ability of the students. Students on the other hand start to see themselves as incapable of following academic material.

Education of the hearing impaired experience increased demand for fewer frills, higher achievement standards and tighter discipline. According to Moores in Njiru (2003:22), education of the hearing impaired will continue to attend to socio – cultural and communication factors as well as academic achievements but they must be aware of the dominant press for achievement in basic subjects matter: Mathematics, Science, English and Social Sciences. Since the academic achievement of hearing learners is on the upswing, teachers of the hearing impaired must help their students improve in academic achievements merely to maintain their position relative to that of hearing peers. To be judged successful academically students with hearing impairments must improve in school achievements at a faster rate than the hearing – a task that will challenge the field to its utmost.

A serious difficulty in the academic achievements of learners with hearing impairment is where teachers of these learners are faced with difficulties in organizing school programmes to suit their learners. (Moore in Njiru, 2003:22). This is because these learners cannot realistically be expected to attend school for longer periods of time than their hearing peers. A

longer day will put too much strain on them since they have to maintain visual attention for them to learn. They cannot close their eyes or even turn away and still be able to follow the progress of a lesson.

The learners' academic achievements are associated with their teachers. This was put forward by Lynas in Njiru (2003:23), who said that if learners perform poorly, it is seen as a failure of their teachers. Some learners with hearing impairment are generally low academic achievers. This is generally thought to be a problem of their teachers and therefore deaf student with low academic achievements are perceived as problematic by their teachers. Lynas continued to say that some teachers find the low academic attainments of their students with hearing impairments as a big problem. For instance, one teacher seemed to blame herself for the apparent lack of progress in a student who was hearing impaired in her class as the following rather poignant remark about her profoundly deaf student indicate:

"In all my eight years of teaching, I can honestly say that Mark is my only failure. I do not feel I have gotten anywhere with him. I do not feel he has learnt a Thing."

The low academic achievement of learners with hearing impairments not only cause anxiety to their teachers but also appear to threaten their self-conception as professionals entrusted with the task of imparting knowledge and developing students' ability to learn.

A big problem that leads to low academic achievements is the increase in the student – teacher ratio. This is where the number of learners is just too large as compared to that of teacher such that a single teacher is required to work with a big number of learners in a class. (Obamba 2001).

Jeanne (2003:69) says that students with speech and communication disorders such as the hearing impaired have abnormalities in speech or language comprehension that significantly interfere with classroom performance. To some extent, instructional strategies must be tailored to students' specific difficulty areas. Yet several strategies are applicable to many of these students providing sufficient scaffolding to maximize the likelihood of students' classroom success, clearly communicating expectations for students' classroom performance and enhancing students' self-confidence and motivation with regard to academic tasks.

2.6 Effects of Modes of Communication on the Academic Performance of the Hearing Impaired Learners.

Despite the efforts of educators and parents, the academic performance of deaf children frequently lag behind that of hearing peers. (Lang, 2003). According to Marschark (1993), there is a general agreement that the academic difficulties of the deaf are not the direct consequences of hearing loss but a more general one. Their education might be successful if both the challenges and strategies for overcoming them are viewed across the curriculum rather than in terms of particular content areas.

Children's hearing loss may not necessarily entail academic difficulty but many of the educational and other developmental challenges facing deaf children relate to their relatively impoverished early language environments which do follow from their hearing loss. Consider reading for example, the relatively poor literacy achievement of deaf children is often ascribed to early language delays with claims that deaf children of deaf parents read better than those of hearing parents, (Padden & Ramsey, 1998).

Perfetti and Sandak (2000), noted that reading optimally depends on spoken language. But there is also some evidence that deaf or hearing parents who provide their deaf children with both effective early access to language (where sign language may be more effective) and intensive exposure to print materials tend to have children with better literacy skills. Hence, earlier availability of language enhances language development which in turn supports academic growth during the school years. Yet even while deaf children of deaf parents often demonstrate higher academic achievement than those with hearing parents, they do not gain the level of hearing age mates, (Marscharks 1993:62).

Akamatsu (2000), observed that exposure to sign and spoken communication in mainstream programmes may be more beneficial than the exposure only to spoken language or sign language in separate schools. Alternatively, such settings may deny young deaf students access to fluent language models in either spoken or sign modes, creating a barrier to learning. If any one of these variables is individually insufficient to affect achievement, a combination of their effects might be responsible for differences observed in deaf and hearing students' academic success.

With regard to visual processing, for instance, deaf signers perform better than either hearing or deaf individuals who use spoken language in their ability to rapidly shift visual attention or scan visual stimuli visually detecting both motion and sign language in the periphery and face recognition. (Rotterback, 1999). According to Chambertain (1994), deaf and the hearing signers are faster in generating and manipulating mental images than are non – signing peers. The fact that such advantages are not found among deaf individuals who rely on spoken language indicates

that the results are more related to the effects of sign language use rather than hearing loss.

Lichtenstein (1998), says that in the domain of short – term or working memory, for example, deaf adults and children tend to recall less from lists of verbal items (text or signs) relative to hearing peers across a variety of paradigms and studies. This shows that this difference results from the form of mental representation used in memory coding (i.e. speech based versus sign-based codes). From studies examining the organization of recall for words, deaf students remembered less than hearing peers, and what they did recall generally consisted of fragments or disconnected words and phrases, whereas hearing students tended to remember semantic information more holistically. (Marschark, 1993).

There exists an academic difference between deaf and hearing students in metacognition. In order to plan the application of knowledge or develop hypothesis, students need to have some awareness of their own cognitive processes (Kruger & Dunning, 1999). They need to determine a goal, consider alternative means of achieving it including barriers and facilitators to success and perhaps play out various scenarios. This establishment of a mental problem solving space and reflection on how to bring knowledge to bear on a problem plays an important role in a variety of academic contents. In reading for example, we monitor our own comprehensive processes, hopefully recognizing when they break down. We notice when we come upon words that we do not know and use context to figure out. (Oakhill & Cain, 2000)

(Adapted from the internet).

2.7 Gap in knowledge

In the review of related literature concerning the modes of communication and academic performance of learners with hearing impairments the researcher did not come across any literature dealing with assessment of learners with hearing impairments. Before learners can be placed in either regular or special schools, they should be assessed properly to determine the degree of hearing loss so that they can be placed properly. At the same time depending on the degree of hearing loss, proper hearing aids can be prescribed to aid them in hearing.

2.8 Review

The researcher reviewed the related literature on the modes of communication and academic performance of learners with hearing impairments. In doing this, he looked at the following areas:

1. Classification and categories of hearing impairments.
2. Causes of hearing impairment.
3. Modes of communication used by learners with hearing impairments.
4. Performance level of learners with hearing impairments and
5. The effects of the modes of communication on the academic performances of learners with hearing impairments.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Overview

This chapter highlights the techniques or methods employed by the researcher in collecting relevant information for the study. The study was done to gather information from teachers and learners with hearing impairments concerning the modes of communication they use when interacting and whether or not these modes affect the academic performance of the learners. The information about how the research instruments were administered and the procedure used during data collection is highlighted.

