

**FACTORS INFLUENCING ACADEMIC PERFORMANCE OF HEARING  
IMPAIRED STUDENTS IN INCLUSIVE EDUCATION: A CASE OF MOSHI  
TECHNICAL SECONDARY SCHOOL**

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**CERTIFICATION**

I, undersigned certify that I have read and hereby recommends for acceptance by The Open University of Tanzania a dissertation titled, *Factors Influencing Academic Performance of Hearing Impaired Students In Inclusive Education: A case of Moshi Technical Secondary School*, in partial fulfillment of the requirements for the award of degree of Master of Education Administration, Planning and Policy Studies (MED-APPS) of The Open University of Tanzania.

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Date

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**DECLARATION**

I, **Charles E. Rishaelly**, do hereby declare that this dissertation is my own original work and it has never been submitted and will not be submitted to any university for a similar or any other academic award.

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Signature

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Date

**DEDICATION**

This dissertation is dedicated to my lovely wife Rehema for her tireless courage, prayers, care and love during my busy times of completing this work. I also dedicate this study to my beloved son Joshua whom I pray that God may lead him to be a great and Godly person and reach greater heights than I have done.

## **ACKNOWLEDGEMENT**

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## **ABSTRACT**

This study sought to investigate factors influencing academic performance of hearing impaired students in inclusive education: a case of Moshi Technical secondary school. This study used case study research design to conduct investigation. It utilized purposive sampling technique to obtain sample from hearing impaired students, ordinary students who study in inclusive classes, teachers who teach in inclusive classes, the head of the school and the academic master. Data were collected by using interviews, Focused Group Discussions and classroom observations. Data collected were analyzed by using descriptive thematic analysis framework. The findings revealed that inclusive teaching and learning environment for hearing impaired students was not friendly due to shortage of specially trained teachers for hearing impaired students, lack of sign language skills to teachers who teach in inclusive classes, as well as shortage of teaching and learning facilities. The findings further revealed that teachers were not comfortable to teach in inclusive classes due to inability to use sign language in teaching and learning processes. Basing on the findings, the study recommended that the government should employ and post more specially trained teachers for the hearing impaired students as well as supplying enough teaching and learning materials to the school to enable hearing impaired students to learn effectively and comfortably. The study also recommended that further study to be done in a wider context on factors influencing academic performance of hearing impaired students in Tanzania.

## TABLE OF CONTENTS

<b>CERTIFICATION .....</b>	<b>ii</b>
<b>COPYRIGHT .....</b>	<b>iii</b>
<b>DECLARATION.....</b>	<b>iv</b>
<b>DEDICATION.....</b>	<b>v</b>
<b>ACKNOWLEDGEMENT .....</b>	<b>vi</b>
<b>ABSTRACT .....</b>	<b>vii</b>
<b>LIST OF TABLES .....</b>	<b>xii</b>
<b>LIST OF FIGURES .....</b>	<b>xiii</b>
<b>LIST OF APPENDICES .....</b>	<b>xiv</b>
<b>LIST OF ABBREVIATIONS AND ACRONYMS .....</b>	<b>xv</b>
<b>CHAPTER ONE .....</b>	<b>1</b>
<b>1.0 INTRODUCTION.....</b>	<b>1</b>
1.1 Introduction.....	1
1.2 Background to the Problem .....	1
1.2.1 Inclusive Education.....	1
1.2.1.1 Inclusive Education in Tanzania.....	2
1.2.1.2 Types of Hearing Impairments .....	4
1.2.1.3 Inclusive Education for Hearing Impaired Students .....	4
1.3 Statement of the Problem.....	5
1.4 Research Objectives.....	7
1.4.1 Purpose of the Study .....	7
1.4.2 Objectives of the Study .....	7
1.5 Research Tasks and Research Questions .....	7
1.6 Significance of the Study .....	8
1.7 Limitations of the Study.....	9



1.8	Definition of Key Terms .....	9
1.9	Dissertation Structure.....	10
<b>CHAPTER TWO .....</b>		<b>11</b>
<b>2.0</b>	<b>LITERATURE REVIEW .....</b>	<b>11</b>
2.1	Introduction.....	11
2.2	Academic Performance .....	11
2.3	Hearing Impaired Academic Performance.....	11
2.4	Factors Influencing Academic Performance of Hearing Impaired Students.....	12
2.4.1	Teaching and Learning Facilities.....	12
2.4.2	Teaching and Learning Methods .....	13
2.4.3	Teachers' Attitude.....	14
2.4.4	Students' Attitude .....	15
2.4.5	Use of Hearing Aids.....	15
2.4.6	Use of Sign Language and Communication Skills .....	16
2.4.7	Physical Environment .....	16
2.4.8	Moral and Social Support .....	17
2.5	Teachers' Academic Qualifications and Professional Qualities in Teaching.....	18
2.6	Teachers' Professional Ability to Communicate Effectively .....	19
2.7	Research Gap .....	20
2.8	Conceptual Framework for the Study .....	21
<b>CHAPTER THREE .....</b>		<b>23</b>
<b>3.0</b>	<b>RESEARCH METHODOLOGY .....</b>	<b>23</b>
3.1	Introduction.....	23
3.2	Research Approach .....	23

