

**EFFECTS OF CLASSROOM COMMUNICATION ON ACADEMIC  
PERFORMANCE OF STUDENTS WITH HEARING IMPAIRMENT IN THE  
SELECTED SECONDARY SCHOOLS OF SHIRE HIGHLANDS EDUCATION  
DIVISION**

**MEd. (PSYCHOLOGY) THESIS**

**DONALD MPHATSO ELIYA**

**UNIVERSITY OF MALAWI**

**AUGUST, 2024**



**EFFECTS OF CLASSROOM COMMUNICATION ON ACADEMIC  
PERFORMANCE OF STUDENTS WITH HEARING IMPAIRMENT IN  
MAINSTREAM SECONDARY SCHOOLS OF SHIRE HIGHLANDS  
EDUCATION DIVISION**

**MEd. (PSYCHOLOGY) THESIS**

**By**

**DONALD MPHATSO ELIYA**

*Bachelor of Education (Special Needs) - Catholic University*

Submitted to the Department of Education Foundation Studies, school of  
education, in partial fulfillment of the requirements for the degree of Master of  
Education (Psychology)

**University of Malawi**

**August, 2024**

## **DECLARATION**

I, the undersigned, hereby declare that this thesis is my own original work which has not been submitted to any other institution for similar purposes. Where other people's work has been used acknowledgements have been made.

---

**Full Legal Name**

---

**Signature**

---

**Date**

## **CERTIFICATE OF APPROVAL**

The undersigned certify that this thesis represents the student's own work and effort and has been submitted with our approval.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Dr. Elizabeth T. Kamchedzera (Associate Professor)

### **Main Supervisor**

Signature: \_\_\_\_\_ Date \_\_\_\_\_

Dr Symon Chiziwa PhD (Senior Lecturer)

### **Co-Supervisor**

## **DEDICATION**

This thesis is dedicated to my wife Chisomo Maleta Eliya who encouraged me to go back to school. I also dedicate it to my daughters Ruth, Madalo and Maris; my sons Prince, Maurice and Fortune not forgetting my first grand-daughter Comfort Joyous Chimwaza. My late mother Rhoda Tracy Nankumba and late father Samson Sataye Grevulo Eliya Phiri for making me who I am today.

## **ACKNOWLEDGEMENTS**

First and foremost, I would like to thank the Almighty God for his sufficient grace and strength that has seen me through the two years of study.

My sincere gratitude and appreciation goes to my supervisor Associate Prof. Elizabeth Tikondwe Kamchedzera for her total commitment right from the conceptualization of the research problem, presentation and analysis of the data and organisation of my argumentation. I found your guidance and supervision in the course of shaping my thesis extremely enriching. I am very grateful for you were always available whenever I needed your assistance. God bless you.

Special thanks go to Dr. Symon Chiziwa, the co- supervisor, for the remarkable guidance towards my study. I also appreciate my M.Ed. Psychology 2017 classmates for the time we spent together in class, group discussions and socialising. I must extend my heartfelt appreciation to all my colleagues in the M.Ed. class they lifted my spirit at a time of need. Our collegial relationship and resilient support to one another during our studies cannot be over-emphasised. I should not forget my colleague, Harry Chikwapula, for working tirelessly encouraging me throughout the course.

It is with pleasure that I recognise the Education Division Manager for Shire Highlands for granting me permission to conduct the study in the division. My sincere thanks are further extended to all my research respondents at the schools of study whose input has been invaluable in this study.

## **ABSTRACT**

*This study investigated the effects of classroom communication on academic performance of students with hearing impairment in selected secondary schools of Shire Highlands Education Division. It was guided by the following main research question: How does classroom communication affect the academic performance of students with hearing impairment in some selected mainstream Secondary Schools of Shire Highlands Education Division? The study included mainstream teachers, Head teachers, Heads of Department as well as Specialist Teachers Purposive sampling procedure was used to select the Heads of Department, Head teachers, mainstream teachers and Specialist teachers and the learners with hearing impairment. Three instruments namely, questionnaires, interview guides and observational checklists were used to collect data. Thematic analysis was used to analyses qualitative data. Through the findings of this study the possible factors that contributed to the poor academic performance by learners with HI have been clear. Teachers preferred using Total Communication and Signed Exact English while on the other hand learners with HI preferred using MSL and Finger Spelling. It was also observed that, majority of teachers lacked the knowledge and skills of Malawi Sign Language. Therefore, they could not effectively assist these learners to boost their academic performance. This study concluded that, classroom communication was a major cause towards low academic performance of students with hearing impairment. It is apparent from the study findings that classroom communication mode is very crucial and much more so to students with HI.*

## TABLE OF CONTENTS

ABSTRACT.....	vi
TABLE OF CONTENTS.....	vii
LIST OF TABLES OR ILLUSTRATIONS .....	x
LIST OF FIGURES .....	xi
LIST OF ACRONYMS AND ABBREVIATIONS .....	xii
OPERATIONAL DEFINITION OF TERMS .....	xiii
CHAPTER ONE .....	1
INTRODUCTION .....	1
1.1 Chapter overview .....	1
1.2 Background to the study .....	1
1.3 Statement of the problem .....	8
1.4 Purpose of the study.....	9
1.5 Research questions.....	9
1.5.1 Main research question.....	10
1.5.2 Sub-research questions.....	10
1.6 Significance of the study.....	10
1.7 Operational definition of terms used in this thesis.....	11
1.8 Chapter summary .....	13
CHAPTER TWO .....	14
LITERATURE REVIEW .....	14
2.1 Chapter overview .....	14
2.2 Classroom communication techniques teachers use for students with hearing impairments.....	14
2.2.1 Communication modes .....	15
2.2.2 Classroom communication .....	18
2.2.3 Malawi Sign Language (MSL) .....	20
2.2.4 Verbal Communication (Oral/Aural).....	21
2.2.5. Manual Communication .....	24
2.3 Adequacy of learning materials for classroom communication .....	30
2.4 Supportiveness of classroom environment for effective classroom communication .....	31
2.4.1 The Classroom Environment .....	31
2.5 Theoretical Framework.....	34
2.6 Chapter Summary .....	38

CHAPTER THREE .....	39
RESEARCH DESIGN AND METHODOLOGY .....	39
3.1 Chapter overview .....	39
3.2 Research approach .....	39
3.3 Research design .....	40
3.4 Methodology .....	41
3.4.1 Population, Research site and Sampling procedure.....	42
3.5 Data collection Methods and Tools .....	43
3.7 Validity and Reliability.....	48
3.7.1 Validity of the instruments .....	48
3.7.2 Reliability .....	49
3.8 Ethical considerations .....	50
3.8.1 Permission to conduct the study .....	50
3.8.2 Informed consent .....	50
3.8.3 Confidentiality and anonymity .....	50
3.9 Chapter Summary .....	51
CHAPTER FOUR.....	52
RESULTS AND DISCUSSION OF THE STUDY.....	52
4.1 Chapter Overview .....	52
4.2 Classroom communication techniques used in classrooms for learners with Hearing Impairment.....	54
4.2.1 Classroom communication techniques that teachers indicated they used when teaching students with hearing impairments.....	56
4.2.2 Classroom communication techniques that students with Hearing Impairments were most comfortable with .....	59
4.3. Classroom Environment.....	65
4.4. Classroom Communication.....	68
4.5. Learning materials .....	73
4.6 Researchers' Observations.....	78
4.6.1 Communication modes in use.....	78
4.7 Classroom environment .....	79
4.7.1 Noise .....	79
4.7.2 Ventilation .....	80
4.7.3 Lighting .....	80
4.8 Teaching and Learning materials.....	80
4.8.1 Textbooks .....	80
4.8.2 Charts, Real objects and Pictures .....	80
4.9 Chapter summary .....	81

CHAPTER 5 .....	82
CONCLUSIONS OF THE STUDY .....	82
5.1. Chapter overview .....	82
REFERENCES .....	85
APPENDICES .....	91
Thank you for participating in the study.....	92

## LIST OF TABLES OR ILLUSTRATIONS

Table 3. 1: Distribution of respondents.....	43
Table 4. 1: Bio data of the respondents.....	53
Table 4. 2: Shows classroom communication modes .....	55
Table 4. 3: Classroom communication modes that students with HI felt comfortable	60
Table 4. 4: Challenges distribution .....	63
Table 4. 5: Classroom communication effects on students' academic performance ...	68
Table 4. 6: showing Influence of teaching and learning materials on students' performance .....	75
Table 4. 7: Shows usage of teaching and learning materials .....	76

## LIST OF FIGURES

Figure 1: Showing effects of classroom communication on students' academic performance .....	69
--	----

## **LIST OF ACRONYMS AND ABBREVIATIONS**

KSL = Kenyan Sign Language

TC = Total Communication

MSL= Malawi Sign Language

MANAD = Malawi National Association for the Deaf

SEE= Signed Exact English

HI = Hearing Impairment

## OPERATIONAL DEFINITION OF TERMS

**Academic performance:** This is the extent to which learners with HI have achieved their short and/or long term goals as measured based on examination.

**Hearing impairment:** It is a partial or total inability to hear.

**Total communication:** It is a philosophy of educating children with hearing loss that incorporate all means of communication such as sign language, gestures, body language, writing etc.

**Communication method:**It is the use of manual communication and body language to convey meaning.

**Oral method:** A method of instructing the learners with hearing impairment by which they are taught to speak and to understand the speech of others by lip reading.

**Manual method:** A method of teaching the hearing impaired that mainly employs finger spelling and the manual alphabet.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Chapter overview**

This chapter presents the background of the study on how classroom communication affects the academic performance of learners with hearing impairment in mainstream secondary schools in shire highlands education division. It further presents the statement of the problem, purpose of the study, research questions, and significance of the study. It ends with operational definition of terms used in the study.

#### **1.2 Background to the study**

Communication between people is the sending and receiving of message, it can involve two or more people. According to Hunt and Marshal (2002), communication is the exchange of ideas or information that involves the decoding of intended message by the sender and receiver. Through communication, needs, feelings, desires and ideas are expressed. Information is given and received through communication and in this way, one establishes one's own identity (Heward, 2006).

Determining how classroom communication affects the academic performance of students with hearing impairment in mainstream secondary schools was central to this study. As rightly noted by Ekwama (2003), classroom communication is one of the most important aspects to consider when discussing the successful teaching and learning of students with hearing impairments. It is important to discuss classroom communication because it is the very aspect where the disability poses the greatest challenge for the students and teachers. The result of such a challenge is persistent poor academic performance. Wisiki (2009) acknowledges that to some extent classroom communication exists between teachers and students, it became necessary to determine how classroom communication affect the academic performance of students with hearing impairments.

Concerning the prevalence of persons with disabilities, the World Health Organization (WHO, 2005) estimates that approximately 600 million people (ten per cent in any country) in the world experience impairment of various kinds including hearing impairments. For the purpose of this study, the term “hearing impairment” is used as an umbrella term that refers to all degrees of hearing loss, from slight to profound.

In educational institutions, success is measured by academic performance or how well a student meets the standard set out by the government and the institution itself. The emphasis on academic performance is made to identify, evaluate, track and encourage the progress of students in schools. As rightly stated by World Education Services (2011), areas of achievement and failure in a student academic life need to be evaluated in order to foster improvement and make full use of the learning process. As a result, discussions of effective education for students with hearing impairments have turned towards classroom communication and the experiences of these students in the various types of classrooms and

schools in which they are enrolled. However, not much is known about the classroom communication and academic performance of students with hearing impairments in Malawi.

Children with HI in Malawi are educated in special schools for the Deaf and mainstream schools. The first school for children with HI was introduced at Montfort in Chiradzulu by the Fathers of Immaculate Conception (FIC) in 1968 (MOEST, 2010). Currently, Malawi has five special schools for the deaf, and these are Maryview, Mountain View, Mua, Embangweni and Karonga School for the deaf. These schools have adequate number of specialist teachers, but are very exclusive, expensive to run and accommodate very few numbers of children with HI due to limited capacity of classes (MoEST, 2010). Majority of children with HI are educated in mainstream primary schools. The mainstream setting has a resource centre where children with HI are supported by specialist teachers or sometimes itinerant specialist teachers.

However, not all mainstream schools in Malawi have specialist teachers. In these schools children with HI are handled by regular teachers who have little or no background knowledge about Special Needs Education (SNE). With the introduction of Primary Curriculum Assessment Reform (PCAR) in 2005, Malawi introduced an introductory course in special education in all teacher training colleges (TTCs) in order to equip graduating student teachers with some skills on how to handle children with special needs. However, the major challenge is that there are very few specialist tutors who teach special education. The majority of tutors who teach special education are not qualified in special education. This implies that most student teachers who are graduating from these colleges are not fully equipped to handle children with Special Educational Needs (SEN) in an inclusive setting.

After finishing primary education, they are selected to go for secondary school education in the mainstream schools where the schools have adequate or inadequate specialist teachers to support them in their studies.

Children with HI are taught Malawian Sign language when they start school. However, this language is not taught in many primary schools due to shortage of specialist teachers (MANAD report, 2008-09). There is also lack of political will to legally recognize the Malawi Sign Language (MSL) as one of the languages for the Deaf. Besides, the Malawi Sign Language Dictionary (MSLD) has not yet been completed (Malawi Daily Times, 2012). This poses a challenge regarding the type of language of instruction the mainstream teachers may use when teaching children with HI in mainstream primary and secondary schools. There is a possibility that children with HI may fail to grasp literacy and communication skills because of language and communication problems between teachers and children with HI or among learners themselves. As a result of this, their participation in class activities is greatly affected due to their limited skills in language and literacy. This resulted further in making Malawi unable to meet Education for All (EFA) and Global Millennium Development Goals (GMDG) if no efforts are made to support children with SEN.

In an effort to address issues affecting children with SEN, the Malawi government introduced some policies such as the Free Primary Education (FPE) and Special Needs Education Policy guidelines (MoEST, 2010). The policy of Free Primary Education (FPE) was introduced in 1994 soon after the dispensation into the multiparty politics.