3.1 Research Design

The researcher used both qualitative and quantitative type of research designs. He used both because in the qualitative design the views and feelings of the respondents are taken care of. For the quantitative design the researcher organized his findings in form of tables where the row data collected was analyzed. The same information was presented in graphs, in form of pie charts and bar graphs.

3.2 Research population

A target population is the one which the researcher ultimately wants to generalize the results. In this study, the population was comprised of all the teachers and some learners of St. Luke's school for the deaf. The learners are those in upper primary classes. The researcher targeted these respondents because they are the ones who interact always and are therefore aware of the modes of communication they use and whether or not these modes affect the academic performance of the learners with hearing impairments. The respondents used are comprised of all the 12

teachers in the school and the 20 learners in upper primary making a total of 32 respondents.

3.3 Sampling Procedure

There are various methods that a researcher can use to choose his sample population for the study. These methods include random, cluster, systematic, stratified and purposeful sampling. In this study, the researcher used purposeful sampling. This is because his target population was learners with hearing impairments and their teachers of St. Luke's school for the deaf. The number of teachers in the school is 12 and the researcher used all of them as his respondents. He also used the learners in upper primary classes (4 to 8). He decided to use those in upper primary because they are the ones who can be able to respond to the questions. They are 20 in number. This gives a total of 32 respondents which includes both learners and teachers.

3.4 Sample Population

The researcher carried out a study on the modes of communication used by the learners with hearing impairments. He wanted to find out whether or not those modes affect the academic performance of these learners. Because it was not possible for the researcher to gather raw data from all the learners with hearing impairments, he decided to use the only school for the deaf in Mbeere District of Kenya to act as a representative of all other schools with similar learners, hence the sample population.

3.5 Research Instruments

There are various research instruments or tools that can be used to collect raw data. Such instruments include questionnaires, interview guides, observation checklists and experiments. For his study, the

researcher used the questionnaires as the instrument to collect raw data from his respondents.

There are three forms of questionnaires that a researcher can use. These are the closed – ended form, open – ended form and pictorial form. The researcher used two forms of questionnaires. One for the teachers, and the other for the learners with hearing impairments. The questionnaire for the teachers was closed – ended and open – ended. This means that the teachers were required to tick the appropriate options (closed –ended) and also express their own opinions in their own words as they respond to the questions (open – ended). The questionnaire for the learners was closed –ended where they will be required to tick the appropriate option without giving their own views.

The researcher decided to use the questionnaire as his instrument to collect data. This was because he had limited time for the data collection. After coming up with the questionnaire, the researcher took them to his respondents. After introducing himself to the head teacher, he gave out the questionnaires which were issued out to the respondents for them to fill by answering the questions. The time to be taken to answer the questions was relatively short since the questions were not many. There were four questions in both questionnaires.

3.6 Procedure of the Study

The researcher started the process of carrying out this study in the month of December the year 2007. This was when he wrote and gave out his proposed research title to the department of I.O.D.L of Kampala International University for approval. In the month of April the year 2008, the researcher was assigned a supervisor and with her help, he prepared

his questionnaires which were approved. He was then given a go ahead to carry on with his study.

The researcher took his questionnaires to the school where he wanted to base his study. That was St. Luke's School for the deaf in Mbeere District, Kenya. He introduced himself to the head teacher as a student of K.I.U. who was carrying out a study on modes of communication and academic performance of learners with hearing impairments. He then gave out the introductory letter and the questionnaires and requested the head teacher to distribute them to the teachers and learners for them to fill.

The researcher collected the questionnaires in the month of June the year 2008. He then took his research proposal to his supervisor later in the month. After this, he embarked on writing the research report which he expected to complete by the month of August the year 2008. He will then hand in his completed report to his supervisor later in the same month.

3.7 Data Analysis

This is the organization and analysis of the collected data into groups to get a meaningful relationship of ideas and opinions about the study from the various respondents. In this study, the researcher organized the data collected in tables. He had a table representing every question. After drawing the table and inserting the necessary figures, he then analyzed the information in percentages in every table. This was in trying to explain the information for the consumers of the study to understand all what was contained in the tables. All this data organization and analysis was done in chapter four in the research report.

3.8 Review

The researcher in this chapter explained the design he followed in carrying out his study. He gave the design used as both qualitative and quantitative. He also outlined the population that he used in his research as the learners with hearing impairments and their teachers. He targeted his respondents from St. Luke's School for the deaf where he used 20 learners and 12 teachers. The researcher used purposeful sampling in his study and used questionnaires as his instruments to collect raw data from his respondents. He described the procedure of the study from beginning to the end and how he was to analyze his data in chapter four. The next chapter presents the findings of the study.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.0 Overview

This chapter presents the findings of the study. The raw data that was gathered from the field is analyzed and presented in tables in form of percentages. The same information is further presented in graphs as can be seen below.

Every table and graph represents a question as they appear in the research questions. A brief summary is given after every table to explain the meaning of the information therein.

4.1 Background information

The researcher prepared and gave out 32 questionnaires for the purpose of data collection. Out of the 32 questionnaires, 37.5% were for the teachers. This represents 12 questionnaires. The other 62.5% were for the learners with hearing impairments, which represents 20 questionnaires. In total, all the questionnaires given out were returned to the researcher after filling them. This shows a 100% compliance where all the questions were answered.

Table 1: Teachers for hearing impaired learners

Category	Frequency	Percentage
Gender		
Male	5	41.67
Female	7	58.33
Total	12	100
Age bracket		
25-35 years	1	8.33
36-45 years	10	83.33
46-55 years	1	8.33
Total	12	100
Highest academic level		
Certificate	4	33.33
Diploma	5	41.67
Graduate	3	25
Total	12	100

Table 1 shows that 58.33% of the teachers teaching the hearing impaired learners are female. The other 41.67% of teachers are male.

As per the age bracket, majority of the teachers for hearing impaired learners are aged between 36-45 years. This represents 83.33%. The remaining percentage is shared equally between the age bracket of 25-35 and 46-55 years each having 8.33%.

Concerning the academic attainment, the majority of the teachers of learners with hearing impairments are diploma holders with 41.67%. This is followed by certificate holders with 33.33% and then the graduates with 25%.