3.2.1	Limitations of Qualitative Approach .....	24
3.3	Research Design.....	24
3.4	Study Area .....	24
3.5	Study Population.....	25
3.6	Sample.....	25
3.7	Sampling .....	25
3.7.1	Purposive Sampling Technique .....	25
3.8	Data Collection Procedures.....	26
3.9	Data Collection Instruments .....	26
3.9.1	Interview .....	27
3.9.2	Observation .....	27
3.9.3	Focus Group Discussions.....	28
3.10	Validity of the Instruments .....	28
3.11	Reliability of the Instruments.....	28
3.12	Ethical Considerations .....	29
3.13	Data trustworthiness.....	29
3.14	Data Analysis Procedures .....	30
3.15	Chapter Summary .....	31
	<b>CHAPTER FOUR.....</b>	<b>32</b>
<b>4.0</b>	<b>DATA PRESENTATION, ANALYSIS AND DISCUSSION .....</b>	<b>32</b>
4.1	Introduction.....	32
4.2	Teachers and Students' Perception on Inclusive Education In Relation to Hearing Impaired Students.....	33
4.2.1	Teachers' Perception on Inclusive Education.....	33
4.2.2	Students' Perception on Inclusive Education .....	35
4.3	Inclusive Education Teaching and Learning Environment.....	37

4.3.1	Teachers' Academic Qualification and Experience in Inclusive Education .....	38
4.3.1.1	Teachers' Academic Qualification .....	38
4.3.1.2	Teachers' Experience .....	38
4.3.2	Teaching and Learning Facilities .....	40
<b>CHAPTER FIVE.....</b>		<b>43</b>
<b>5.0</b>	<b>SUMMARY, CONCLUSION AND RECOMMENDATIONS .....</b>	<b>43</b>
5.1	Introduction.....	43
5.2	Summary of the Findings.....	43
5.3	Conclusion .....	44
5.4	Recommendations.....	46
5.4.1	Recommendations to Education Stakeholders.....	46
5.4.2	Recommendations for Further Research.....	47
<b>REFERENCES.....</b>		<b>48</b>
<b>APPENDICES .....</b>		<b>53</b>

**LIST OF TABLES**

Table 1.1: Comparison of Form Four National Examination Results for Hearing  
Impaired Students and Ordinary Students at Moshi Technical Secondary  
School from 2011-2015..... 6

**LIST OF FIGURES**

Figure 2.1 : Conceptual Framework on Factors Influencing Academic  
Performance of Hearing Impaired Students .....22

**LIST OF APPENDICES**

Appendix 1 : Interview Guide for Hearing Impaired Students ..... 53

Appendix 2 : Interview Guide for Ordinary Students ..... 54

Appendix 3 : Focused Group Discussions (FGD) for Students ..... 55

Appendix 4 : Interview Guide for Teachers..... 56

Appendix 5 : Interview Guide for the Head of the School and the..... 58

Appendix 6 : A Classroom Observation Guide for Inclusive Classes for..... 60

**LIST OF ABBREVIATIONS AND ACRONYMS**

EFA	Education for All
ETP	Education and Training Policy
GCSE	General Certificate of Secondary Education
IE	Inclusive Education
MOEC	Ministry of Education and Culture
MOEST	Ministry of Education, Science and Technology
MTSS	Moshi Technical Secondary School
NGO's	Non-Governmental Organizations
NDCS	National Deaf Children's Society
NSIE	National Strategy on Inclusive Education
SQA	Scottish Qualifications Authority
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
URT	United Republic of Tanzania

## **CHAPTER ONE**

### **1.0 INTRODUCTION**

#### **1.1 Introduction**

This chapter provides the background of the study, statement of the problem, purpose of the study, objectives of the study as well as research tasks and questions. It also includes the significance of the study and dissertation structure.

#### **1.2 Background to the Problem**

##### **1.2.1 Inclusive Education**

According to Schuelka and Johnstone (2012) Inclusive education for students with disabilities gained international concern during 1990's when UNESCO held Salamanca Conference in 1994 where the first statement and framework that specifically focused on the education of persons with disability was made. Using EFA initiatives of 1990, the conference was a major proponent of including children with disabilities within the regular education system.

The Salamanca statement of 1994 shows that the fundamental principle of Inclusive education is that all children should learn together, whenever possible, regardless of any difficulties or differences they may have. It adds that, inclusive education should recognize and respond to the diverse needs of their students, accommodating both different styles and rates of learning and ensuring quality education to all through appropriate curricula, organizational arrangements, teaching strategies, resource use and partnerships with their communities (UNESCO, 1994).