This was put into force because Malawi is a signatory to the World Conference on Education for All which was held in Jomtien, Thailand in 1990 (Masperi & Hollow, 2008, MoEST, 2010). The aim of FPE was to increase access to primary education, eliminate inequalities in enrolment and build a strong socio-economic base within the society and enhancing civic education and economic benefits of education at the community level (MoEST, 2010). This initiative attracted children of different disabilities to attend regular schools alongside their normal peers under the care of regular teachers. Although this policy was aimed at reducing illiteracy levels in Malawi, it encountered some challenges such as overcrowding of classes, untrained teachers, inadequate teaching and learning materials, and inadequate classroom blocks (Riddell, 2003, Gwayi, 2009). These challenges have greatly affected the teaching of literacy to children with HI in mainstream school in terms of support. The government also introduced Special Needs Education Policy guidelines with the following objectives: providing equal educational opportunities to all learners, providing educational facilities with needed supportive provisions, ensuring accommodating learning environments for all children with SEN, and increasing SNE service provisions (SNE, 2007). All the above policies are very crucial to this study because they contain priorities of access and equity which encourages children of different disabilities, including children with HI, to have greater opportunities to acquire literacy skills which are fundamentally important to facilitating their greater access to education by being engaged in meaningful activity with hearing peers either through spoken, or signed or written form (MoEST, 2008).

Concerning classroom communication, Article 21 of the Salamanca Framework for Action (1994) states that owing to the particular communication needs of students with hearing

impairments, their education may be more suitably provided in special schools or special classes and units in mainstream schools. Classroom communication involves interactive communication, language and responses between students and teachers (Marschark et al. 2006). This implies that classroom communication for students with hearing impairments should comprise a special education teacher, media of communication such as sign language and students with hearing impairments.

Classroom communication may also encompass interaction between two or more students. A study carried out in Washington by Gallimore (1993) titled “how to utilize American Sign Language as the language of instruction in the classroom” found that it was difficult to find an appropriate classroom communication system that effectively provides access to curriculum content. Subsequently, there have been changes in search for a better teaching methodology from pure Oralism to Total communication. Despite the changes in teaching methodology, the question has remained unresolved as to which particular method best suits students with hearing impairments.

Hearing impairment, like any other sensory impairment, could pose serious academic, communication and social problems. Ainscow (2007) asserts that communication has to do with acquisition and abstraction of meaningful information processing and storing in short term and long-term memory and retrieval of information. It includes language components of phonology, syntax, morphology, semantics and pragmatics.

It can be seen from the above analysis that classroom communication is a very important component in the teaching and learning process of all students, with or without special educational needs.

This is because classroom communication enables students to understand the content of the lesson and also to communicate effectively with the teacher as well as their fellow peers. Booth and Ainscow (2002) assert that classroom instruction that produces positive results acknowledges the need for a liberal use of nonverbal cues, student involvement and team communication. For this reason, a study on classroom communication and the academic performance of learners with hearing impairments was necessary. Ekwama (2003) addressed that classroom communication is the most important issue to consider when discussing successful teaching and learning experiences with students with hearing impairment. This is because it is the very aspect where his or her disability poses the most challenge for him or her and his or her teacher.

However, there is an observable increasing gap in vocabulary growth, complex sentence comprehension and construction among students with hearing impairments to the point of posing a challenge on their academic performance. For instance, students with hearing impairments are observed to have limited vocabulary as compared to students without hearing impairments. This is because students with hearing impairments enter school with limited knowledge of vocabulary. The discrepancy broadens over time between students without hearing impairment who have rich knowledge of vocabulary and themselves.

There is emphasis by the Ministry of Education's Special Needs Education Directorate that teachers who teach students with hearing impairments should engage with as many classroom

communication techniques (such as sign language, voice amplification, finger spelling, lip-reading, writing, gesture, visual imagery and body language) as possible (MOE, 2009). They have even gone a step further by making it mandatory for each and every lesson to have talking walls and visual aids. Talking walls are educational resources that teachers hang on classroom walls to stimulate continuous visual influence. These include maps, diagrams, students work, portraits and pictures.

### **1.3 Statement of the problem**

In a study by Raga (2014), found that educational outcome for students with hearing impairments is still low with illiteracy and ignorance rate for people with hearing impairment being much higher than that of the general population. According to Msena (2015) report, students with hearing impairment averagely register a mean mark ranging between 160-180 marks while their hearing counterpart register well above 700 marks out of the possible 900 marks. This poor academic performance of learners with hearing impairment in secondary school education brings to question the quality of education they receive which eventually limits their ability of being equipped with necessary skills and knowledge needed to join certain courses at the high levels of learning.

Various studies have been done on the influence of appropriate communication methods in delivery of the curriculum content at different stages of education. These studies have varied results on this matter with the students with hearing impairment registering poor academic performance compared to those who have hearing ability (Adoyo, 2004; Borefoot, 2011; Muiruri, 2015). The government of Malawi and MOEST (2004) realized that one of the

contributing factors in poor academic performance of students with hearing impairment is communication breakdown developed among other initiatives sign language dictionaries making sign language an examinable subject at primary and secondary level (MOEST, 2004). Lack of proper resources that facilitate communication access and stigmatization are some of the causes of communication breakdown resulting in poor school attendance and poor academic performance among students with hearing impairment (Muiruri, 2015). For example, little is known and documented nationally about classroom communication practices, the challenges being faced or the accommodations and supports they need to ensure they receive quality education like their hearing counterparts.

In view of this background, this study was designated to investigate the effects of classroom communication methods on academic performance of students with hearing impairments in selected secondary schools of Shire Highlands Education Division.

#### **1.4 Purpose of the study**

The purpose of the study was to investigate the effects of classroom communication on academic performance of students with hearing impairment in selected secondary schools of Shire Highlands Education Division.

#### **1.5 Research questions**

The following research questions were used to guide the study:

### ***1.5.1 Main research question.***

How does classroom communication methods affect the academic performance of students with hearing impairment in mainstream Secondary Schools of Shire Highlands Education Division?

### ***1.5.2 Sub-research questions***

This study was based on the following research questions:

1. What communication techniques are used in the classroom for students with hearing impairments?
2. How adequate are learning materials for students with hearing impairments?
3. How does the classroom environment support effective classroom communication for students with hearing impairments?
4. What are the effects of classroom communication on academic performance of students with hearing impairments?

## **1.6 Significance of the study**

It is expected that the findings from this study may contribute to the body of knowledge of how classroom communication affect the academic performance of students with hearing impairments in the mainstream secondary schools.

In addition, the findings may inform policy makers and motivate policy makers as well as curriculum planners to place due emphasis in the curriculum on the importance of classroom

communication towards the improvement of the academic performance of students with hearing impairments.

In the context of practice, it is also anticipated that the findings may enhance classroom communication between teachers and students with hearing impairments. The findings will also stimulate further research in finding means and ways of improving academic performance of students with hearing impairments using classroom communication.

### **1.7 Operational definition of terms used in this thesis**

For the purpose of this study, key terms are used as follows:

**Academic performance:** The outcome of education; the extent to which a student, teacher or institution has achieved their educational goals. Academic performance is commonly measured by examinations or continuous assessment.

**Classroom communication:** The interaction inside the formal classroom that is initiated by the learners and/or the teacher

**Hearing impairment:** A generic term used to identify anyone with a hearing loss regardless of the degree of impairment. However, there is no universal definition of hearing impairment as both the cause of the loss and its degree can differ from person to person.

**Mainstream school:** A type of school placement in which children with disabilities attend a public school for part or all of the school day, sometimes in regular education programme classrooms with students without disabilities and sometimes in special classrooms within a regular or general education school. It is the educational equivalent of the normalization

principle which suggests that people with disabilities have a right to life experiences that are the same as, or similar to, those of others in society (Swart & Pettipher, 2011, cited in Bell, 2012).

**Special school:** A type of school that provides educational and other related services solely to children with special educational needs and is staffed by specially trained teachers. These schools usually have small number of children in order to fully support them when in class (MoEST, 2010).

**Regular teacher:** A regular teacher is one who teaches both children with and without disabilities in a regular class. They are qualified teachers for primary / secondary schools, but have not been trained in the field of special education. Most teachers in Malawi teach children with special needs because of shortages of specialist teachers.

**Hearing Impairment:** The term hearing impairment refers to the reduced ability to hear (MOEST, 2010). Marschark and Spencer (2009) refer hearing impairment as the condition of having any level of hearing loss in the ranges from mild to severe.

**Deaf:** Deaf means a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing with or without amplification, which adversely affects educational performance (Angell, 2009, Meyen & Bui, 2007).

**Teaching methods:** A teaching method is characterised by a set of principles, procedures or strategies to be implemented by teachers in order to achieve desired learning needs in students (Liu & Shi 2007, in Westwood 2008). Children with HI require special methods which may involve use of many senses to compensate for the hearing loss.

**Literacy:** In the traditional sense, 'literacy' is the ability to read, write and perform simple numeric calculations (The Canadian Language & Literacy Research Network, 2009).

Literacy is very essential to children with special needs because it is a catalyst for participation in social, cultural, political and economic activities and for learning throughout life.

### **1.8 Chapter summary**

This chapter has presented the background of the study on how classroom communication affects the academic performance of learners with hearing impairment in mainstream secondary schools in shire highlands education division. It further has presented the statement of the problem, purpose of the study, research questions, and significance of the study. It ended with operational definition of terms used in the study. The next is literature review for the study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Chapter overview**

This chapter presents the reviewed literature related to how the classroom communication affect the academic performance of learners with hearing impairments in the mainstream secondary schools. It therefore focuses on the classroom communication techniques used in classrooms for students with hearing impairments, the kind of learning materials teachers used for students with hearing impairments, supportiveness of classroom environment for effective classroom communication for students with hearing impairments and how classroom communication affected the academic performance of students with hearing impairments. It then discusses the theoretical framework that guided the study and ends with the chapter summary.

#### **2.2 Classroom communication techniques teachers use for students with hearing impairments**

A study by Barefoot (2011) which was carried out In New York on the importance of

classroom communication found that the communication of learners with hearing impairments can be diverse and included language, modality, cultural identity, gender, emotional and physical influences. Buscemi (2006) in a study carried out in New York reported that classroom communication was about using a suitable language to convey and decode ideas or meanings, to exchange views, explain processes or demonstrate skills.

Barefoot (2011) also found that learners with hearing impairments value learning with their communication strengths such as access to visual information, opportunity to use their residual hearing and use of their strongest language. Similarly, Heward (2002) reported that learners with hearing impairments must have a firm concept of and foundation in language so they derived benefit from educational instruction. The greatest disadvantage which hearing loss places on individuals was the deprivation of communication opportunities.

Moore (1996) in a study carried out in Boston reported that there were two basic modes of classroom communication that teachers used for learners with hearing impairments in the classroom and these were the Oral method and Total communication. However, the finding also showed that the teachers used verbal, nonverbal and written communication techniques for students with impairment.

### ***2.2.1 Communication modes***

Communication between people is the sending and receiving of message, it can involve two or more people. Communication is the exchange of ideas or information that involves the decoding of intended message by the sender and receiver (Hunt & Marshal, 2002). Through communication, needs, feelings, desires and ideas are expressed. Information is given and received through communication and in this way one establishes one's own identity.

Communication modes are communication methods or techniques used in combination with others to communicate or instruct learners with hearing impairment. Professionals have developed educational programming along three different lines of thought, the oral/aural approach, emphasizing listening, speaking and speech reading (lip-reading). The manual mode, teaching finger spelling, or some form of sign language as the primary mode of communication and the philosophy of total communication (TC) approach, incorporating a combination of methods which are individually developed to meet the needs of a specific person (Duncan, 2006). There have been a lot of controversies on the best approach to be used in educating learners with hearing impairment. The eclectic approach makes use of most components, from both sides that are Oralism and Manualism. In order to ensure effective communication with and among learners with hearing impairment, the teachers should adjust to any mode to make sure learners with hearing impairment responds to the message (Reed, 2009).

Effective communication is an important step towards building good relationship and involvement in the community. According to Hunt and Marshal, (2002) hearing impairment in children cause delay in the development of receptive and expressive communication skills. The language deficit causes learning problems that result in reduced academic performance. Communication difficulties often lead to social isolation and poor self-concept. It may have an impact on vocabulary choices and sentence structure (American Speech-Language-Hearing Association, 2010).

Communication is the cohesive, compelling force in biological survival of all human beings as well as in our social, cultural and personal lives. The ultimate purpose of communication

in human beings is pursuit of knowledge (Lewis, 2009). The importance of communication in human species cannot be over-emphasized for it is the fundamental aspect of all human interaction. It is through language that humanity has been able to record its history and transmit its cultures from one generation to the next. Furthermore, the ability to communicate has enabled humans to build societies, organizations and social groups that are needed for survival and better living (Okeke, 2003).

The need to communicate is clearly indicated by the fact that all human societies have developed signal system for communication based on the spoken word, using the aural/oral channel for reception and expression. According to Reed (2009), most members of societies acquire language of their group in an apparently effortless fashion during the first few years of life. He pointed out that a child will effortlessly internalize on auditory-based language system if the infant has a reasonably intact sensory system. The infant must also not have severe intellectual or cognitive deficit, and should be exposed to a reasonably stimulating environment. The parents or care givers of the infant also ought to be reasonably verbal, providing a reasonably warm and loving atmosphere and communicate reasonably fluently with the infant. This internalized effortless language system will serve as a foundation of the child's receptive and expressive language in early childhood and as a base on which reading and writing and all education factors related to them will later be developed. Lewis (2009), in view of the foregoing, severe and prolonged deprivation in any of these areas will eventually produce communication and language problems (Duncan, 2006). The primary problem seems to be interference with the immediate figures in his/her environment.

### *2.2.2 Classroom communication*

Classroom communication involves interactive communication and responses between learners and teachers (Marschark, Convertino, & LaRock, 2006). This implies that classroom communication for learners with hearing impairment involves special education teacher, medium of communication such as Kenyan Sign Language (KSL) and learners with hearing impairment. It may also encompass interaction between two or more learners.

A study carried out in Kenya by Adoyo (2004) on how to utilize KSL as the language of instruction in classroom for learners with hearing impairment, found that it was difficult to find some appropriate classroom communication modes that effectively provide access to curriculum content. Subsequently there have been changes in teaching methodology from pure Oralism, Manualism to Total Communication (TC) and now to Bilingual/bicultural/approach.

In Kenya, there was a controversy over which medium of instruction was suitable for learners with hearing impairment. Different modes such as Oral, Sign Language, Sign Extract English and Sign English were tried out, but they seemed not to fulfill communication need for these learners. This was because Signed Exact English proved hard for learners with hearing impairment to comprehend (Adoyo, 2001). In 1986, the ministry of education established Machakos School for the Deaf as a pilot school to try out TC; a philosophy which allows learners with hearing impairment with their teachers to use various modes of communication to facilitate better understanding.

It comprises of: Signed Exact English, Signed English, KSL, Finger spelling, Lip-reading, drawing, pointing among others being used interchangeably, T.C proved an effective method of communication hence it was officially adopted by the Ministry of Education Science and Technology (MoEST, 1988).