Graph 1: Teachers for Hearing Impaired Learners

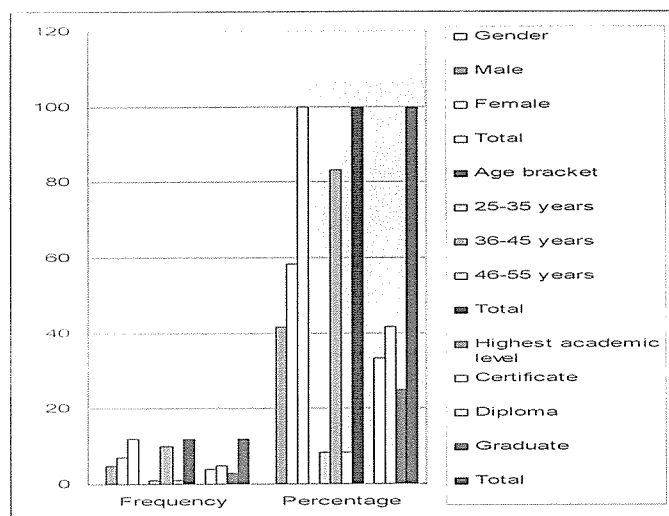


Table 2: Learners with Hearing Impairments

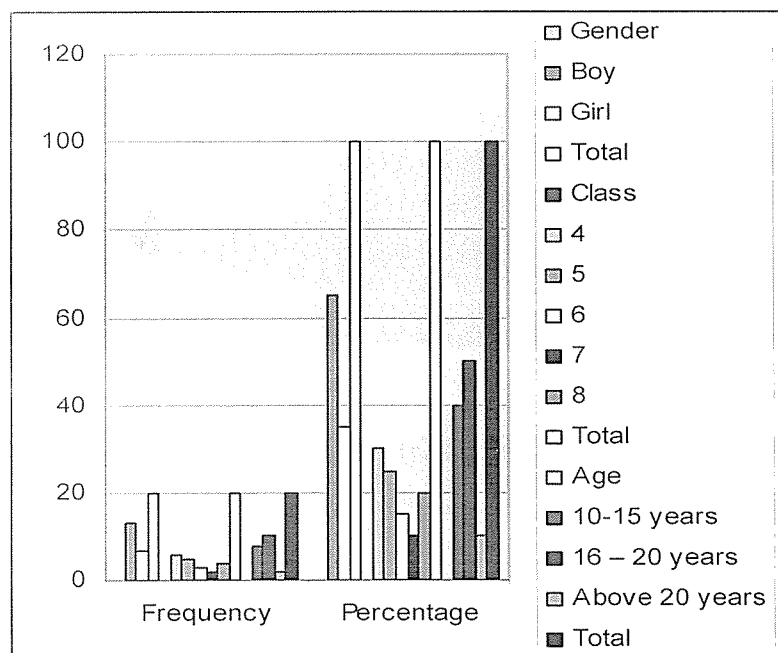
Category	Frequency	Percentage
Gender		
Boy	13	65
Girl	7	35
Total	20	100
Class		
4	6	30
5	5	25
6	3	15
7	2	10
8	4	20
Total	20	100
Age		
10-15 years	8	40
16 – 20 years	10	50
Above 20 years	2	10
Total	20	100

Table 2 shows that majority of the hearing impaired learners are boys. They represent 65% while the other 35% are girls.

Among the respondents who are in the upper primary classes, majority of the hearing impaired learners are in middle upper classes where 30% are in class 4 and 25% in class 5. In the other classes, 15% of the respondents are in class 6, 10% in class 7 while 20% are in class 8.

Considering the age of the respondents, the majority of the hearing impaired learners are between the ages of 16-20 years. This age bracket represents 50%. The ages between 10-15 years represents 40% while those above the age of 20 years represent 10% only.

Graph 2: Learners with hearing impairments.



4.2 QUESTIONNAIRE FINDINGS

4.2.1 Research question 1

What are the categories and causes of hearing impairments?

Table 3: Categories of hearing impairments

Category	Frequency	Percentage
Hard of hearing	9	28.12
Deaf	23	71.88
Total	32	100

Table 3 shows that majority of the learners with hearing impairments are deaf. They represent 71.88% as compared to the hard of hearing who only 28.12%.

Graph 3: Categories of Hearing Impairments

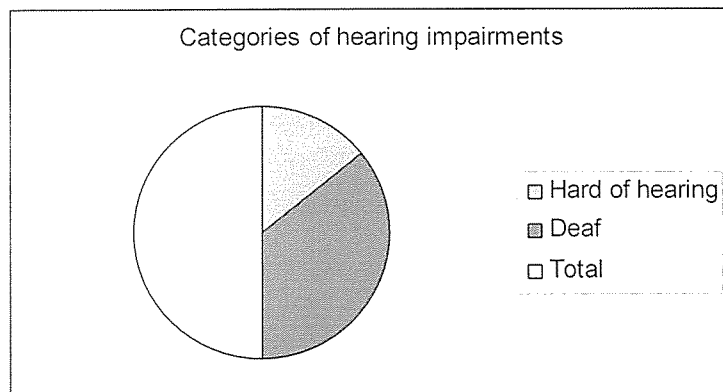
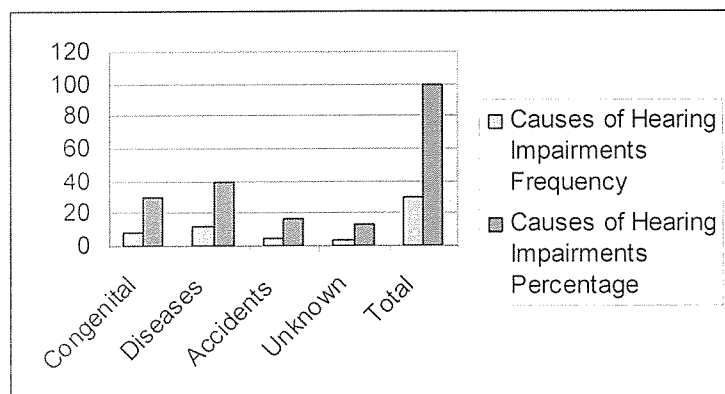


Table 4: Causes of Hearing Impairments

Category	Frequency	Percentage
Congenital	9	30
Diseases	12	40
Accidents	5	16.67
Unknown	4	13.33
Total	30	100

Table 4 indicates that most of the hearing impairments are caused by diseases since from the table; this is represented by 40%. The second major cause of hearing impairments is congenital which is represented by 30% (the child is born with the deafness). Other causes of hearing impairments are accidents which is 16.67% and other unknown causes which are represented by 13.33%.

Graph 4: Causes of hearing impairments



4.2.2 Research question 2

What are the modes of communication used by the learners with hearing impairments and their teachers?

Table 5: Modes of communication used by the hearing impaired learners and their teachers.

Category	Frequency	Percentage
Sign language	27	35.53
Speech /talking	4	5.26
Lip-reading /mouthing	9	11.84
Writing/drawing /reading	10	13.16
Finger spelling	5	6.58
Gestures /facial expressions/ Body language	16	21.05
Dramatization/ mimicry/ pantomime	3	3.95
Total communication	2	2.63
Total	76	100

From table 5 the majority of the hearing impaired learners and their teachers use sign language as their mode of communication. This is represented by 35.53%. Those who use gestures, facial expressions and

body language are 21.05%. Those who write, draw and read as they interact through communication are 13.16%. Those who lip-read as people mouth what they are saying are represented by 11.84% while those who try to use their speech to talk are 5.26%. There are only a few people who use dramatization, mimicry and pantomime as their mode of communication. They are represented by 3.95%. Those who use total communication philosophy as their mode of communication are the minority who are only 2.63% of the total.

Graph 5: Modes of communication used by the hearing impaired learners and their teachers.

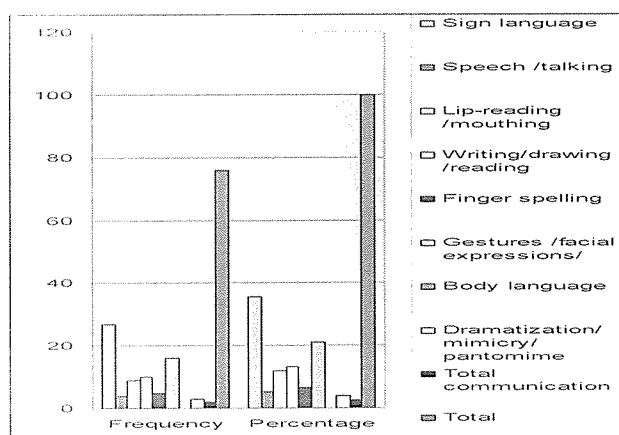
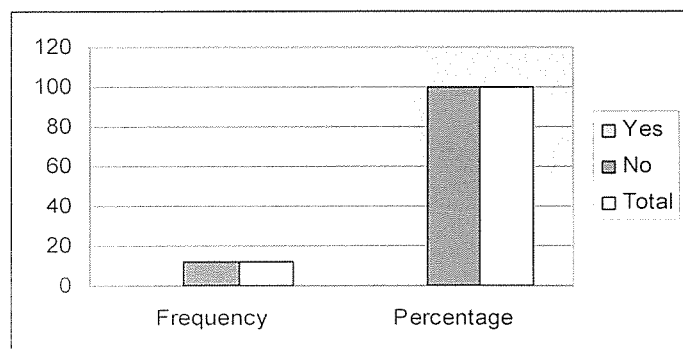


Table 6: Use of hearing aids

Category	Frequency	Percentage
Yes	Nil	0
No	12	100
Total	12	100

Table 6 shows that none of the hearing impaired learners have and use hearing aids. 100% of the respondents indicated that the hearing impaired learners do not use hearing aids.

Graph 6: Use of hearing aids



4.2.3 Research question 3

How is the academic performance of learners with hearing impairments in comparison with their hearing peers?

Table 7: General academic performance of hearing impaired learners

Category	Frequency	Percentage
Below average/below 100 marks	11	34.37
Average (101-300marks)	21	65.63
Above average/above 300 marks	Nil	0
Total	32	100

Table 7 indicates that 65.63% of the learners with hearing impairments are average students in their academic performance. This represents those who score between 101-300 marks out of a possible 500 total marks. 34.37% of them are those who perform below average. That is, those who score less than 100 marks out of a possible 500 total marks. There are no students who are above average. None of them who manage to score above 300 marks out of a possible 500 total marks.

Graph 7: General academic performance of hearing impaired learners.

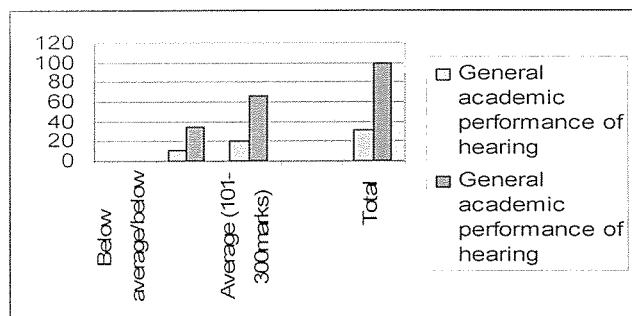


Table 8: Is the academic performance level of hearing impaired learners the same as the hearing learners?

Category	Frequency	Percentage
Yes	2	16.67
No	10	83.33
Total	12	100

From table 8, majority of the hearing impaired learners do not perform at the same level with their hearing peers academically. This is shown by a 83.33% representation of the responses. Only 16.67% of the respondents who indicated that the hearing impaired learners perform at the same level with their hearing peers.

Graph 8: Comparison of hearing impaired and hearing learners' performance level.

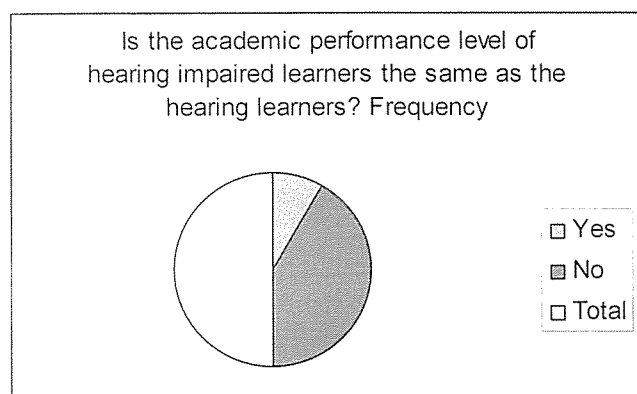
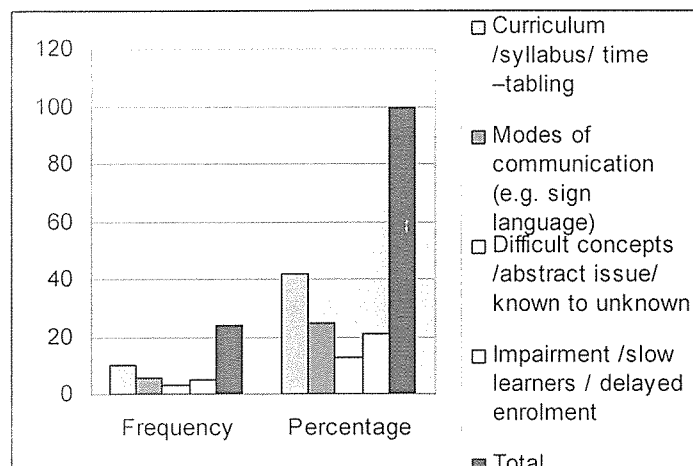


Table 9: Reasons for the poor academic performance by the hearing impaired learners

Category	Frequency	Percentage
Curriculum /syllabus/ time –tabling	10	41.67
Modes of communication (e.g. sign language)	6	25
Difficult concepts /abstract issue/ known to unknown	3	12.5
Impairment /slow learners / delayed enrolment	5	20.83
Total	24	100

Table 9 shows that the major reason for the poor academic performance of hearing impaired learners has to do with the curriculum, syllabus and time –tabling. This is represented by 41.67% of the total responses. 25% of the responses show that the poor academic performance of the hearing impaired is as a result of the modes of communication used. 20.83% of the respondents attributed the poor academic performance of the hearing impaired learners to their impairment, being slow learners and due to delayed enrolment into schools. The minority of the responses that is 12.5% said that the poor academic performance of hearing impaired learners is as a result of difficult concepts, abstract issues and learning from known to unknown which the hearing impaired learners lack due to lack of exposure.