The Kenya Institute of Education (KIE ) however observed that during the piloting of TC, KSL was used more often by learners as they interacted in the classroom discussions and during their free time. KIE therefore recommended for a research on the relevance and development of KSL as a medium of instruction (Ndurumo, 2008). These views backed the Kamunge report of 1988 which suggested that, research needed to be conducted to develop the most appropriate sign language for Kenyan learners with hearing impairment.

Kenyan Sign Language was then gradually developed by Kenya Institute of Education ( KIE) in conjunction with adult persons with hearing impairment (Ndurumo, 2008). The Kenyan Ministry of Education in 2004 recognized the use of KSL as an effective medium of communication for learners with hearing impairment. It was therefore adopted as a national language; same level as the national Kiswahili language. KSL was further declared examinable in schools for learners with hearing impairment as from the year 2010 (Kenya National Examination Council, 2009).

Owiko (2009), in his study in Nyanza province on factors contributing to poor performance at KCPE among standard eight pupils in primary school for learners with hearing impairment, reveals that there was need for research on the use of KSL as a tool to enhance better

performance among learners with hearing impairment. This is backed by Bunyasi (2010), who revealed teachers lack of skills in KSL and inadequacy of resources in classes for learners with hearing impairment. For the purpose of this study the researcher discussed the following; Verbal (oral/Aural), Finger spelling, Total Communication, Kenyan Sign Language, Sign Exact English and Sign Language.

### ***2.2.3 Malawi Sign Language (MSL)***

Sign language is a visual gestural language that involves the use of the hands, eyes, face, mouth, head and body (World Federation of the Deaf, 1993, Pearson Series in Education, 2012). People use sign language to ask complicated questions, describe things around them, discuss relationships, ideas and beliefs and everything that a hearing person can communicate using spoken language. Like in spoken languages, complete sign language differs from region to region and country to country.

Malawi has its own sign language known as Malawi Sign Language (MSL). Though Malawi government has not yet recognized the MSL, it is still used in many schools where children with HI or deaf are educated. Sign language is an independent and complete language with a unique set of rules. It has its own grammar that does not reflect in any way the grammar of English. For example, the order of signs in a sentence is often different from the order of spoken words. English follows the subject-verb-object order while the sign language either follows the object-subject-verb or any order as long as the message is heard. In Malawi sign language, ‘What is your name?’ would look like this, ‘Name?’ or ‘Your name what?’, ‘What is his name?’ could be ‘Name who he?’ ( MoEST, 2010). In Malawi each community of learners with hearing impairment has developed its own set of signs. This enables them to communicate effectively with each other. It will be necessary for

teachers of children with HI to learn the local signs in order to effectively communicate, teach and socialize with those learners. Teachers should first observe their learners in different environments at school and in the community in order to identify the common signs being used. After identifying the signs, there is need for the teacher to practice these signs and use them in the teaching and learning process (MoEST, 2010). Some of the things to consider when signing are as follows: The signing space should be in front of the body just below the waist to above the head level (chest position).

During conversation, both the teacher and the learner must face each other while standing or sitting. The teacher and the child must accompany the signs with facial expressions and the body movements. It is a good idea to have enough light during communication process. This enables both persons to see the signs clearly. In classroom setting, there is need to consider the sitting position of learners who are deaf. It is also important to use as many visual clues as possible when teaching learners who are deaf (MoEST, 2010, Wood, 1998).

#### ***2.2.4 Verbal Communication (Oral/Aural)***

Verbal communication is an oral approach which emphasizes auditory training, articulation ability and lip-reading (Duncan, 2006). In the US, the oral/aural approach is historically the oldest. Oralists advocates have believed that learners with hearing impairment are best served by instruction in reading, maximum use of residual hearing (through amplification and auditory training) and in articulation to improve speech (Marschark et al; 2006). Pure oralism strongly emphasizes no signing and speech is the only acceptable means of response.

The goal of auditory verbal practice is for learners with hearing impairment to grow up in “typical” learning and living environment that enables them to become independent participating and contributing citizens in a complete mainstream society. This is because all learners with hearing impairment deserve an opportunity to develop the ability to listen and use verbal communication with their families and communities, (Marschark et al, 2006). Listening skill is developed to increase spoken language competence. In this case, speech is the primary stimulus for communication.

A study by Okeke (2003) carried out in Ghana highlighted that undoubtedly, teachers were aware of the unrivaled importance of oral language in teaching and learning processes. Similarly, Ekwama (2003) who carried out a study in Nigeria reported that oral communication facilitated meaningful teacher-learner interactions than any other form of communication. This made learning more readily mediated than writing, signing, gesticulating pantomiming or whatever medium. Research conducted in schools for learners with hearing impairment especially in United States of America showed that this approach performed quite poorly in academic achievement apart from less than 10% who performed well since they were partially hearing (Reed, 2009). Oralism requires patience and in most cases learners with hearing impairment feel frustrated and humiliated in the process of learning. Though it’s difficult to lip-read, many learners with hearing impairment naturally try to lip-read. From 1958 to 1985, Kenya used pure oralism.

Lip-reading is the ability to read lip patterns Duncan (2010) reported that, it was very difficult for most learners with HI to rely solely on lip-reading to communicate as they could only pick

up a small percentage of what was being said. Therefore, lip-reading was usually used alongside other communication modes. Duncan (2010) noted that lip-reading involved utilizing clues from the topic of conversation, facial expression, the eyes, the rhythm of speech and body language. It must be noted that learners with moderate hearing usually did not understand what the teacher said without using hearing aids. When they were not using hearing aids, the learners with HI relied on lip-reading. However, some learners could only lip-read for a certain period of time. Duncan (2010) also found that, learners who only used lip-reading for a long period of time lagged behind in their comprehension, had limited vocabulary poor pronunciation of words and speech sounds and felt fatigued towards the end of a lesson and lost concentration. Not only did such learners misinterpret verbal speech but they also frequently misinterpreted written lessons and reading materials.

A study carried out by the University of Cambridge (2003) highlighted that, to some extent, many learners with Hearing Impairment (HI) relied on lip-reading despite being aware that only about 30% of words could be lip-read clearly. In addition, not all people with a hearing impairment could lip-read well. Lip-reading can be used in line with facial expressions, for instance, much information can be conveyed with a smile or a frown. Facial expression, can convey a message to learners with HI in that, as the learners lip-read, the facial expressions tell the context in which the message is delivered. In addition, facial expression for happiness, sadness, anger and fear are similar throughout the world. Since oralism did not produce expected academic improvement, educators turned to manualism modes of communication.

### *2.2.5. Manual Communication*

Manual communication is a way of communicating by use of signs and finger spelling. This include, Finger selling, Total Communication, writing, Sign Exact English, Sign language to mention but a few. This study discusses the following; Finger Spelling, Total Communication, writing, Sign Language and Malawian Sign Language.

**Finger spelling** is writing in the air. It forms hand shapes representing the 26 English alphabetical letters and can be used to spell words manually. It warrants for an exact presentation of written language when communicating with learners with HI. A single benefit of finger spelling is the absence of the limitation of the number of words that can be spelled. A conflict which may result between the English signing and the learners with HI mother tongue (sign language) may be solved by the application of finger spelling. Heward (2006) indicated that communication by finger spelling for learners with HI is one of the oldest known forms. He observes that finger spelling is sometimes used to connect signs into sentences, or to odd stress in sign languages. Finger spelling is particularly useful for introducing names, neologisms and technical terms. The manual alphabet is one-to-one code for letters of an alphabet on the fingers. In the United Kingdom, the manual alphabet is two-handed, but elsewhere it is usually displayed on one hand. In Kenya, the one-handed American manual alphabet has been adopted. There are twenty-six positions or combination of finger placements and hand shapes corresponding to the twenty-six letters of the English alphabet. These, therefore, are shown without vagueness and can be used to spell out a word with the fingers, as with the conventional spelling of English letters.

Finger spelling is a slow form of communication as Heward (2006) reported that it has a maximum transmission rate of about “sixty words per minute, roughly three times slower than rather fast speech or signed communication. It is for this reason that instructors ought to use finger spelling together with signs; such knowledge will enable clear and accurate communication with learners with HI. Finger spelling can be used in other ways. Besides its direct use for names and technical terms, it has a role as a verbal tool for learning of such items, and can reinforce the written form of new words (Asha, 2001). Asha (2001) also observed that, signs tend to communicate content words, whereas finger spelling is useful for function words, such as articles and prepositions. It plays a corresponding role to signs when it may significantly increase understanding of the signed message. Studies in comparison of Rochester method (fingerspelling and speech) and oral method come up with TC.

**Total communication** means all the full spectrum, speech, formal signs, finger-spelling, speech reading, writing as well as other methods that may be developed in future (Reed, 2009). Ainscow (2007), suggested that intervention procedures aimed at developing speech reading skills should use T.C. Total Communication may involve one or several modes of communication (manual, oral and written) depending on the particular needs of the learner (Scouten, 2004). The original expectation of TC was for teachers to use the communication mode most appropriate for a particular learner at a particular stage of development. Therefore, there would be situations where signing might be appropriate, others that would call for written communication and still others where simultaneous communication might work best, (Reed, 2009). Total communication should help to reduce the dominant position taken in class by the teachers of learners with HI. It should help to encourage bond between teachers and

learners, besides assisting a learner with hearing impairment to communicate with hearing learners and adults. TC offers a view of the learners with hearing impairment participating in an educational curriculum more like that of the hearing learner. It also promises perceptions into spoken language, by providing continuity opportunities for learners with hearing impairment to analyze and compare spoken and manual/languages. TC is valued because it can provide both a means of communication and away of assisting oral communication. It is like stimulating learner's attention span, motivation and social interaction. It could also decrease behavior problems (Reed, 2009).

According to Heward (2006), most learning occurs through interaction with other people such learning is possible only when individuals are able to communicate with understanding, likewise, the quality of the relationship between a learner with hearing impairment and his/her teachers is dependent on the quality of communication existing between them. Thus, the choice of communication mode that will be most effective is of paramount importance.

The main benefit of Total Communication is that it can open all avenues of communication for learners with hearing impairment. Teachers might be reluctant to choose one mode of communication over another. Total Communication however, allows a variety of combination. One limitation of TC is that, while the mode may be sound, it may not be put into practice accurately enough in some situations. In classroom, TC often becomes a concurrent practice of combining manual components (signs and finger spelling) with spoken components used in English word order.

The very nature of the two modes (spoken and visual) may cause signers or speakers to modify their message to accommodate one or the other mode causing a negotiation between the two modes (Ekwama, 2003). Although the idea of individualization is at the heart of TC, teachers are limited to how many different modes they can use at one time.

Language of instruction policy in schools for learners with hearing impairment in Kenya has changed over the years. From 1958 to 1985, Kenya used a pure oral system of education (MoEST, 2004). From 1986 to date (2019) teachers are using TC which according to Adoyo (2002) is simultaneous communication. The communication mode has not produced the wide scale expected academic improvement, although there had been a marked improvement in curriculum access and academic improvement. There is still however dissatisfaction on the type of education for the Kenyan hearing impaired students as they have continued to lag behind their hearing counterparts in all academic achievements. As a way of improving learners with hearing impairment education, suggestions have currently been offered to implement the sign bilingual approach, a strategy in which sign language and spoken (written) language are used complementarily as languages of instruction (Adoyo, 2004). Ademokoya (2008) found that even when speaking and signing simultaneously, as was often the practice while engaging TC (speech and signs) to teach learners with hearing impairment, more things were said than signed. Actually, the advocate of total communication argues that, TC promotes communication.

**Writing** is also part of mode of communication in total communication. It plays a vital role in classroom communication for learners with hearing impairment. This is because learners

with hearing impairment who were not very proficient in sign language benefited from written communication (Duncan, 2006).

Lewis (2009) carried out a study on sign languages of the world, in his findings on KSL, he reported that 32 schools out of 71 were using KSL, they included Kerugoya, Nyangoma, Bondo, Karen, St, Angela Mumias, St. Antony Webuye, Machakos, Sakwa and St. Martin Mumias for learners with hearing impairment among others. In his study in Nyanza Province on factors contributing to poor performance at KCPE among standard eight pupils in primary schools for learners with HI, Owiko (2009) reveals that, there is need for research on the use of KSL as an instructional mode to enhance better performance among learners with hearing impairments. This is backed by Bunyasi (2010) who revealed teachers lack of skills in KSL. In Kenya, learners with hearing impairment need a lot of exposure to KSL for cognitive development and for second language acquisition. The school administration must ensure that the school environment is linguistically rich to facilitate rapid and easy sign language acquisition at the same time using it to deliver curriculum content (Lewis, 2009). In her doctoral dissertation, Bunyasi (2010) revealed that teachers skilled in KSL were inadequate. Bunyasi (2010) cited remarks from one principal who said that; “Teachers require constant refresher courses in sign language because it is a language like any other language and it grows with time. Now we are introducing KSL in our curriculum yet not all teachers are good at it”. Bunyasi (2010) also observed that, most teachers were not conversant with KSL, but noted that most learners with hearing impairment preferred using KSL for purposes of interacting with one another outside the classroom. Muiti (2010) in her study on; Hindrances to effective learning of learners with hearing impairment in Meru North District, Kenya,

asserted that most head teachers and teachers were not trained in the use of KSL and hence were ineffective in communicating using KSL. She suggested that all teachers in schools for learners with hearing impairment should be trained in KSL because learners with hearing impairment learn just like their hearing counterparts if given access to modes they need and the language they understand.

A study by Adoyo (2004) reports teacher's lack of competence in KSL and attributes this to lack of interest in it. Adoyo (2004) argues that although teachers interact daily with learners with hearing impairment who are native KSL users and who can provide them with an ideal environment for signing, there is still a low attitude towards this language. This is contrary to other countries that have reported significant academic improvement through the use of their respective sign languages such as American Sign Language, Germany Sign Language, etc. Muiti (2010) and Adoyo (2004) findings reveal the existing gaps hence necessitate determining classroom communication and academic performance of learners with HI. It should be noted that KSL is not a written language. The function of Kenyan Sign Language is to transmit information visually between people and not on paper. While this helps learners with HI communicate effectively, it does create some confusion because signs are known and used by a small minority of people (Adoyo, 2004). A report carried out in Nigeria by Ademokoya (2008) found out that, it was important to bear in mind that, learners with hearing impairment have varying degrees of understanding of English. Some learners could still be acquiring a full language base and errors could occur in their written expression. Teachers who are not proficient with signing can also use writing to express concepts. Findings by Malunga (2007) in a study carried out in Zambia, showed that learners naturally try to learn a language that enabled them to be understood.