Graph 9: Reasons for the poor academic performance by the hearing impaired learners.



4.2.4 Research question 4

What are the effects of the modes of communication on the academic performance of learners with hearing impairments?

Table 10: Do the modes of communication used by learners with hearing impairments affect their academic performance?

Category	Frequency	Percentage
Yes	12	100
No	Nil	0
Total	12	100

From table 10, it shows that the modes of communication used by the hearing impaired learners affect their academic performance. Out of the 12 respondents, 100% said that the modes of communication used do affect the academic performance of the learners with hearing impairments.

Graph 10: Modes of communication used and whether or not they affect academic performance of learners with hearing impairments

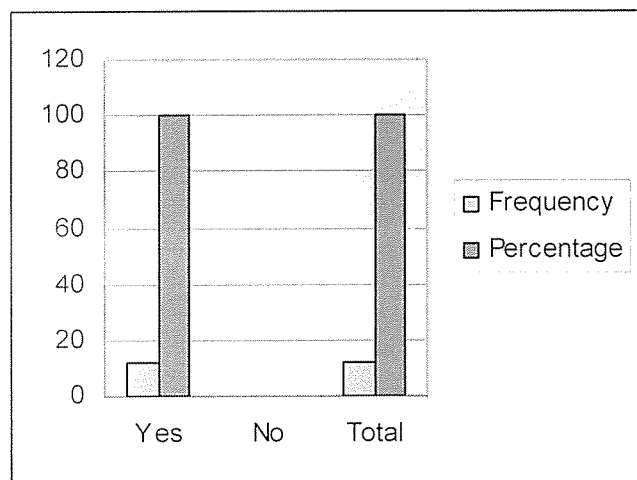


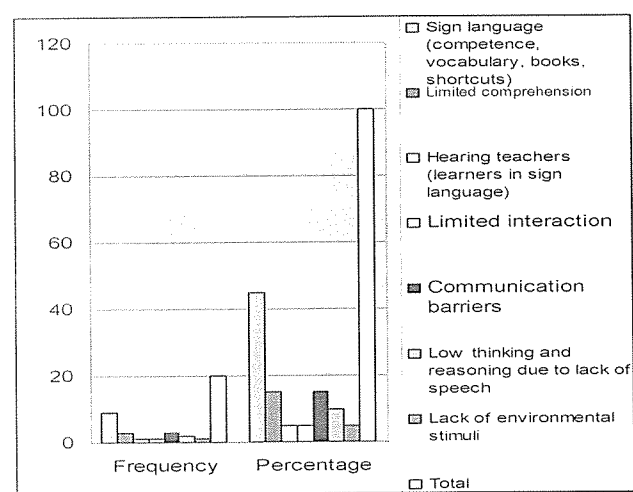
Table 11: Why the modes of communication used by hearing impaired learners affect their academic performance.

Category	Frequency	Percentage
Sign language (competence, vocabulary, books, shortcuts)	9	45
Limited comprehension	3	15
Hearing teachers (learners in sign language)	1	5
Limited interaction	1	5
Communication barriers	3	15
Low thinking and reasoning due to lack of speech	2	10
Lack of environmental stimuli	1	5
Total	20	100

From table 11, 45% of the respondents said that the academic performance of hearing impaired learners is affected by lack of competence, limited vocabulary, lack of books and short cut in sign language. 15% of the respondents said that the academic performance of hearing impaired learners is affected by communication barrier that exists between the hearing impaired and the hearing and between the hearings

impaired themselves. The same percentage is so for those who said it is because of limited comprehension of concepts by the hearing impaired learners. 10% of the respondents said that the hearing impaired learners academic performance is affected by their low thinking and reasoning capacity due to lack of speech. 5% of the respondents said that the modes of communication used by the hearing impaired learners do affect their academic performance in that most of their teachers are hearing and are therefore learners of sign language. The same percentage said that they have limited interaction with other people while others said that they lack environmental stimuli.

Graph 11: Modes of communication used by the hearing impaired and how they affect their academic performance.



4.3 Review

The researcher outlined the findings of the study. He gave a brief description of the background information about his respondents in terms of gender, age and their academic levels. The researcher also gave the findings of the study inform of tables and graphs where he followed the research questions as they are outlined. He gave out the categories and causes of hearing impairments, the modes of communication used by the hearing impaired learners, among others.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Overview

This chapter discusses the findings of the study in details. The discussion is going to compare the researcher's findings in chapter four with what other authors have said on the same in chapter two. The researcher is going to draw conclusions based on the findings of the study in chapter four. After this he is going to make recommendations of what should be done in order to improve the academic performance of the hearing impaired learners. He is also going to give suggestion on what topics other researchers might investigate on.

5.1 Discussion

The researcher gave a general overview of the procedures that he followed in trying to investigate the modes of communication used and whether or not they affect the academic performance of learners with hearing impairments. He went ahead to find out what other scholars have said in relation to the statement of the problem under study. Hence, review of the related literature.

To obtain first hand information from the field about the problem under investigation, the researcher used questionnaires as his instruments to collect raw data from the hearing impaired learners and their teachers. He then analyzed his findings using simple tables in form of percentages and the same information was presented in graphs.

The findings of the study are discussed under four headings:

1. Categories and causes of hearing impairments.

2. Modes of communication used by learners with hearing impairments.
3. Level of academic performance of learners with hearing impairments.
4. Effects of the modes of communication on the academic performance of learners with hearing impairments.

5.1.1 Categories and causes of hearing impairments

From the data collected and analyzed in table 3, it shows that there are two categories of hearing impairments. These are hard of hearing and deaf. From the statistics given in that table, it is evident that majority of the hearing impaired learners fall in the category of deaf, rather than the hard of hearing. Mwaura et al (2002) seems to agree with these findings. He has categorized hearing impairments into the same two groups as hard of hearing and deaf.

From the researchers own experience, there are those hearing impaired learners who are able to hear some sounds and can also be able to use some speech though it may not be quite intelligible. These can benefit from speech and especially if the sound is loud enough and spoken in a quite environment. Others are those who cannot hear anything even if the sound is amplified. They cannot benefit from spoken language. The two groups of hearing impaired learners are the ones classified as hard of hearing and deaf respectively.

Table 4 shows that the respondents gave four causes of hearing impairments. They gave congenital (inherited), diseases, accidents and unknown causes as the causes of hearing impairments. However, they gave diseases as the major cause of hearing impairments followed by those who are born with the deafness (congenital). Mwaura et al (2002)

concerns with these findings even though he has categorized the causes of hearing impairments into three stages depending on the time the deafness occurred. He has given this as pre-natal, peri-natal and post-natal. Included in the three stages are diseases, inheritance (congenital) and accidents among others.