The communication mode used by learners with hearing impairment was dependent on a number of factors such as the level of hearing impairment and which modes they were comfortable with. Research carried out by Ainscow (2007) in New York highlighted that without communication there would be no education, no matter how qualified a teacher and relevant of the adaptation of content. Opinions about the modes to use in programs for learners with hearing impairment should be used on best approaches to instruction.

### **2.3 Adequacy of learning materials for classroom communication**

A study carried out in New York by Marschark et al. (2002) titled “Educating learners with hearing impairments: Research into practice” reported that learners with hearing impairments and learners with normal hearing had different backgrounds, experiences, and communication histories. Therefore, the framework of learning that learners with hearing impairments had differed from that of learners with normal hearing.

Research carried out by Ainscow (2007) in New York highlighted that without communication there would be no education, no matter how qualified a teacher and relevant the adaptation of content, methods and organization may be. Often, opinions about the methods used in programs for learners with hearing impairments were based on best practices or approaches to instruction.

### **Writing techniques**

A report carried out in Nigeria by Ademokoya (2008) in a study titled “Classroom communication and placement of learners with hearing impairment in an inclusive class” found that it was important to bear in mind that learners with hearing impairments had varying

degrees of understanding of English. Some learners could still be acquiring a full language base and errors occurred in their written expression. Writing played a vital role in classroom communication. This was because learners with hearing impairments who were not very proficient in sign language benefited from written communication. This was especially observed in learners who acquired hearing impairments at a mature age.

A study carried out in Washington by Marschark et al (2006) reported that although most learners with normal hearing relied on speech to communicate with others, learners with hearing impairments used a range of communication techniques. For example, students with hearing impairments used some form of signed communication, lip reading, or assistive technologies, such as hearing aids, cochlear implants (CI) and communication boards.

Findings by Malunga (2007) in a study carried out in Zambia showed that children naturally try to learn a language that enabled them to be understood. The communication technique used by learners with hearing impairments was dependent on a number of factors, such as the level of hearing loss and which techniques they were most comfortable with.

## **2.4 Supportiveness of classroom environment for effective classroom communication**

### ***2.4.1 The Classroom Environment***

The classroom environment and activities are what learners experience directly and they are the mechanism through which educational interventions are mostly likely to produce desired improvements in learner's performance (Ekwama, 2003). Peters (2004) in a study titled Inclusive Education, and Education for All strategy for All Children; revealed that, environment played a significant role in disabling majority learners.

Ademokoya (2008) in a study titled classroom communication and placement of learners with hearing impairment in an inclusive class carried out in Nigeria found that, to support improved outcomes of learners with hearing impairment, it was important that, their direct experiences in the classroom were understood.

A study carried out in Zambia by Malunga (2007) titled an “Investigation on the use of sign language and language by regular teachers teaching learners with hearing impairment” showed that in relation to the learning environment, the best possible conditions were a quiet place with good lighting. This allowed learners with hearing impairment to concentrate and follow what was being lip-read. A study by Liwakala (2003) carried out in Mpika, Zambia, reported that, learners with HI were visual learners. As a result, an attractive classroom with talking walls such as interesting notice boards and charts around the room, visual teaching aids such as pictures, diagrams and world maps assisted the learners to learn.

A study carried out by Ekwama (2003) in Nigeria, found that, in order to accommodate learners with hearing impairment who used hearing aids, it was vital to minimize noise. If there was noise from outside, doors needed to be shut and in certain instances, windows were shut. These measures were put in place in order to reduce background noise. It was highlighted that background noise, echo and distance from the speaker were real issues for learners with hearing impairment, even those with mild or unilateral hearing loss who were able to hear in the classroom.

Peters (2004) in a study titled 'inclusive education: An Education for All strategy for all children' revealed that there was a growing realization that, for the majority of learner's, the environment played a significant role in disabling them.

Adekemoyo (2008) in a study titled "Classroom communication and placement of the learners with hearing impairments in an inclusive class" carried out in Nigeria found that provision of support improved performance outcomes of learners with hearing impairments for it was important that their direct experiences in the classroom were understood. The classroom environment and activities were what learners experienced directly and were the mechanisms through which educational interventions were most likely to produce desired improvements in learner performance.

A study carried out in Zambia by Malunga (2007) titled an "Investigation on the use of sign language and oral language by regular teachers teaching learners with hearing impairments" showed that in relation to the learning environment, the best possible conditions were a quiet place and good lightening. This allowed learners with hearing impairments to concentrate and follow what was being lip-read. Lip-reading was used in line with other communication techniques. This technique was most effective in cases of mild to moderate hearing loss.

A study by Liwakala (2003) carried out in Mpika, Zambia reported that learners with hearing impairments were visual learners. As a result an attractive classroom with talking walls such as interesting notice boards and posters around the room assisted the learner to learn. Visual teaching aids such as pictures, diagrams and word maps also assisted learners with hearing impairments. In relation to seating arrangement, Liwakala (2003) found that it was very important that learners with hearing impairments sat on chairs so that they could see both the

teacher and their peers as much as possible. This was attributed to the fact that the learners were able to see the various signs, lip read and interpret body language as they were in full view of all participants in the classroom.

In addition, Ekwama (2003) in a study carried out in Nigeria found that in order to accommodate learners with hearing impairments who used hearing aids, it was vital to minimize noise to support them. If there was noise from outside, doors needed to be shut and in certain instances, windows were shut. These measures were put in place in order reduce background noise. It was highlighted that background noise, reverberation and distance from the speaker were real issues for learners with hearing impairments, even those with mild or unilateral hearing losses who were able to hear in the classroom.

Background noise and reverberation were minimized by placing carpets on the floor. It was also vital for to make sure that windows had some covering. This included noises such as those made in woodwork and metal work workshops, other machines found in the school and noise outside the classroom or in the corridor.

A study carried out in New York by Barefoot (2003) highlighted that the challenge of classroom communication bordered on creating a classroom environment where communication issues were openly recognized and managed in a way that promoted learning.

## **2.5 Theoretical Framework**

This study was based on Total Communication (TC) theory as pronounced Holcomb (1967). This theory advocates for the use of more than one way of communication depending on the need of a given learner. The instructor has several ways of communication at his disposal to

choose from such as manual, written, oral or even auditory. Depending on the need of a particular learner, there are cases in which the instructor may choose to use oral but other situations may call for the use of signing in communication or both. The use of total communication allows for flexibility in communication due to the availability of several methods of communication with the hearing impaired. According to Lepot- Fromentand Clerebaut (1996), total communication can be used as a powerful tool to improve the academic performance among students with hearing impairment. For learning to occur, there must be an effective communication between the learner and the instructor (Mapolisa & Tshabalala, 2013). The choice of communication method is very vital for the passage of information and the use of Total Communication is valuable in communicating with students with hearing impairment as it allows for adjustment of the choice of communication method depending on a particular situation.

Total Communication favors those with hearing impairment in all aspects of life be it psychological, language development or even on their academic achievement as cited by Serban (2013). The need for effective communication and understanding between students with hearing impairment, their hearing counterparts and teachers is needed for holistic development and academic achievement.

Total Communication provides students and teachers with several communication methods that are employed in the selection of a given form of communication. Combination in Total Communication is purely based on the particular needs of a given child. Holcomb (1970) encourages teachers who find Total Communication suitable at any given situation to use the communication methods which appeals and relevant to a given child at a given stage of

development. The use of a given communication method as usual present a different challenge depending on a particular situation and situation as cited by (Wambui, 2012).

Many researchers agree that learning in any society takes place when people socialize, and this occurs to a greater extent when people can communicate and understand each other effectively. Child's academic performance has a direct link with the effective understanding of what is taught in class. This heavily depends on the effectiveness of learning communication.

The selection of a communication method which enables communication process to be smooth without breakages is thus very important to all children irrespective of where they are found or their nature of specialties. The choice of communication mode that will be most effective is very important inn this study.

The theory asserts that in Total Communication all forms of communication for students with hearing impairment may be integrated and when well used will make these students to be at equality with average students. In a learning environment, this theory is found to be relevant because Total Communication embraces the use of various forms of communication simultaneously using both manual and spoken words (Ekwama, 2003).

Total Communication theory incorporates a number of different techniques of communication. For instance, learners with hearing impairments are exposed to sign language, speech, lip reading, pictures, mime, and writing. The philosophy of total communication is that the technique should be fitted to the learner, instead of the other way round. For instance, learners with hearing impairments have individual needs such as limited sign language vocabulary.

One of the observations in the Total Communication theory is that learners with hearing impairments in traditional learning environments often feel left out of classroom communication. Because of the lag that exists between the delivery of the information and the signing of the content by the teacher, learners with hearing impairments also report difficulty responding to the teacher's questions or asking a timely question. Total Communication, therefore, assisted learners with hearing impairments by giving them a number of options for communication. This in turn helped the learners express themselves. Moreover, total communication helped the teacher to engage all possible techniques of communication to enhance the learning experience.

Another contribution by the theory to the study is that it contributed to the understanding that techniques of communication needed to be adjusted based on the situation. For instance, sometimes signing is the right method to use, other times it may be speech and in other situations, writing may be the best technique to use.

In addition, some teachers favored total communication as a catch-all that ensured that a learner with hearing impairments had access to some means of communication (speaking as needed, or signing as needed). For example, a learner with hearing impairment who could not communicate well orally got additional support of sign language, and vice versa. Using Total Communication reduced the pressure on teachers to choose one technique over another.

Therefore, Total Communication guided this study in determining how classroom communication affected the academic performance of learners with hearing impairments.

## **2.6 Chapter Summary**

The general conclusion that was drawn from the reviewed literature was that when individual learners' classroom communication needs were met, teacher to learner communication improved and the academic performance also improved. Analysis of the literature showed that a study by EQUIP 3 (2006) focused on capacity building of learners with hearing impairments and that of Malunga (2007) identified learners and teachers' knowledge of hearing impairment. None of these studies assessed how classroom communication affected the academic performance of learners with hearing impairments in Malawi. This gap motivated the researcher to conduct a study which sought to investigate the how classroom communication affected the academic performance of learners with hearing impairments. The findings on classroom communication and academic performance of learners with hearing impairments will add to the body of knowledge.

The next chapter presents the research design and methodology.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Chapter overview**

The purpose of this study was to investigate how classroom communication affect the academic performance of students with hearing impairments in mainstream secondary schools. This chapter therefore presents the research design and methodology that were used for the study. It first of all describe the theoretical paradigm that guided the choice of the research design and methodology. It further describes the sampling procedure, data gathering technique, data analysis procedure, ethical considerations, issues of trustworthiness and reliability as well as the limitations of the research. It ends with the chapter summary.

#### **3.2 Research approach**

##### **Interpretive paradigm**

This research aims to investigate the effects of classroom communication on the academic performance of students with hearing impairments in mainstream secondary schools, hence employs Interpretive paradigm.

The interpretivist paradigm emphasizes understanding the subjective meanings and interpretations individuals attribute to their experiences. This research paradigm aligns with the qualitative research design, employing methods such as interviews and focus group discussions to gain in-depth insights into the perspectives and experiences of teachers, parents, and students with hearing impairment.

### **3.3 Research design**

#### **Ethnographic research design**

Ethnography as a research methodology is quite specific to the interpretive theory of knowledge. It is one of the most popular approaches to qualitative research used by researchers in the field of education. The word ethnography literally means “writing about people” (Johnson & Christensen, 2000). Ethnography essentially involves descriptive data collection as the basis for interpretation. It represents a dynamic “picture” of the way of life of some interacting social group. As a process, it is the science of cultural description (Burns 2000).

Ethnographers are interested in documenting qualities like the attitudes, values, norms, practices, patterns of interaction, perspectives, meanings, interpretations and language of a group of people. They take a holistic approach: they endeavor to describe how the individual members of a group interact and how they come together to make up the group as a whole. In other words, the group is more than the sum of its parts (Johnson & Christensen, 2000).

The researchers using this approach employ many different methods of data gathering, they often join a group of people that they study for a period of time and observe their lives in

action. They observe them, as far as possible, as if they were “one of them” (Henning *et al*, 2004).

An ethnographic research design has been chosen to assist the researcher in the task of systematically obtaining valuable information by observing students with hearing impairment in their inclusive educational settings and interviewing the qualified specialist teachers in order to be able to outline specific guidelines to assist the mainstream teachers of these students. In so doing generating rich and detailed qualitative data including observations, interviews which will provide a careful analysis and understanding of the research topic under study.

### **3.4 Methodology**

A qualitative research methodology was considered as appropriate in-line with the study objectives based on the interpretive epistemological assumptions. It followed a qualitative approach in collecting, analyzing and presentation of data related to teaching of young children with hearing impairment. Qualitative approach was preferred because it helps to understand better the feelings, opinions, views and practices of the respondents in relation to the phenomenon being studied (Kombo, & Tromp, 2006) The qualitative data was collected using interviews, Focus Group Discussions, Observation guide and documentary analysis.

It is a research method which appreciates the use of words rather than numbers in interpreting and understanding of the social world. This indicates that the researcher listens to the experiences of the research participants, analyses them and then constructs knowledge.

Interpretivism according to Bryman (2008) “stresses on the understanding of the social world through an examination of the interpretation of that world by its participants. It is the prime interest of the researcher to interact with the research participants, understand the world from their perspectives and together constructing the knowledge since reality lies with the people.

#### ***3.4.1 Population, Research site and Sampling procedure***

Gall et al, (2003) pointed out that it is only when a target population has been identified that a sampling procedure can be used. The population of the study consisted of 20 students with hearing impairments in four mainstream secondary schools of Thyolo, Mulanje, Luchenza and Phalombe located in Shire-Highlands Education Division. It also included mainstream teachers Head teachers Heads of Department as well as Specialist Teachers.

Purposive sampling procedure was used to select the Heads of Department, Head teachers, mainstream teachers and Specialist teachers and the learners with hearing impairment. This procedure was used because these elements were the only ones with critical information on how classroom communication affects the academic performance of students with hearing impairments in the mainstream secondary schools.

The total sample size therefore consisted of 50 respondents. Thus, sixteen (16) students with hearing impairments, ten (10) mainstream teachers, two (2) Heads of Department and two (2) Head teachers. In addition, 16 Specialist teachers were also part of the study sample. The Heads of Department, Head teachers and Specialist teachers were chosen because they were the only ones in charge of supervising classroom learning activities. Table 1 shows the distribution of the study sample.

*Table 3. 1: Distribution of respondents*

<b>Respondents</b>	<b>Total number</b>
Students with Hearing Impairments	16
Specialist teachers	16
Mainstream teachers	10
Heads of departments	4
Head teachers	4

The study sites were in Thyolo, Luchenza, Mulanje and Phalombe secondary schools respectively. In each of the study site, four (4) respondents were students with hearing impairments, one (1) Head of Department and one (1) Head teacher. In addition, sixteen (16) Specialist teachers and seven (7) mainstream teachers, were also part of the study sample. The students with hearing impairments were chosen because they had characteristics that were representative of the principal target group. The four secondary schools were selected because they were the only schools that accommodate students with hearing impairments so as to implement inclusive education in the division.

### **3.5 Data collection Methods and Tools**

The methodological instruments used for gathering information for this study were interviews and observation checklists.

## **Interview**

According to Thomson (2009), “interviews are the central element of the data collection process in phenomenological research.” Moreover, an interview is the meaning of making a process of knowing each other’s experiences (Seidman, 2006). Thus it was felt that interviews would provide the researcher with the best means to extract information from the participants to understand their views and experiences, because in “an interview situation it is possible for the researcher to obtain in-depth information by probing” (Kumar, 2005). Hence , interviewing is the preferred method of data collection in a situation where in-depth information is required. Avoke (2005) highlighted that interviews were an important aspect of qualitative studies. They were a way of verbally interacting with participants or respondents in conducting research. Interviews were also described as a form of conversation between two people. In terms of structure, they could be fully structured, semi-structured or conversational or unstructured. He continued that interviews could also be in-depth as in the case of ethnographic study, and specific strategies of interviewing which could involve the use of telephone, face to face or one-on-one or focus groups. The study opted for this method of collecting data because it helped the researcher to explore in-depth information regarding the phenomenon.

### **Semi-structured interview guide**

A semi-structured interview was prepared based on the research questions and observations done earlier. This helped the researcher to keep focused on the intended areas of interest during the interview process so as to maximize the use of the interview as part of the data collection kit and knowledge construction process.

The semi-structured interview guide provided the researcher with the opportunity to get rich information through the use of open ended questions which offered the platform for changes to questions and answers from participants.

As stated by Kvale and Brinkmann ( 2009), a semi- structured interview; seeks to obtain the descriptions of the life world of the interviewee with respect to interpreting the meaning of the described phenomena; it will have a sequence of themes to be covered , as well as some suggested questions. Yet at the same time there is openness to changes of sequence and forms of questions in order to follow up the specific answers given and the stories told by the subjects.

The interviews were conducted with the mainstream teachers, Heads of Department, Head teachers and Specialist teacher were interviewed in their natural school environments. The researcher interviewed the participants on the classroom communication modes used by teachers for students with hearing impairments. The interviews took thirty (30) to forty-five (45) minutes.

### **Observation**

Observation can be understood as a process and a method of data collection in which the situation of interest is watched and the relevant facts, actions and behaviours are recorded. Observation was chosen as one of the means to collect data because it has the power to enlighten and give clear picture and first-hand information about situations to the researcher that what people can say. This allowed the researcher to immerse in the local setting to understand and contextualize better in order to discover things that might otherwise have been missed if interviews alone were used to collect data ( Denzin & Lincoln, 2011).

An observation schedule was therefore prepared before hand. Bryman ( 2008), gives a highlight of the observation schedule as a device that specifies the category of behaviour that are to be observed.

The use of observation as a data collection tool brought on board some challenges in the way that some of the teachers and students conducted themselves knowing that they are being observed. The researcher realized that some of them put up false behaviours in line with Merriam's ( 2009) notification when she writes, participants who know they are being observed would tend to behave in socially accepted way and present in a favourable manner. For example, the teachers exaggerated their classroom communication modes used for learners with Hearing Impairment knowing that the researcher was there taking notice of every bit of the lesson for which questions are likely to be asked during interviews. Through observation the researcher was able to complement the information that was gathered in the interviews.

### **Classroom and Lesson Observation**

There was an observation guide to help the researcher observe the communication techniques used to teach P.1 – P.3 children with hearing impairment. The instrument had four sections that is, how pupils respond and how the teacher assessed his own lesson. Observation involves examining and recording what is happening in a real life situation (Amin, 2005).

This instrument was used for data collection because it provided first hand and rich information (Barbie, 2010; Holloway, 1997). “To yield rich data, a qualitative researcher

may therefore use indepth interviews, focus group discussions and observations”  
Mugenda & Mugenda 2003-P.203.

Post-lesson conferences (interviews) were held to ascertain and solicit for more views on classroom communication modes affecting the academic performance of children with hearing impairment.

### **Documentary analysis**

Documentary analysis was another instrument used in the data collection process. Creswell (2005) noted that documents consisted of public and private records that qualitative researchers obtain about a site or participant in a study and they included newspapers, minutes of meetings, personal, journal and letters. They also included, school records, folders, registers, archival records, correspondents or official government papers.

In relation to this study, documents such as student’s examination reports, class exercise books and assessment records were reliable sources for tracking the academic performance of learners with hearing impairments. It must be highlighted that class exercise books alone did not reflect the true performance of the learners since they may be helped by classmates hence the need for assessment and examination reports. The assessment records of learners with hearing impairments gave a continuous account of the overall performance of the learners. These documents helped assess classroom communication and the academic performance of learners with hearing impairments.

In order to enhance the reliability of the findings, the data collected was verified using triangulation and respondent validation. Triangulation was done by comparing data collected using different instruments to ascertain whether or not they collaborated. On the other hand,

respondent validation was done by relating the findings of the study with evidence from literature reviewed. In order to ensure that the findings were valid, both triangulation and respondent validation was used. For instance, data collected on classroom communication techniques from all respondents was cross-checked with data collected from observations.

### **3.6 Data analysis**

Vrakas and Anagnostou (2015) defines data analysis as the process of bringing order and meaning to raw data. Data was processed with the aid of micro soft Excel. Data processing involves editing the data collected and elimination of the errors made by the respondents to the completeness and checking whether all questionnaires were answered accurately and if the respondents interpreted instruction and questions uniformly. The researcher employed the use of both thematic and content in the data analysis. Qualitative data was analyzed using thematic and content analysis and the findings presented in text form. However, in some circumstances quantitative data has also been analysed using descriptive statistics presented in table charts, graphs, percentages and frequencies.

### **3.7 Validity and Reliability**

An equally significant aspect of the study was reliability and validity and these were therefore taken into consideration.

#### ***3.7.1 Validity of the instruments***

A panel of experts was used to ensure the face and content validity of the instruments. The questions found vague were eliminated or rephrased. Any ambiguities, misunderstanding

and inadequacies were eliminated (Amin, 2005). With regard to face validity, the words used in the instruments were simple, clear and related to the research problem.

With regard to content validity, the researcher ensured that he uses constructivism approach to validate multiple realities that people have in their minds about how classroom communication modes affecting academic performance of students with hearing impairment in selected mainstreams of the Shire Highlands of Education Division. Therefore, to acquire valid and reliable multiple and diverse realities, interviews were carried out by the researcher in order to gather the necessary data that was needed which led to more valid, reliable and diverse construction of realities.

### ***3.7.2 Reliability***

According to Kvale and Brinkmann (2009) considers reliability as what “pertains to the consistency and trustworthiness of the research findings; it is often treated in relation to the issue of whether a finding is reproducible at other times by other researchers.

In order to enhance the reliability of the findings, the data collected was verified using triangulation and respondent validation. Triangulation was done by comparing data collected using different instruments to ascertain whether or not they collaborated. On the other hand, respondent validation was done by relating the findings of the study with evidence from literature reviewed. In order to ensure that the findings were valid, both triangulation and respondent validation was used. For instance, data collected on classroom communication modes from all respondents was cross-checked with data collected from observations.

### **3.8 Ethical considerations**

The following ethical issues which were considered are explained below:

#### ***3.8.1 Permission to conduct the study***

Bell (1993) pointed out that no researcher could demand access to an institution, organization or to materials. Therefore, the researcher sought permission to conduct the study using an introductory letter from the University. This letter was handed over to the Desk Officer for Special Needs Education who introduced the researcher to the head teachers. The head teachers then authorized the respondents to partake in the study.

#### ***3.8.2 Informed consent***

Respondents in the study were informed about the nature and purpose of the study, and informed consent was sought before interviewing and administering questionnaires to them. The educational institutions were fully aware of the study and were very cooperative and participated fully.

#### ***3.8.3 Confidentiality and anonymity***

Confidentiality and anonymity was an essential element on the research agenda which was followed throughout the entire study. Confidentiality here implied that the researcher does neither publicise the raw data gathered nor the identity of the participants. Respecting the rights, dignity and privacy of those involved in the study was highly followed through. According to Neuman (2000), a researcher had a moral obligation to uphold confidentiality

of data, which included keeping information confidential from others in the field and disguising members' names in field notes. It is against this background that respondents were also assured of high levels of confidentiality. Pseudonyms were also used to protect the anonymity of the respondents in all transcripts and reports. In addition, the respondents were informed that the information gathered was purely for academic purposes.

### **3.9 Chapter Summary**

This chapter has presented the methodology used in the study. A case study design was used to explore classroom communication and academic performance of learners with hearing impairments. The study population composed of learners with hearing impairments, Heads of Department, Head teachers and Specialist Teachers and mainstream teachers. A total of fifty (50) respondents were used as the sample. This sample was selected using purposive and simple random sampling procedures. Three instruments namely, questionnaires, interview guides and observational checklists were used to collect data. Thematic analysis was used to analyse qualitative data. Furthermore, ethical issues were considered in the process of collecting data. The next chapter will present results and discussion of the study.

## **CHAPTER FOUR**

### **RESULTS AND DISCUSSION OF THE STUDY**

#### **4.1 Chapter Overview**

The chapter presents findings and discusses the findings of the study that explored how the classroom communication affect the academic performance of students with hearing impairments in Shire Highlands Education Division at Thyolo, Luchenza, Mulanje and Phalombe secondary schools. The findings are presented in line with the study research questions and guided by the theoretical framework that informed the study. The findings are therefore presented under the following themes: classroom communication techniques used in classrooms for students with hearing impairments, adequacy of learning materials for classroom communication, supportiveness of classroom environment for effective classroom communication and how classroom communication affects the academic performance of students with hearing impairments. The findings from the student's responses are presented first, followed by those from the mainstream teachers, Heads of Department, Head teachers and Specialist teachers. At the end, the findings are consolidated, interpreted and discussed with reference to literature, the findings from the other studies and the theoretical framework that guided the study.

## Demographic data of the respondents

The respondents of this study were the Headteachers of the selected mainstream secondary schools in SHED, students with HI, Specialist teachers and mainstream teachers serving in those schools.

Table 4. 1: Bio data of the respondents

Characteristics	Category	Frequency	Total
<b>Sex</b>	Male	13	50
	Female	37	
<b>Education level</b>	Certificate	8	50
	Diploma	10	
	Degree	11	
	Post graduate	1	
	Others ( students)	20	
<b>Age</b>	Below 18 years	5	50
	19-24 years	20	
	25-30 years	5	
	31-36 years	21	
<b>Teaching experience</b>	Less than 1-3 years	4	30
	Above3 years	26	

**Source: Primary data, 2019**

Table 4.1 shows that both specialist and mainstream teachers in the selected mainstream secondary schools for SHED in the targeted sample population are mainly female. The majority (37) of the respondents who participated in the study were female. Majority of the respondents (21) were in the age category of 31-36 years. This shows that majority of the respondents were mature and were able to answer the questions asked.

The results further show that (20) of the respondents were in the age category of 19-24 while (5) of them were in the age bracket 25-30 years. This result further indicates that the researcher was able to get information from knowledgeable and mature respondents. Table 4.1 further shows that (26) of the respondents had experience in teaching students with hearing impairment in the selected mainstream secondary schools. These findings indicate that majority of the respondents have knowledge and skills regarding the topic under study. The Table also shows that only (4) of the respondents have taught students with hearing impairment for only less than one to three years. Majority (11) of the respondents had attained a Degree in teaching students with HI. Only (10) of the respondents had attained a Diploma. This result indicates that most of the respondents had received some level of training regarding students with hearing impairment.

#### **4.2 Classroom communication techniques used in classrooms for learners with Hearing Impairment**

The researcher wanted to find out the classroom communication modes used in classrooms for learners with hearing impairment. Learners, teachers and the head teacher were asked to state the mode of communication that was used by both learners with HI and teachers during teaching and learning activities. In relation to communication modes used in classrooms for learners with hearing impairments, the findings from the learners are tabulated in Table 2

*Table 4. 2: Shows classroom communication modes*

<b>Classroom communication mode</b>	<b>Number of responses</b>
Sign language	18
Writing	15
Facial expressions	20
Body Language	20
Gestures	14
Lip reading	9
Verbal communication	2

The results of the findings, showed that there were various communication modes being used by students with hearing impairment. Findings showed that, concerning the types of classroom communication mode used in classrooms for students with hearing impairments, the most commonly used classroom techniques as indicated by students with hearing impairments included verbal, lip-reading, gestures, body language, facial expressions, writing and sign language. Of these classroom communication techniques, 20 of the students with hearing impairments indicated that the teachers commonly used facial expressions and body language. 18 of the students with hearing impairment stated that the teachers commonly used sign language while 15 students indicated writing and 14 mentioned gestures as the commonly used classroom communication techniques whilst and on the other hand, the least

commonly used classroom communication technique was verbal communication which was only indicated by 2 of the students with hearing impairments.

#### ***4.2.1 Classroom communication techniques that teachers indicated they used when teaching students with hearing impairments***

In relation to the classroom communication techniques that the teachers used in classes for students with hearing impairments, the study found that the teachers did not use sign language, finger spelling, facial expressions, gestures, writing and verbal communication which is contrary to what the students with hearing impairments felt the teachers used. For example, most of the teachers who served in the short term (2-4 years) category indicated that of all the classroom communication techniques used in the classroom for students with hearing impairments were finger spelling, writing and verbal techniques. One of the teachers said:

*In relation to communication, when I first started teaching learners with hearing impairments, I had very little knowledge of sign language. I mainly relied on other teachers and learners to assist me. What I use the most is finger spelling, writing on the board and verbalizing as I try to sign. This is because I only know limited signs. (interview with Teacher D on 21<sup>st</sup> June, 2018).*

Another teacher commented that:

*Learning to communicate with learners with hearing impairments has been a fascinating journey which in my opinion never comes to an end. This is because every day, I am learning new signs for different words. I find finger spelling and writing to be most useful for me because even if I do not know the*

*signs very well, the learners can interpret for themselves.* (interview with Teacher B on 21<sup>st</sup> June, 2018).