The researcher agrees with the findings of the study as well as with Mwaura. From his own experience with the deaf learners, he has discovered that most of their deafness was caused by diseases such as sexually transmitted infections during pregnancy (by mothers), syphilis, gonorrhea, meningitis, measles, malaria, mumps and otitis media after birth. Other causes are hereditary where the child is born with the deafness while others are accidents affecting the mother during pregnancy, those affecting the baby during birth such as head injuries and those affecting the baby after birth such as trauma that may cause brain damage.

5.1.2 Modes of communication used by the learners with hearing impairments

Table 5 indicates that there are various modes of communication that are used by the hearing impaired learners and their teachers in their communication. These modes of communication are sign language, gestures, facial expressions, body language, writing, drawing, reading, lip-reading, mouthing, finger-spelling, speech, dramatization, mimicry, pantomime and total communication. However, the findings show that the most commonly used modes of communication are sign language, gestures, facial expressions and body language.

These findings are similar to what other researchers have found out. According to the information from the website: www.Google.com the

modes of communication used by the hearing impaired are categorized into three main groups as auditory/oral, manually coded English and Sign bilingualism approaches.

The auditory / oral approach includes the use of residual hearing with the use of appropriate audio logical aids to develop understanding of spoken language and to acquire intelligible speech. These approaches are the natural aural approach, the structured oral approach, lip-reading/ speech reading and auditory verbal therapy.

The manually coded English approaches include the total communication, finger –spelling, sign supported English, signed English, cued speech and Paget-Gorman signed speech, which is a simultaneous grammatical representation of spoken English for use as an aid to the teaching of language.

The sign bilingualism approach uses the language of the Deaf community (BSL) and the language of the hearing community (English). This approach includes sign multilingualism and British sign language.

From the researcher's point of view, he concerns with the findings of the study and the information adapted from the internet. What his respondents have given and the information from the internet gives the modes of communication that the researcher had from his won findings. These are sign language, finger-spelling, gestures, facial expressions, body language, lip-reading and total communication just to mention a few.

From table 6, the respondents showed that the hearing impaired learners do not have and use any hearing aids. The findings showed that none of

the hearing impaired learners used hearing aids. This contradicts with the researcher's views that the hearing impaired learners have different types off hearing aids that they use to aid them in hearing and communication. The researcher had identified various hearing aids as group hearing aids and individual hearing aids.

5.1.3 Level of academic performance of learners with hearing impairments

Table 7 shows that the majority of the hearing impaired learners are average performers in academics. It shows that majority score between 100 and 300 marks out of a possible 500 total marks. A few respondents indicated that the hearing impaired learners perform below average academically. That is, they score below 100 marks out of a possible 500 total marks. The table goes ahead to indicate that none of the hearing impaired learners perform above average. That is, none of them score above 300 marks out of a possible 500 total marks.

The above information contradicts Lynas in Njiru (2003) who said that learners with hearing impairments are generally low academic achievers. Lynas continued to say that the low academic achievement of hearing impaired learners is seen as a big problem by their teachers who are always blamed for failure by their learners. She continued to give an example of a teacher who seemed to blame herself for the apparent lack of progress in a student who was hearing impaired in her class. The teacher even gave a remark to indicate how her profoundly deaf student's low academic performance affected her morale at work.

"In all my eight years of teaching. I can honestly say that Mark is my only failure. I do not feel I have gotten anywhere with him. I do not feel he has learnt a thing."

The researcher concerns with Lynas. From his experience with the hearing impaired learners, he has found the academic performance of hearing impaired learners wanting. For the six years he has worked with them, he has discovered that most of them are low academic achievers as majority of them score less than 200 marks out of a possible 500 total marks.

Table 8 which compare the level of academic performance between the hearing impaired and the hearing learners show that the two do not perform at the same level. It shows that majority of the hearing impaired learners perform at a lower level than the hearing learners.

This supported by Obomba (2001) who said that one of the biggest problems that leads to low academic achievements by learners with hearing impairments is the increase in the student –teacher ratio. He said that the number of learners is too large as compared to that of teachers such that a single teacher is required to work with a big number of learners. This makes it difficult for the teacher to reach all the learners effectively leading to their low academic achievements.

This is consistent with the researcher's point of view. From his own experience, he has found out that the hearing impaired learners perform at a lower level academically as compared to the hearing learners. Majority of the hearing learners score at 300 marks on average out of a possible 500 total marks. This is contrary to the hearing impaired learners who score at 150 marks an average out of a possible 500 total marks. This shows clearly the disparity that exists between the two groups of learners in terms of academic attainments.

Table 9 which gives the reasons for the poor academic performance by the hearing impaired learners shows that the main reasons why these learners do not perform well is because of the curriculum, the syllabus and the time-tabling. The three do not favour the education of the hearing impaired as they are designed for the hearing learners. Since the hearing impaired learners use the same curriculum, syllabus and time-table as the hearing learners, they are definitely disadvantaged as they have special needs which makes it necessary for the adaptation of the three for these learners to benefit.

Another major reason is the modes of communication used by the hearing impaired learners. They mainly use sign language which has various short comings when compared to spoken language. It is not easy to pass all the necessary information using sign language because some words do not have sign vocabularies to match with. This definitely limits the understanding by the hearing impaired learners leading to poor academic performance.

Meadow in Ndurumo (1993:153) confirms the above when he said that about 90% of hearing impaired children are born to hearing parents. These parents try to make the deaf child hear in order to make him worthy of integration into the hearing society. He further continued to say that this deprives the deaf child of the opportunity to acquire language naturally through sign language. As a result their academic performance, where written language plays a significant role is affected leading to their dismal performance in academics.

Having taught the hearing impaired learners for the last six years, the researcher concurs with the findings of the study and also that of Meadow. He has discovered that due to barriers in communication there

is limited understanding between the hearing impaired learners and their teachers. This is more so where the teachers are hearing since they are also learners of sign language. The researcher has also realized that the curriculum, the syllabus and the time-table used with the hearing impaired learners are the same as those used with the hearing. This puts the hearing impaired learners at a great disadvantage since they cannot grasp concepts at the same rate as the hearing learners because of their special needs. This then makes these learners to perform poorly academically when compared with their hearing peers.

5.1.4. Effects of the modes of communication on the academic performance of learners with hearing impairments.

Table 10 shows that the modes of communication used by the hearing impaired learners do affect their academic performance. All the respondents said that these modes of communication which includes sign language, finger spelling, gestures, lip-reading just to mention a few are not quite effective in passing information. This leads to breakdown in communication hence failure in understanding and therefore poor academic performance.

Marscharks (1993:62) agrees with the findings of the study when he said that earlier availability of spoken languages enhances language development which in turn supports academic growth during the school years. This was further supported by Perfetti and Sandark (2000) who noted that reading optimally depends on spoken language. Since the learners with hearing impairments do not have spoken language which enhance language development which in turn support academic growth, it goes without saying that the academic performance of theses learners has to suffer due to the modes of communication they use.