On the other hand, long serving teachers indicated that the most comfortable classroom communication techniques for them included gestures, body language, sign language and verbalizing. One teacher said:

*Because of my vast experience in teaching these children, I come to realize that gestures and body language combined with sign language are the easiest ways of communicating. Body language and gestures are most beneficial because they do not require you to be taught and even a learner with hearing impairments who doesn't know sign language is able to read in between the lines.* (interview with Teacher A on 21<sup>st</sup> June, 2018).

Another teacher had this to say:

*I am very comfortable with sign language. My sign language vocabulary has increased with the extensive years of teaching students with hearing impairments such that I use more of sign language than any other type of classroom communication.* (interview with Teacher B on 21<sup>st</sup> June, 2018).

The study results were supported by Borefoot (2011) who found out that, the communication of students with hearing impairment can be diverse and included language modality, cultural identity, emotional, gender and physical influences. He reported that classroom communication was about using a suitable language to convey and decode ideas or meanings, to exchange views explain processes or demonstrate skills. It is true that students with hearing impairment value learning with their communication strengths such as access to visual

information and opportunity to use their strongest language (Borefoot, 2011). Most learning occurs through interaction with other people; such learning is possible only when individuals are able to communicate with understanding. Likewise, the quality of a relationship between a learner with hearing impairment and his/her teachers was dependent on the quality of communication between them. Thus, the choice of communication mode that would be most effective is of the greatest importance.

In addition to the points above, the study results showed that, most teachers were not conversant with Malawi Sign Language. It was also noted that most students with Hearing Impairment preferred using MSL for purposes of interacting with one another outside the classroom. Adoyo (2004) in support of this study findings reported teachers lack of competence in Malawi Sign Language and attributes this to lack of interest in it. This showed clearly that there was a gap between the classroom communication modes that students and teachers preferred. It must be noted that when teachers engaged Signed Exact English and Total Communication as a classroom communication mode, learners were not able to fully benefit from lesson presentation. This, in-turn, affected learners' academic performance. One teacher indicated that, of all the classroom communication modes used in classroom for students with Hearing Impairment, the most comfortable classroom communication modes was writing. Thus, the teachers agreed that, classroom communication either enhanced or negatively affected the academic performance of students with Hearing Impairment.

The findings also reviewed that Malawi Sign Language was hardly used in communication between teachers and students with hearing impairment; this resulted in students failing to understand lessons and found it very difficult to learn. The current trend in the education of

students with HI as earlier stated emphasize the use of total communication as a philosophy that encourages incorporation of oral communication, manual communication and other components such as writing, gestures, body language, drawing and facial expression.

The findings of this study are supported by Duncan, Rhodes and Fitzpatrick (2012) who revealed that communication can be verbal or non-verbal. It can also involve the use of gestures, signs, speech or a combination of both methods. If teachers could have proficiency in sign language as a component of Total Communication philosophy, they could easily interact and motivate students with Hearing Impairment to engage in constructive dialogue and as such boost their communication as well as their academic performance. However, the study results showed that despite students with Hearing Impairment being able to communicate, their teachers' proficiency in Malawi Sign Language, was inadequate. On the other hand, the student's proficiency in Malawi Sign Language was adequate for they learn this communication mode while they are young. This shows that there is a need for in- service courses for teachers who teach students with Hearing Impairment to improve their skills in Malawi Sign Language in case they delay behind their students for the students' proficiency in Malawi Sign Language is excellent because they learn the Malawi Sign Language skills while they are young.

#### ***4.2.2 Classroom communication techniques that students with Hearing Impairments were most comfortable with***

In relation to classroom communication techniques that students were comfortable with, the findings showed that 18 were comfortable with the teachers' use of sign language, 15 were comfortable with the use of facial expressions and body language. The other students with

hearing impairment, 13 reported that they felt comfortable when the teachers used gestures whilst 10 of the students indicated that they were comfortable when the teachers used writing as a means of classroom communication mode. Table 4.3 presents the classroom communication modes that students with Hearing Impairments felt most comfortable with when the teachers used them.

**Table 4.3 Classroom communication techniques that students with Hearing Impairments felt most comfortable**

*Table 4. 3: Classroom communication modes that students with HI felt comfortable*

<b>Classroom communication mode the students felt most comfortable with</b>	<b>Number of students</b>
Sign language	18
Writing	10
Facial expressions	15
Body Language	15
Verbal communication	5
Lip reading	8

On the other hand, 8 of the students were very uncomfortable when the teachers used lip reading as a means of classroom communication mode and 19 of the students indicated that they were very uncomfortable with the use verbal language as shown in the table above.

## **Communication Challenges Teachers Encounter during Lesson Presentation**

In relation to challenges that teachers encounter during teaching and learning activities, teachers cited limited sign language vocabulary, differences in signs among students, lack of formal assessment reports, big class sizes, insufficient lightening and ventilation, as well as inadequate teaching and learning materials. Findings further showed that, students came from different backgrounds and each students posed different communication challenge to the teacher. The competence in sign language among students with hearing impairment varied and as a result teachers found it difficult to cater for individual communication needs. To this effect, one teacher narrated that,

*There was a common myth that if you have a hearing impairment, then you automatically know sign language but that is not the case. We have noticed that, some learners who came from different schools learnt to sign certain words differently and this is a huge challenge. These learner's academic performance is below average because classroom communication is a huge challenge. My greatest challenge with such learners is how I can best communicate with them without inconveniencing the other learners. This is mainly because they need to be communicated to like they are in lower classes (1- 2) yet they are in upper classes (3-4).*

It can be argued that, such a situation where there is difference in sign language, the pace of the lesson is affected. This is because communication at this point, between the students and the teacher, involved a lot of finger spelling and assigning of an appropriate sign to a proposed word. It must be highlighted that when too much time was spent in finger spelling, the pace of the lesson was slow, some students got bored and the teacher failed to complete assigned

tasks. This in turn, negatively affected the academic performance of students with Hearing Impairment because they never completed the syllabus and exams were set covering the whole syllabus.

The findings also showed that, teachers had problems in making students with Hearing Impairment to understand written instructions. They felt that the reasons for students not able to understand written instructions were:

- Teachers' incompetence in signing thus making it difficult in signing the written instructions;
- Students' inadequacy in English vocabulary thus not able to understand written instructions;
- Students with Hearing Impairment are good in Malawi Sign Language and when a teacher uses Signed Exact English, the two have different sentence structure thus causing confusion.

It must be highlighted that, the teaching and learning process of learners with Hearing Impairment must include the use of different classroom communication simultaneously. For instance, the teacher may use facial expressions, signs, verbal and body language at the same time. All languages have expressive and receptive features for communication. Teachers are therefore encouraged to use different communication modes to teach students with Hearing Impairment.

The findings were supported by Borefoot (2011), who reported that, students with Hearing Impairment value learning with their communication strengths such as access to visual information, opportunity to use their residual hearing and use of their strongest language.

**Communication Challenges encountered by students with Hearing Impairment.**

In relation to communication challenges encountered by students with hearing impairment, the researcher sought to find out if students were able to follow through lessons using the teacher’s classroom communication modes. The results are tabulated in Table 4.4

*Table 4. 4: Challenges distribution*

<b>Communication challenges faced by students from the teachers lessons</b>	<b>Number of students responded</b>
Have problems in understanding speech	9
Have problems in understanding signs	6
Have problems in understanding written instructions	5

The findings showed that, all the students experienced problems in one way or another in understanding teachers during lesson presentations. The findings revealed that, 9 students

experience problem in understanding oral communication. This showed that, it was difficult for most students with hearing impairment to rely solely on lip-reading to communicate as they could only pick up a small percentage of what was being said. Speech requires patience, in observed lessons, most students with HI were observed frustrated and humiliated in the process of learning. Though it's difficult to lip-read, many students with hearing impairment naturally try to lip-read. It must be noted that, students with moderate hearing usually do not understand what the teacher says without using hearing aids.

However, some students could only lip-read for a certain period of time. The study results were supported by Duncan (2010) who found that, students who only used lip-reading for a long period of time lagged behind in their comprehension, had limited vocabulary, had poor pronunciation of words and speech sounds and felt fatigued towards the end of a lesson and 59 lost concentrations. Not only did such students misinterpret verbal speech but they also frequently misinterpreted written lessons and reading materials.

Six students representing had problems in understanding teachers' signs during lesson presentations while five students reported having problems in understanding teachers written instructions. This can be traced from an interview with the head teacher, who revealed that, most teachers struggled to present good lessons because they did not know or had not yet grasped how to effectively communicate with students with Hearing Impairment.

During observation, the researcher noted that, teachers and students had difficulties in understanding each other signs. Students signed and finger spelt very fast, while teacher's signs were hard to understand due to incorrect positioning of hands. This implied that, if

teachers did not have knowledge and skill in signing, the performance of such students would be below average all the time. Therefore, patterns of communication ought to be improved in the case of students with Hearing Impairment. However, there is an observable increasing gap vocabulary growth, complex sentence comprehension and construction among students with Hearing Impairment to the point of posing a challenge on their academic performance.

### **4.3. Classroom Environment**

The researcher sought to find out if classroom environment was supportive to classroom communication for students with HI. This section presents, lighting, ventilation, how noise was kept away from the classroom and classroom seating arrangement.

In relation to classroom environment, teachers responded that, in some ways classroom environment was supportive but in other ways it was not. The findings revealed that, the model of the classroom as at Thyolo and Mulanje secondary schools were made in such a way that they accommodated a maximum of 60 students at any given time. These prescribed classrooms enabled enough ventilation, lighting and one-on-one teaching interaction with the students. This was especially noted in the lower classes, where the class sizes were small and consisted of about a maximum of 40 students.

These findings were supported by Ekwama (2003) who found that in order to accommodate students with HI who use hearing aids; it was vital to minimize noise. If there was noise from outside, doors must be shut. These measures were put in place in order to reduce background noise.

Findings further revealed that, the background noise, sound and distance from the speaker were real issues for students with HI; even those with mild or unilateral hearing losses who were able to hear. This included noises such as those made in woodwork and metal workshops, other machines found in the school such as for tailoring and knitting, and noise outside the classroom or in the corridor. Sound and background noise can be minimized by making sure that, the windows have some covering and students keep noise at minimum. However, the classroom environment for the upper classes had been compromised by the large class sizes, therefore, making it difficult for the teacher to communicate effectively. What even made the situation worse was that, the class sizes were quite large, ranging from 40 - 70 per class and yet the classrooms themselves were small. With such an arrangement of large class sizes, it was difficult for teachers to offer one-on-one learning experience with their students. It was difficult for the teachers to address the individual needs of the students. This negatively affected performance of the students with Hearing Impairments.

Furthermore, when classrooms cannot manage noise, students with hearing residuals usually tend to be irritated by the background noise. Many students who had mild Hearing Impairment failed to make use of their residual hearing because of environmental barriers such as a classroom environment that was not friendly for use of amplification devices. This was because classrooms lacked resources that could have enabled the environment to be least restrictive.

In relation to the seating arrangements, findings showed that most students could not see the teacher or the peers clearly from where they sat. It is very cardinal that students with Hearing Impairment are seated so that they can see both the teacher and their peers as much as possible. This can be attributed to the fact that students are able to see the various signs, lip-read and read body language as they are in full view of all participants in the classroom. Similarly, any seating arrangement should not isolate the learner. The implication of the seating arrangement in this study was that, students with hearing impairment tend not to participate actively in class. The seating arrangement negatively affected the performance of students with Hearing Impairment. Moreover, certain students with hearing impairments also had visual impairments. These students needed to have a very clear view of the teacher, peers and chalkboard of which without, the students were more handicapped.

The study results were supported by a study carried out in Zambia by Malunga (2007) titled “An investigation on the use of sign language and oral language by regular teachers teaching students with Hearing Impairment” which showed that, in relation to the learning environment, the best possible conditions would need to be in place, for example a quiet place and good lightening. This would allow students with Hearing Impairment, to concentrate and follow what is being lip-read.

Just like communication modes plays vital role in enhancing academic performance, classroom environment is vital in enhancing classroom communications. If classroom environment is to play a positive role in the academic performance of students with Hearing Impairment, certain accommodations need to be made in the classroom. Accommodations

such as small class sizes, spacious classroom, well ventilation, a good lighting all positively affect the student's performance.

#### 4.4. Classroom Communication

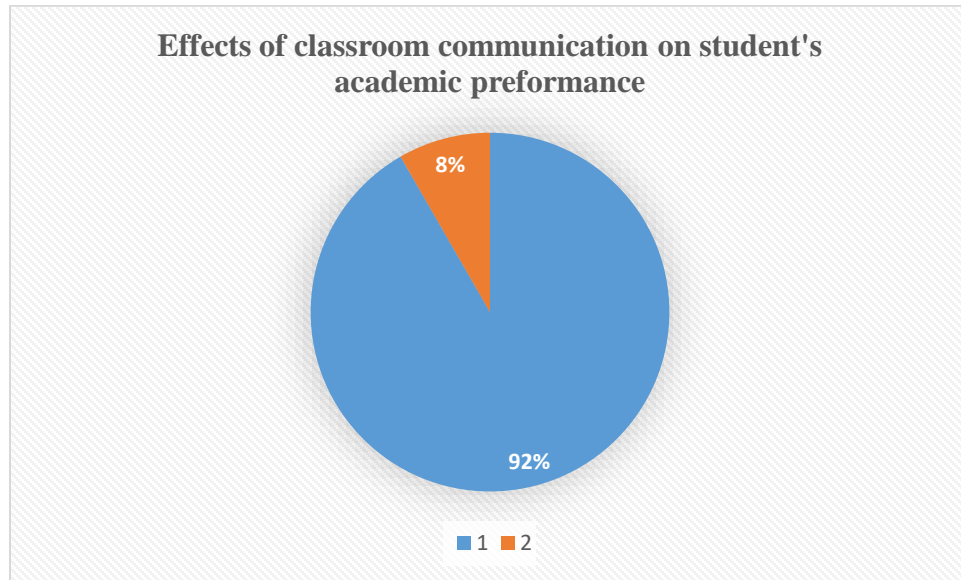
The researcher sought to find out the effects of classroom communication on academic performance of students with Hearing Impairment. The study findings showed that, almost all teachers agreed with the importance of classroom communication. They believed that teachers should be able to communicate effectively during lesson presentations. The study findings indicated that, the majority of teachers agreed that, learners were more motivated and believed that they benefited more from the lessons that were effectively communicated. In relation to academic performance, the researcher asked the four school head teachers, heads of departments and specialist teachers to indicate students' academic average performance to find out the classroom communication effect. The responses are illustrated in table 4.5.

*Table 4. 5: Classroom communication effects on students' academic performance*

<b>Marks</b>	<b>Respondents</b>
Below average ( 0 – 40)	20
Average ( 40- 69)	0
Above average ( 70 – 100)	0

Findings of this study showed that all the 20 students performed below average. This performance affects the quality of education for students with HI.

In relation to effects of classroom communication on students' academic performance, the responses are illustrated in Figure 1 below.



*Figure 1: Showing effects of classroom communication on students' academic performance*

The study findings showed that, eighteen learners with Hearing Impairment reported that teachers' poor communication skills negatively impacted on their academic performance. This was noted during lesson observation especially in a Social Studies and Science lessons where the teachers kept on using finger spelling and the learners were unable to give a sign to most of the words in the sentences. Similarly, teachers also observed that students who communicated constantly in class, performed far much better than passive students. However, most of the students lagged behind in classroom communication skills and this affected their academic performance.

The study results were supported by EQUIP (2006) who reported that in developing nations, ninety percent (90%) of learners with HI were born into “hearing” families where there was no exposure to sign language or to the existing culture of persons with HI. These learners with HI were typically deprived of the communication skills they needed for social development, incidental learning, academic pursuits and gainful employment respectively.

The analysis of the findings of this study highlighted a notable contrast between the classroom communication needs of the student with HI and what the teacher had to offer. For instance, findings of the study also revealed that most students preferred MSL and finger spelling. Teachers on the other hand preferred Signed Exact English (SEE), writing and Total Communication (TC). This discrepancy, negatively affected the academic performance of students with hearing impairment. This was because the communication needs of the individual student were not met.

Moreover, the communication strengths of students with HI were not fully utilized by the teachers. Questions that arise from these findings were firstly, is there effective classroom communication between the student and the teacher if their communication needs are in contrast? Secondly, if not, who is to adapt, the teacher or the student? Thirdly, how can the classroom communication management strike a balance between the communication needs of the student and the capabilities of the teacher?

As to whether there was effective classroom communication with regard to modes used, an analysis of the findings and observations of the study showed that, to a minimal extent, the classroom communication modes used were effective. However, the analysis of the participant’s responses and observations indicated that the classroom communication modes

used were somehow effective but this cannot be conclusive on a practical basis. This is because, to a larger extent, the individual classroom communication needs of the student had not been clearly established. The deficit in classroom communication skills had created the perception by many students with normal hearing that students with HI were intellectually deficient. This classroom communication deficit has negatively affected the academic performance of student with HI. These findings were traced to the difficulty in language usage which made it difficult for students with HI to communicate intelligibly with hearing students. With reference to the aforementioned, it can be argued that when communication skills are lacking, academic performance is negatively affected. It can be deduced from the findings of the study that the communication skills of majority of the students with HI were lacking as a result of limited sign language vocabulary and unsupportive classroom environment. Consequently, the student's sign language, reading and writing skills have equally been affected.

This is supported by Marschark (2003) who highlighted that, language serves as the vehicle for many thought processes. The influence of languages on thought processes was illustrated by the concept of verbal mediation which facilitates learning, retention and understanding. Findings in this study also revealed that majority of students with HI struggled to read, had poor memory and also struggled to understand what they read. These students were slow even when it came to copying notes from the chalkboard, they required extended time to complete tasks, and as a result, they took much longer time to complete the curriculum syllabus as compared to the hearing counterparts. Many of the students could not work independently in the classroom. These students were slow because of poor linguistic skills for effective

communication. Therefore, poor linguistic skills for effective classroom communication negatively affected the academic performance of students with hearing impairment. The study findings were supported by Marschark et al. (2006) who found that deaf adults in traditional learning environment often felt left out of classroom communication because of the language that existed between the delivery of information by the instructor and the signing of the content by the interpreter. studentss with hearing impairment also reported difficulty in responding to the instructor's questions or asking timely questions. Academic performance therefore, was the demonstration of learning of subject content and process. The study results were supported by a study done by Albertine and Lang (2001) that aimed to determine how well learners with hearing impairment understood science concepts. They analyzed a sample of 10 written contents in science literacy for students in Form 3 through 4 and reflective comments from their teachers.

The teacher's views in this research established that the mode of communication (verbal or non-verbal) well acquainted to the students with hearing impairments had an impact on their scientific content understanding and writing. An analysis of the experiences of teachers of learners with hearing impairment who use sign language in teaching confirmed classroom engagement, active participation, and peak performance for learners with hearing impairment. The study findings showed that teacher's communication skill and language of instruction were vital in effective content delivery. Consequently, while communication is extremely important to the overall successful education of learners with hearing impairment, no one communication mode(s) should be at the forefront of academic performance. It can be seen from the analysis that classroom communication was a very important component in teaching

and learning process of learners with hearing impairment. This was because classroom communication enables learners to understand the content of the lesson and also to communicate effectively with the teachers as well as with their fellow peers.

The study results were supported by Ainscows (2007) who asserts that, classroom instruction that produces positive results acknowledge the need for a liberal use of nonverbal cues, learner's involvement and team communication. Areas of achievement and failure in a learner's academic life need to be evaluated in order to foster improvement and make full use of the learning process.

#### **4.5. Learning materials**

The question as to whether there were adequate teaching and learning materials in classrooms for learners with HI was intended to explore the availability of learning materials, accessibility of textbooks, adequacy suitability and utilization for effective classroom communication.

The researcher also wanted to find out whether the teacher simplified the vocabulary in the text books. Teaching-learning materials play a very important role in the teaching and learning process of learners with HI. This is because, learning materials such as books, charts, pictorial illustrations just to mention but a few, help learners to build on their vocabulary. In order for learners with HI to fully benefit from academic learning and teaching modification of the curriculum to suit their communication needs, cannot be overemphasized.

Research carried out by Ainscow (2007) highlighted that will be no education, no matter how qualified and relevant the adaptation of content, methods and organization seems to be often, opinions about the methods used in programs for learners with HI were based on best practices to instruction. Teaching and learning materials are important for effective teaching. This is because they motivate learners with HI to learn and also increase their retention capacity, reducing the language barrier. Teachers and the head teacher were asked to state whether teaching and learning materials influenced the learners' academic performance. Their responses are presented in Table 4. 6.

*Table 4. 6: showing Influence of teaching and learning materials on students' performance*

Teachers	Frequency	Percentage	Ways in which Teaching / Learning materials influence learning			
			Availability	Suitability	Utilization	Adequacy
Yes		80 %	20 %	30 %	10 %	40 %
No		20 %	N/A	N/A		
Total		100 %				

The findings showed that, majority of teachers representing 80%, agreed that learning materials affected the academic performance of students with HI. In case of ways learning materials influenced the students' in the teaching and learning process, they gave varied responses in mentioned suitability and 40% adequacy, and only 10% attributed this to utilization. The teachers' responses indicated that adequacy of the learning materials was the key factor, followed by suitability. Although there were few learning materials in classrooms, students with HI require special assistance in the teaching and learning process to enable them use their full potential. Teachers gave their views on the use of teaching-learning materials as the researcher also observed the lessons for confirmation purposes and the results are presented in Table 4.7.

*Table 4. 7: Shows usage of teaching and learning materials*

T/ L materials	In class		How used	
	Yes %	No %	Effectively	Ineffectively
Text books	38 %	62 %	25 %	75 %
Charts	13 %	87 %	10 %	90 %
Teacher made resources	0	100 %	N/A	N/A

Findings showed that, textbooks were not available in most of the lessons observed (62%). However, it was also noted that some textbooks were not enough in most of the lessons observed, hence, not effectively used (75%). This implies that, students had to share the few textbooks available. This has negative implication on the teaching and learning processes, in turn students with HI were unable to keep pace with hearing students in their academic performance. It was also noted that even though there were charts, in some lessons observed (13%) they were hardly utilized by teachers in the teaching and learning process. In particular, the majority of the lessons (90%), charts in classrooms were ineffectively utilized and only 10% utilized, the charts.

It was also observed those resources made by teachers were not used at all. Use of such learning materials creates students' interest and motivation. This was particularly important for students with HI to require motivational techniques in order to sustain their attention as well as promote their concentration (Borefoot, 2011). Therefore, teachers ought to improve learning materials where necessary such as to create a satisfactory learning environment that would enhance academic performance among students with HI.

An analysis of the findings clearly shows that learning materials were scarce in classrooms for students with HI. These findings call for concern because students with HI are visual students and require readily, available and accessible learning materials. When learning materials such as textbooks are inadequate students with HI face challenges in building vocabulary. As a result, they had very limited vocabulary. This limitation negatively affects their academic performance because there is a discrepancy between their vocabulary for communication and that of hearing students.

Teachers and head teacher also cited scarce resources, high book to learner ratio of 1 to 9; outsourcing learning materials and under stocked school library. An analysis of these findings showed that much as the simplified the vocabulary in textbooks, majority of the students still found it difficult to comprehend. This can be attributed to the inadequacy of learning materials. Students did not have the privilege to be exposed to extensive vocabulary and as a result they relied too much on the teacher to simplify most of the work. This requires that, when the teacher is not there to communicate or interpret the work, most of the students will perform below average because of teacher dependency. This dependency negatively affected their academic performance. When students are exposed to learning materials they build on their vocabulary and in the long run, they become more confident. This is because, they have more communication options.

These findings were supported by Stubbs (2002) who found that the availability of adequate textbooks and other instructional materials has been shown to be one of the most positive and consistent factors of teacher's willingness to teach as well as students learning achievements

with scarce textbooks and minimal access. Students with HI continue to have limited vocabulary because they cannot practice their English. This is specially the case in Malawi where the language of instruction is English. There has been very little information nationally on the classroom experiences and academic performance of students with HI. From the researcher's observation, some items were available, others were not. The classroom environment was not at all supportive to effective communication and this could have contributed to low academic performance.

## **4.6 Researchers' Observations**

### *4.6.1 Communication modes in use*

#### *4.6.1.1 Speech/Lip reading*

It was observed that most teachers used speech and lip reading in which only few students seemed to be able to read. This was not effective as most students lacked hearing aids and were also unable to follow the lessons thoroughly.

#### *4.6.1.2 Manualism*

It was also observed that only few teachers were able to use signs in which also few students were able to follow up the lessons. On the other hand, it was fair since most teachers were not competent in Malawi Sign Language, in addition to that body language was not incorporated.

#### *4.6.1.3 Malawi Sign Language*

It was observed that most teachers had difficulties in Malawi Sign Language skills in which most of their lesson summaries were in written form which made students failing to understand the main concepts. Therefore, teachers need to be offered an In-service training and practice other communication modes. Since Malawi Sign Language is the mother tongue for students with HI, therefore teachers need to learn, master and use it.

#### *4.6.1.4 Total Communication*

The researcher observed that most teachers used Total Communication though body language and signs were hardly incorporated. It can be commented that since Total Communication combines all modes of communication, teachers should use it for the benefit of students with HI.

#### *4.6.1.5 Writing*

All teachers used writing although most of them were not able to make the students understand the written contents. This is to inform that teachers should find means and ways of making students understand the content material.

### **4.7 Classroom environment**

#### *4.7.1 Noise*

There was no sound proof which disturbed the students with mild hearing. However, they were disturbed with outside noise. In this case, there is a need for all classrooms to be sound proof.

#### ***4.7.2 Ventilation***

It was observed that most classes had windows permanently closed which can also affect the learning conditions of students with HI. In this case, it can be advised that all classes need fresh air, hence having windows opened.

#### ***4.7.3 Lighting***

It was observed that there was not enough light as the windows were covered. This affected the communication between the teachers and the students with HI since Sign Language cannot be done in dark conditions. To correct this condition, the classes need enough light so that students can be able to see well all the activities taking place in the classroom, for example, signs from teachers and peers.

### **4.8 Teaching and Learning materials**

#### ***4.8.1 Textbooks***

The researcher through observation discovered that, there were not enough textbooks for the lessons observed, and in some subjects, the textbooks were not available and few in some subjects that were shared in a ratio of 1:15. It can be recommended that each and every subject should have enough textbooks and this will assist students to improve their vocabulary.

#### ***4.8.2 Charts, Real objects and Pictures***

The charts and pictures were available in some classes. They were suitable, well labelled and well-drawn. It was also observed that real objects were not used in all the lessons observed.

It is important that teachers need to use real objects where necessary for it assist students with HI to improve their academic performance.

From the researcher's observations in all the classroom communication modes, it can be concluded that some items were available, others were not. The classroom environment was not all supportive to effective communication and this could have contributed to low academic performance of the students with HI.

#### **4.9 Chapter summary**

The chapter has presented findings and discussed the findings of the study that were explored on how the classroom communication affect the academic performance of students with hearing impairments in Shire Highlands Education Division at Thyolo, Luchenza, Mulanje and Phalombe secondary schools. The findings are therefore been presented under the following themes: classroom communication techniques used in classrooms for students with hearing impairments, adequacy of learning materials for classroom communication, supportiveness of classroom environment for effective classroom communication and how classroom communication affects the academic performance of students with hearing impairments. The next chapter will present conclusions and implications of the study.

## CHAPTER 5

### CONCLUSIONS OF THE STUDY

#### 5.1. Chapter overview.

This chapter presents the conclusions and the implications of the study on the effects of classroom communication modes on the academic performance of students with hearing impairments in mainstream Secondary Schools of Shire Highlands Education Division. The objectives of the study were as follows: To identify classroom communication modes that were used in classrooms for students with hearing impairments, to establish whether there were adequate learning materials for students with hearing impairments, to establish whether the classroom environment was supportive of effective classroom communication and to determine how classroom communication affects the academic performance of students with hearing impairments

Through the findings of this study the possible factors that contributed to the poor academic performance by learners with HI have been clear, as outlined below:

1. Teachers preferred using Total Communication and Signed Exact English while on the other hand learners with HI preferred using MSL and Finger Spelling. This showed that there was a gap between what the teachers had to offer and what learners had to take. This difference between teachers and student's classroom communication contributed to students not asking questions during lessons participating in class activities and failing to analyze and explain what they were taught. As a result, almost 88% of the students' academic performance was below 40% pass mark. This in turn had contributed to student's low academic performance.

2. It was also observed that, majority of teachers lacked the knowledge and skills of Sign Language. Therefore, they could not effectively assist these learners to boost their academic performance. It was also noted that, teachers did not give individual attention to students with HI. This probably encouraged those students to be left out in the teaching/learning process. Such a situation is likely to result in low academic attainment by such students. This could be attributed to prevailing factors related to teachers, students and the learning environment such as poor seating arrangements, suitability and adequacy of teaching/learning materials and lack of knowledge and skills in communication modes.
3. The study also revealed that, the teaching and learning materials needed for enhancing classroom communication were inadequate. The classroom environment was totally not supportive to effective classroom communication as it was only in lower classes (1-3) that had talking walls. Most of the classes had poor lighting and ventilation
4. Seating arrangement hindered most of the students from seeing the chalkboard, teachers and other students during lesson presentation.
5. Some factors influenced the academic performance during the lesson proceedings, while others influenced them by consequential effects occurring either before or after the actual learning and teaching process. This study concluded that, classroom communication was a major cause towards low academic performance of students with hearing impairment.