Akamatsu (2000) concurs with the above when he observed that exposure to sign and spoken communication in mainstream programmes may be more beneficial than the exposure only to spoken or sign language in separate (special) schools. This is so because such settings may deny the young deaf students access to fluent language models in either spoken or signed modes creating a barrier to hearing. This in turn becomes responsible for the differences observed in deaf and hearing students' academic success where the hearing perform better than the deaf.

The researcher has similar sentiments to those of the findings of the study as well as those from the above writers. Having taught the hearing impaired learners for the last six years, he has discovered that the modes of communication used by the hearing impaired learners affect their academic performance in several ways. These learners lack exposure to most of the vocabularies used by the hearing learners and therefore miss a lot of important issues that could help them in their academic attainments.

Table .II gives the reasons why the modes of communication used by the hearing impaired learners affect their academic performance shows that the major reason why these learners do not perform well is due to lack of competence, limited vocabulary, lack of books and short-cuts in sign language. This is so because sign language is not like the spoken language. There are various limitations in sign language which creates some barriers in communication leading to misunderstandings. Hence poor academic performance.

Other reasons given in this table are communication barriers and limited comprehension which are brought about by the fact that the hearing

impaired learners have several limitations due to their special needs in education brought about by their lack of spoken language. Some respondents thought that the hearing impaired learners have a low thinking and reasoning capacity due to lack of speech. This is so because people learn through imitation. Since the hearing impaired learners are not able to imitate so many things due to their handicapping condition, then their academic performance is affected adversely. Hearing teachers who are also learners of sign language, limited interaction and lack of environmental stimuli are some of the reasons why the modes of communication affect the academic performance of learners with hearing impairments.

Rotterback (1999) contradicts with the findings of the study when he says that deaf signers perform better than either hearing or deaf individuals who use spoken language in their ability to rapidly shift their visual attention or scan visual stimuli visually detecting both motion and sign language in the periphery and face recognition. Chambertain (1994) is consistent with this when he said that deaf and hearing signers are faster in generating and manipulating mental images than are non-signing peers. He continued to say that the fact that such advantages are not found among deaf individuals who rely on spoken language indicates that the results are more related to the effects of sign language use rather than hearing loss.

The researcher's view on the reasons why the modes of communication used by the hearing impaired learners affect their academic performance is that most of these modes used by those learners are not as effective as those used by their hearing peers. Since these hearing impaired learners do not hear and cannot use speech in their communication, it goes without saying that a lot of things do happen without their knowledge.

This is a great hindrance to their understanding and hence poor academic performance.

5.2 Conclusions

From the data and findings of the study regarding the modes of communication and academic performance of learners with hearing impairments, it is evident that:

- There are various modes of communication used by the learners with hearing impairments and their teachers as they interact during the process of teaching and learning. These are sign language, gesture/facial expressions/ body language, writing/ drawing/reading, lip-reading/mouthing, finger spelling, speech/talking, dramatization/ mimicry/ pantomime and total communication.
- Majority of the hearing impaired learners are average academic performers while a few of them perform below average. It is also evident that none of them perform above average. There is also some evidence that majority of these learners performance level is lower than that of hearing learners.
- Among other reasons, the hearing impaired learners perform poorly because of the curriculum, syllabus and time tabling which do not favour them since the three are designed for the hearing learners. Other reasons are the modes of communication they use (e.g. sign language), their impairment, which makes them slow learners and may also lead to delayed enrolment in schools.
- Among other reasons, the modes of communication used by the hearing impaired learners affect their academic performance because there is lack of competence in sign language by both the learners and their teachers, limited vocabulary in sign language, lack of books of sign language and the short-cuts that are used in

sign language. This is so because sign language is the main mode of communication used by these learners.

- There are various causes of hearing impairments but the most common ones are diseases, congenital (inherited) and accidents.
- There are two categories of hearing impairments which include the deaf and the hard of hearing.
- Majority of the learners with hearing impairments do not have/use the hearing aids.

If all the short comings found in the study concerning the modes of communication used by the hearing impaired learners are overcome, then their academic performance can be improved tremendously.

5.3 Recommendations

From the findings of the study, the researcher recommends the following;

1. The government through the Kenya Institute of Education should adopt the regular curriculum, syllabus and the timetable to suit the learners with hearing impairment.
2. Teachers graduating from colleges should be proficient in the use of different sign language systems such as bilingualism, signed English, natural sign language among others. This will enable them to be competent in assisting their hearing impaired learners to improve in their academic achievements.
3. Appropriate educational resources should be provided to the hearing impaired learners especially those in elementary classes. This is more likely to make them independent learners in their later years. This also helps them to become self-reliant later in life when they are out of school.
4. The Ministry of Education through the Kenya Institute of Education and the Teachers Service Commission should train and post sign

language interpreters to assist hearing impaired learners and their teachers in schools.

5. The hearing impaired learners should be provided with appropriate hearing aids to assist them in maximizing their residual hearing (hard of hearing).
6. The government through the K.I.E, the N.G.O's and other stakeholders in the education of the hearing impaired learners should organize regular workshops and seminars for teachers, parents and other caretakers to sensitize them on emerging issues in the education and care of these children.
7. There should be proper assessment of learners with hearing impairments to determine the correct placement in either the mainstream or special schools.
8. The hearing impaired learners should be placed in an inclusive setting so that they can be exposed to both signed and spoken communication for maximum utilization of their residual hearing especially the hard of hearing.
9. The hearing impaired learners should sit for the national examinations which are offered at the end of each educational level (e.g. K.C.P.E)
10. The Kenya National Examinations Council should stop ranking of candidates after the National examination results such as K.C.P.E to avoid discouraging learners with hearing impairments who cannot match their hearing peers in academic achievements.

An educational finding, which has not been systematically studied by the researcher or anyone else that he knows, is the methods of assessing the learners with hearing impairment for proper placement in appropriate schools.

5.4 Review

The researcher gave a summary of what he did in the previous four chapters before discussing the findings of the study. In the discussion, the findings of the study were discussed under four headings as:

1. Categories and causes of hearing impairment.
2. Modes of communication used by learners with hearing impairments.
3. Level of academic performance of learners with hearing impairments.
4. Effects of the modes of communication on the academic performance of learners with hearing impairments.

The researcher went ahead to give his recommendations and suggestions on what should be done by all those involved in the education of the hearing impaired learners in order for these learners to benefit from education.

BIBLIOGRAPHY

- Jean, G (2002). *Special Educational Needs in the Primary Schools: A Practical Guide*, (3rd Ed). Open University Press Buckingham. Philadelphia.
- Jeane, E. (2003). *Educational Psychology: Developing Learners* (4th Ed). Marrill Prentice Hall, Upper Saddle River New Jersey Columbus, Ohio.
- Kruger, J. & Dunning, D. (1999). *Unskilled and Unaware of it. How Difficulties In Recognizing One's Own Incompetence Lead to Infected Self – Assessment*. Journal of Personality and Social Psychology.
- Lang, H.G, (2003). *Perspectives on the History of Deaf Education – Oxford Hand Book of Deaf Studies, Language and Education*.
- Lichtenstein, E. (1998). *The Relationships between Reading Processes and English Skills of Deaf College Students*. Journal of Deaf Studies and Deaf Education.
- Luetke – Stalman, B. & Luckner, J. (1991). *Effectively Educating Students with Hearing Impairments*. New York: Longman.
- Marchark, H. (1993). *Psychological Development of Deaf Children*. New York: Oxford University Press.
- Mwaura, S & Wanyera, S (2002). *Introduction to Children with Special Needs in Education* (Module 4) KISE/UNISE- D.L.
- Ndurumo, M.M. (1993). *Exceptional Children: Development Consequences and Intervention*. Nairobi: Longhorn Kenya.
- Njiru, B.C. (2003) *Challenges Facing Teachers of Learners with Hearing Impairments* (SSP) KISE.
- Obomba, O. (1996). *Experience in Special Education*. UNISE BULLETIN;.

APPENDIX A: RESTIONNAIRE FOR LEARNERS

Dear pupil,

I am asking you simple questions. Try and answer the following by ticking () the correct answer.

Do not write your name in this paper please.

Answer the following questions

- Are you a boy _____ or a girl _____?
- Your class 4_____ 5_____ 6_____ 7_____ 8_____
- Your age _____ years

1. Do you hear very little or nothing at all?

Very little _____ Nothing at all _____

2. How do you tell something to your friends and teachers?

Sign language _____ Talking _____

3. How many marks do you get when you do a test?

Below 100 _____ 101- 200 _____
201-300 _____ Above 300 _____

4. Which of the following ways of communication do you understand best when used by your teachers and friends?

Sign language _____ Talking _____
Writing _____ Signing and talking _____

APPENDIX B: QUESTIONNAIRE FOR TEACHERS

My dear respondents,

I am Mr. Njiru B. Charles, a student of Kampala International University. I am pursuing a Bachelor of Education Degree in Special Needs Education. I am carrying out a research based on **Modes of communication and academic performance of learners with hearing impairments.**

I humbly request you to support me by answering all the questions in the spaces provided.

Your responses will be treated with confidentiality.

Thank you.

Instructions: Tick where appropriate.

GENDER: Male _____ Female _____

AGE BRACKET: 25 – 35 _____

36 – 45 _____

46 – 55 _____

HIGHEST ACADEMIC LEVEL:

Certificate _____ Diploma _____ Graduate _____

1 (a). Which category of learners with hearing impairments is common in your school?

Hard of hearing _____ Deaf _____

(b). What do you think are the causes of the hearing impairments?

Congenital / Inherited _____ Diseases _____

Accidents _____ Unknown _____

2 (a). What modes of communication do you use when interacting with your learners?

List at least five: -

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....

(b) Do your learners have and use hearing aids?

Yes _____ No _____

(c) If yes, list the types they have:

3.(a) What is the general academic performance of learners with hearing impairments in your school?

Below average _____ Average _____ Above average _____

(b) Do your learners perform at the same level as their hearing counterparts Academically?

Yes _____ No _____

(c) If no, what do you think are the reasons?

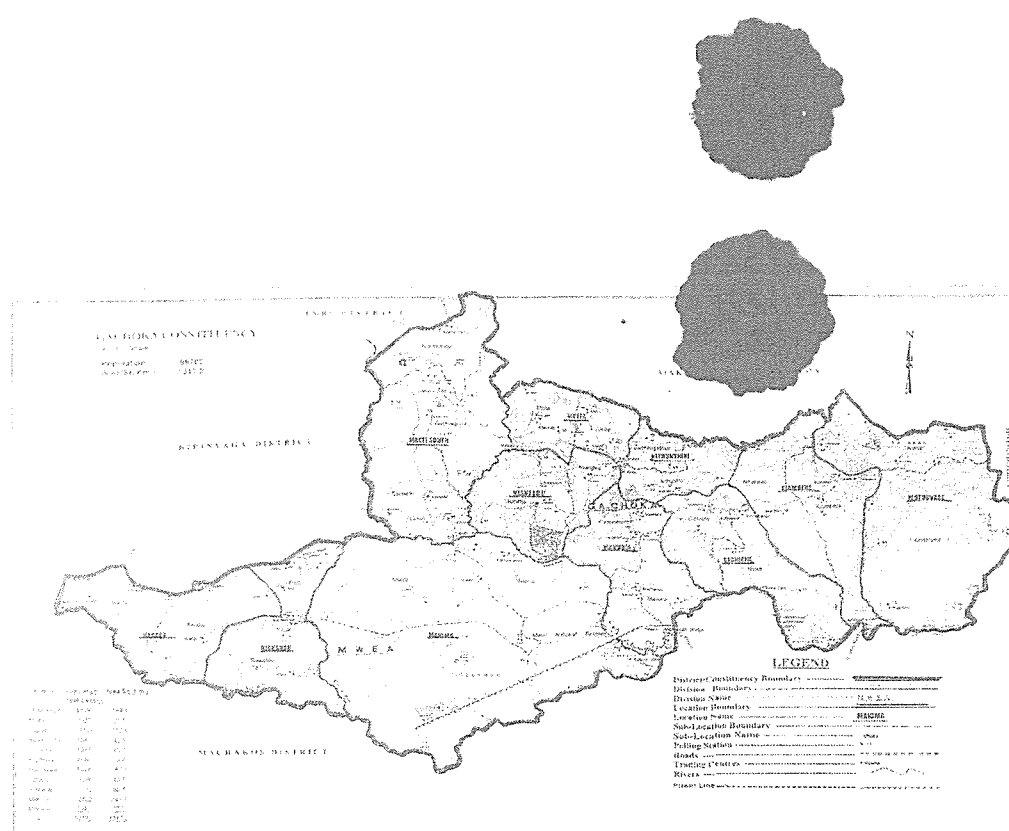
4 (a) Do you think the modes of communication used by the learners with hearing impairments affect their academic performance in any way?

Yes _____ No _____

(b) Give reasons for your answer above

MAP OF THE RESEARCH ENVIRONMENT

GACHOKA DIVISION



INTRODUCTORY LETTER



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Office of the Director

24th April 2008

TO WHOM IT MAY CONCERN:

Dear Sir/Madam,

RE: INTRODUCTION LETTER FOR ~~MS/MRS/MR.~~ NJIRU B.C.

REG. # PED/134.55/61/DF

The above named is our student in the Institute of Open and Distance Learning (IODL), pursuing a ~~Diploma~~/Bachelors degree in Education.

He/she wishes to carry out a research in your Organization on:

MODES OF COMMUNICATION AND ACADEMIC
PERFORMANCE OF LEARNERS WITH HEARING
IMPAIRMENTS.

The research is a requirement for the Award of a ~~Diploma~~/Bachelors degree in Education.

Any assistance accorded to him/her regarding research will be highly appreciated.

Yours Faithfully,

MUHWEZI JOSEPH
HEAD, IN-SERVICE