It is apparent from the study findings that classroom communication is very crucial and much more so to students with HI.

## REFERENCES

- Aaker, D.A., Kumar, V. and Day, G.S. (2007). *Marketing Research (9th ed)* UK. John Wiley & sons
- in Ademokoya, J. A., (2008). *Classroom Communication and Placement of the Deaf Child in an Inclusive Class*. Ibadan: Agbo Area.
- Adoyo, P. O., (2004). *Kenyan Sign Language and Simultaneous Communication*. Differential effects on Memory and Comprehension in deaf children in Kisumu-Kenya). Lake publishers & Enterprise Ltd.
- Albertini, J. A., & Lang, H. G., (2001). *Construction of meaning in authentic science writing of Deaf students*. Journal of Deaf Studies and Deaf Education. 6(4) 258 – 284.
- Ainscow, M., (2007). *Teaching for diversity, the next big challenge in Connelly*. Sinneba; University of Education.
- Asha, J., (2001). *Exceptional children*. Jitendara Lehigh University.
- Avoke, M., (Ed). (2005). *Rudiments of special Education*. Winneba Special Educational Books. Department of special Education. University of Education.
- Bernard, H.R., (2010). *Analyzing qualitative data; Systematic Approaches* Thousand oaks CA: Sage.
- Borefoot, M. S., (2011). *Classroom Communication*. Sage.
- Bunyasi, B. A., (2010). *Relationship between self-esteem and academic achievement for girls with hearing impairment in Kenya*. (Unpublished Doctoral dissertation) Kenyatta University Nairobi, Kenya.
- Creswell, J. W., (2005). *Educational Research Planning, Conducting and Evaluating. Quantitative and Qualitative Research (2nd Ed)* New Jersey: Pearson & Merrill Prentice Hall.

- Didier, D (2013). *How to estimate your population and survey sample size*. Department of Political Science, Antwerp Area, Belgium.
- Duncan, J. Rhoades, E.A & Fitzpatrick, E. (In Press 2012). *Adolescents with hearing loss. Auditory Rehabilitation*. New York, NY: Oxford University Press.
- Duncan J., (2006). *Application of the auditory-verbal methodology and pedagogy to school age children*. Journal of education audiology: 13, 39-49.
- Duncan, J., (2010). *Circles of influence*. EA toward a family centered Approach Springfield, Ili Charles Thomas.
- Duncan, J., Rhoades, E. A & Fitzpatrick, E. (2012). *Adolescents with hearing loss. Auditory Rehabilitation*. New York, NY: Oxford University Press.
- Educational Quality Improvement Programs (2006). *At Risk Deaf Youth Program description*. Pdf. Retrieved on 20/04/2017 from: [www.equip123.net/docs/e3](http://www.equip123.net/docs/e3).
- Ekwama, M. B., (2003). Communication Systems used with Hearing Impaired with defective educational practices in special education. *The special educator* 3(1), 46-51.
- Enns, C., (2007). Process and Product: Creating Stories with deaf Students. *T.E SL Canada Journal*, 25 (1), 1-22
- Fraenkel, J.R., Wallen, N.E. (2006). *How to Design and Evaluate Research Methodology Methods and Techniques, (2<sup>nd</sup> ed)*. New age International Publisher, New Delhi.
- Harding, J., (2013). *Qualitative data analysis from start to finish*. London; Sage Publication
- Heward, W. L., (2002). *Exceptional Children: An Introduction to Special Education*. New Jersey Prentice hall.
- Heward, W. L., (2006). *Exceptional Children (8th ed.) An introduction to special education*. New Jersey Pearson Ed. Inc.

- Hunt N., & Marshal, K., (2002). *Exceptional Children and Youth; An introduction to special education (3rdEd)* Boston: Houghton Mifflin Company.
- Kamonya, K., (2008). *Factors hindering effective teaching and learning activities for hearing impaired students at Karen Technical Training Institute of the deaf.* (Unpublished Master Thesis) Kenyatta University, Nairobi, Kenya.
- Kombo, D. K., & Tromp, D.L.A., (2006). *Proposal and Thesis writing. An Introduction.* Nairobi. Pauline's Publication Africa.
- Kothari, C. R., (2004). *Research Methodology methods and Techniques, 2nded).* New age International Publisher, New Delhi.
- Kenya Society for Deaf Children, (2001). *Report on Sign Language trainers' workshop held at Kenya Institute of Special Education from 23rd April, 2nd May 2002.*
- Lang., H. G., Makee, B. G., & Conner, K., (1993). *Characteristics of effective teachers: A descriptive study of the perception of faculty and deaf college students.* American Annals of the Deaf
- Leedy, P.D., Ormrod, J. E (2005). *Practical research: Planning and design (8th ed).* Upper Saddle River NJ. Prentice Hall
- Lewis, M.P., (Ed.) (2009). *Ethnologic; languages of the world 16th edition.* Retrieved on 23/05/2010 from <http://www.ethnologue.com>
- Liwakala, P.C., (2003). *Inclusive Schooling in Enabling Education Network (EENET) (2003) Researching our experience: a collection of writing by teachers in Mpika Zambia,* Manchester.
- Luckners, J., & Muir, S., (2001). *Successful students who are Deaf in General Education settings.* American Annals of the Deaf: 146(5).

- Malunga T., (2007). *An Investigation on the use of sign language and oral language by regular teachers. Teaching Hearing impairment children*; unpublished master's thesis – University of Oslo – Norway.
- Marschark, M., (2003). *Interaction of language and cognition in deaf learners. From research to practice*. International journal of Audiology, 42, 541-548.
- Marschark, M., Convertino, C., & LaRock D., (2006). *Optimizing academic performance of deaf students*. Gallaudet University press. Washington D.C. 179-200.
- Martin, K & Acuna, C., (2002). *SPSS for Institutional Researchers*. Pennsylvania, Bucknell University Press: Lewisbury.
- Mugenda, O. M. and Mugenda, A. G. (1999). *Research methods. Qualitative and Quantitative Approaches*. Nairobi: Acts Press
- Muiti J. M., (2010). *Hindrances to effective learning of pupils with hearing impairment in Meru North District, Kenya*. (Unpublished Master Thesis) Kenyatta University, Nairobi-Kenya.
- NDCS (2008). *Deaf Child Worldwide*. Wales, England.
- Ndurumo, M., (2008). *Sign Language Interpreting reference to Kiswahili African annals of the deaf* 1/11/2008. Retrieved 30/10/2009 from: <http://www.firsteternal.com> (Africa-nad-ndurumo-002-2.html).
- Okeke B. A., (2003). *Communication Practices in Special Education: oral manual and others*. The special educator 3(1), 135-138.
- Orodho, A.D., (2005). *Elements of Education and social sciences, Research Methods (1<sup>st</sup> Ed)*. Nairobi, Masola Publishers.

- Orodho A. J., (2009). *Elements of education and social sciences, research methods* (2nd Ed), Maseno Kenezia Publishers.
- Owiko, C. O., (2009) *Factors contributing to poor performance in mathematics at KCPE among standard eight pupils in primary schools for learners with hearing impairments in Nyanza Province, Kenya.* (Unpublished Master thesis) Kenyatta University; Nairobi Kenya.
- Peters, S. J., (2004) *Inclusive Education: An Education for all strategy for all children*, World Bank November 2004. [www.worldbank.org](http://www.worldbank.org). retrieved on 20/05/2017.
- Reed C. M., (2009). *American Sign Language, Total Communication and Oralism.* Unpublished Doctor of education dissertation Seton Hall University, New Jersey.
- Resnik, D. B., (2012). *What is ethics in research and why is it important?* National Institute of Health as Department of Health and Human Science. New York, USA.
- Scouten, E., (1984). *Turning points in the education of deaf people.* Danviller, IL; The interstate printers and publishers inc.
- Smith, D. H., & Ramsey, C. L., (2004). *Classroom discourse practices of a deaf teacher using American Sign Language.* Sign language studies 5 (1), 39 – 62.
- Stubbs, S., (2002). *Inclusive Education: where there are few resources.* [www.eenet.org.uk/resources/ducs/IE\\_few\\_resources\\_2008.pdf](http://www.eenet.org.uk/resources/ducs/IE_few_resources_2008.pdf). Retrieved on: 20/04/2012.
- Turnbull, A., Turnbull, R and Whehmeyer, M. L. (2010). *Exceptional lives: Special Education in today's schools.* Merrill, Columbus O. H.
- UNESCO (2005). *Education for all global monitoring report. The quality imperative peris.* UNESCO.

University of Cambridge (2003). *Teaching Deaf and hard of Hearing students.*

<http://www.admin.com.ac.uk/Univ/disability/practice/pdf/deaf-pdf>. Retrieved on 24/04/2012.

Wamae, G. M., (2003). *Effects of Sign Language mode of instruction on acquisition of English affixes by hearing impaired from two learners.* (Unpublished master thesis)

Kenyatta University: Nairobi Kenya.

## APPENDICES

### **APPENDIX I: INTERVIEW GUIDE FOR TEACHERS ( Specialists and Regular)**

#### **Interview Guide for Teachers on How Classroom Communication modes affect the academic performance of students with Hearing Impairment**

1. How long have you been teaching children with hearing impairments?
2. What classroom communication techniques do you usually use?
3. How does each of those influence pupils' acquisition, interpretation and application of knowledge?
4. Which classroom communication technique are you most comfortable with?

Please state your reasons.

5. In your opinion, which classroom communication techniques have you observed be most influential when teaching children with hearing impairment?
6. What classroom communication challenges do you face? Comment on your competence in the sign language
7. In your opinion, is the classroom environment supportive for effective classroom communication?
8. What measures would you suggest for enhancing classroom communication?
9. What type of learning materials do you use?
10. How often do you use text books?

11. How do you find teaching vocabulary using text books to children with hearing impairment?

Does the teacher make the work in the text books simpler?

12. Does the school provide enough learning material for the deaf children?

If yes how adequate are the learning materials

If No explain briefly

13. Is there enough lighting in the classroom?

14. How is noise kept away from the classroom?

15. Is the classroom well ventilated?

16. Are all children able to see you when you are teaching in class?

If No, give one reason

17. Are all the classes in your special primary /units acoustically treated?

If no, is there any effort being made to treat the classes acoustically? Please Explain briefly

18. How would you describe the state of facilities in your school /unit.

**Thank you for participating in the study.**

## **APPENDIX 2: INTERVIEW GUIDE FOR HEADTEACHERS**

### **Interview Guide for Head teachers on how Classroom Communication modes affect the academic performance of students with Hearing Impairment**

1. How long have you been a head teacher in this school?
  
2. What classroom communication techniques are commonly used in the school?
  
3. How competent are your teachers in the sign language?
  
4. How often do you observe lessons? Please state your reasons
  
5. Are Cognitive learning materials readily available and accessible? Please state your reasons
  - a) Are the classroom environments supportive of effective classroom? Communication?
  
  - Please state your reasons
  
  - b) Has classroom communication modes has affected the academic performance of students with hearing impairment?
  
  - c) How competent are your teachers to teach children with hearing impairment?
  
  - d) Do you receive any funding from government to teach children with hearing impairment?

- 6 . Is this school regularly inspected?
7. If yes who carries out the inspection
8. Ever since they started inspecting, do you witness any improvement?
9. If yes, describe briefly.
10. Give suggestions on how the education of students with hearing impairment can be improved upon.
  11. Is there enough lighting in the classroom?
  12. How is noise kept away from the classroom?
  13. Is the classroom well ventilated?
  14. Are all children able to see you when you are teaching in class ? Why is this important
  15. Are all the classes in your special primary /units acoustically treated that is enabling sounds to be clear?

If no, is there any effort being made to treat the classes acoustically? Please explain briefly
  16. How would you describe the state of facilities in your school/unit.

Thank you for participating in the study .

### **APPENDIX 3: FOCUS GROUP DISCUSSION GUIDE**

- Which communication modes do you use to use to teach students with hearing impairments?
- How does each communication modes help students?
  - To acquire
  - Interpret
  - Apply knowledge?
- How does you find lip reading as a communication mode?
- How competent are you and your students in Malawi signlanguage?
- How does the verbal /oral communication technique benefit your students and yet they are deaf?
- What are the challenges of teaching students with hearing impairments generally
- Many people in the homes and the wider community do not understand and use sign language. How does it affect pupils with hearing impairments?
- Many people in the homes and the wider community do not understand and use sign language. How does affect pupils with hearing impairments?
- How any authority or organization supported you as a teacher of children with hearing impairment?
- How equipped is your school offer effective education to children with hearing impairments
- Comment on your student's academic performance compared to students with hearing impairment in other schools

## **APPENDIX 4: LESSON OBSERVATION GUIDE**

1. Which communication modes is the teacher using during teaching?
2. What shows that students are following what the teacher is saying or doing?
3. How does the teacher position himself /herself (for all students to see him/her well)?
4. Does the teacher position a student who is communicating something in such a way that all students can see his/her face properly?
5. How is the teacher using instructional materials and the chalk board?
6. How does a teacher speak when communicating to students with hearing impairments?

### **Post lesson conference guide**





































7. Were all your students following what you were presenting? What is the evidence?
8. Which communication modes were using to teach?
9. Which communication modes does you think help students understand better?
10. Which aspects of your lesson you consider

a) Positive and why

b) Negative and why

11. Suggest ways you can improve on your teaching of such students

**APPENDIX 5: MANUAL ALPHABET AND NUMERALS FOR THE DEAF**

<i>Letters</i>				
 <b>A</b>	 <b>B</b>	 <b>C</b>	 <b>D</b>	 <b>E</b>
 <b>F</b>	 <b>G</b>	 <b>H</b>	 <b>I</b>	 <b>J</b>
 <b>K</b>	 <b>L</b>	 <b>M</b>	 <b>N</b>	 <b>O</b>
 <b>P</b>	 <b>Q</b>	 <b>R</b>	 <b>S</b>	 <b>T</b>
 <b>U</b>	 <b>V</b>	 <b>W</b>	 <b>X</b>	 <b>Y</b>
 <b>Z</b>	<i>Numbers</i>			
 <b>0</b>	 <b>1</b>	 <b>2</b>	 <b>3</b>	 <b>4</b>
 <b>5</b>	 <b>6</b>	 <b>7</b>	 <b>8</b>	 <b>9</b>