In general perspective, Inclusive Education (IE) is a process that involves the transformation of schools and other centers of learning to cater for all children,



including boys and girls, students from ethnic and linguistic minorities, rural populations, those affected by HIV/AIDS, and those with disabilities and difficulties in learning and to provide learning opportunities for all youth and adults as well (UNESCO, 2009).

On the other hand, Ogot (2008) sees inclusive education as a way that looks into how to transform the mainstream education system in order to respond to different learners in a constructive and positive way. Also, Fakolade *et al.* (2009) assert that inclusive education can be interpreted as the philosophy and practice for educating students with disabilities in general education settings. Again, Ali *et al.* (2006) adds that, inclusive education is a concept that allows students with special needs to be placed and receive instruction in the mainstream classes and being taught by mainstream teachers. Barnes (2011) reflects the same idea that, inclusive education refers to the practice and process of involving and meeting the diverse needs of all learners in supportive schools and classrooms. Apart from the foregoing definitions on inclusive education, now let us look at the inclusive education in Tanzanian context.

#### **1.2.1.1 Inclusive Education in Tanzania**

Tanzania, like other countries in Africa and the world at large considers inclusive education as a very essential process of increasing access and quality of education for all. Hence, Tanzania defines inclusive education as a system of education in which all children, youths and adults are enrolled, actively participate and achieve in regular schools and other educational programmes regardless of their diverse backgrounds and abilities without discrimination, through minimization of barriers and maximization of resources (URT, 2009).

Tanzania, is a signatory of various international education documents that includes the following: International Declarations of Human Rights which states that education is a right for all (UN, 1948); World Declaration on Education For All (EFA) which focused on universalizing access and promoting equity in education by considering disability (UNESCO, 1990); and Salamanca Statements and Frameworks of Action on Special Needs Education which emphasized on attention of education to children with special needs (UNESCO, 1994).

In order to implement the issues of Inclusive Education, Tanzania has taken several measures and actions from policy level to the implementation level. In its Education and Training Policy (ETP) of 1995, one of the government's aim and objective was to promote and facilitate access to education to disadvantaged social and cultural groups which includes children with disabilities such as the vision impaired, the hearing impaired, the crippled and mentally retarded (URT,1995). Based on the Education and Training Policy of 1995, Tanzania launched National Strategy on Inclusive Education 2009-2017 which aimed at enrolling all children, youths and adults who could actively participate and achieve in regular schools and other educational programmes regardless of their diverse background and abilities (URT, 2009).

At execution level, Inclusive Education for students with disabilities is implemented at school levels where these students are enrolled and learn along with ordinary students in the same classrooms. For instance, Moshi Municipal has strived to implement inclusive education at secondary school level in its public secondary schools whereby among its 14 public secondary schools, two secondary schools, namely, Moshi and Moshi Technical secondary schools are dominant schools that enroll students with various disabilities together with ordinary students. Moshi secondary school specifically enrolls

students with disabilities such as vision impaired, partial vision impaired, albino and physical disabilities, whereas, Moshi Technical secondary school specifically enrolls hearing impaired students and those with physical disabilities together with ordinary students. Therefore, Moshi Technical Secondary School is the only public secondary school in Moshi Municipality that enrolls hearing impaired students in inclusive classes.

### **1.2.1.2 Types of Hearing Impairments**

According to NDCS (2008), a hearing impaired is anyone with a permanent or temporary hearing loss. Apart from definition, NDCS identifies the levels of hearing impairment as mild, moderate, severe or profound hearing loss. On the other hand, Heward (2006) describes that; levels of hearing loss can be slight, mild, moderate, severe and profound depending on the average hearing level. In education context, a hearing impaired is a student who is not able to use hearing to understand speech. This study dealt with permanent hearing loss which is severe or profound, and therefore, the term 'hearing impairment' in this study refers to permanent hearing loss.

### **1.2.1.3 Inclusive Education for Hearing Impaired Students**

In implementing the issues of inclusive education, Tanzania has considered the hearing impaired in its objective to promote access to education to this group in its Education and Training Policy (ETP) of 2014, therefore the government wanted to promote and facilitate access to education to disadvantaged social and cultural groups which includes children with disabilities such as the hearing impaired (URT, 2014) Practically, the implementation of inclusive education for the hearing impaired in Tanzania has widened the opportunities for the hearing impaired to access education from primary to tertiary levels of education. The implementation of inclusive education for hearing

impaired students requires more sensitive attention to their physical, mental, linguistic, academic and social needs that contribute to their academic achievements.

The examination results show that, the academic performance of hearing impaired students in inclusive education at Moshi technical secondary school is poor, specifically in their Form Four National Examinations. The trend shows that, most of hearing impaired students at Moshi Technical secondary school who sat for Form Four National Examinations (CSEE) for five consecutive years 2011, 2012, 2013, 2014 and 2015 had failed their examinations. (MTSS, 2015)

The results show that, in 2011, 8% of hearing impaired students got between division I and IV, while, 92% got division zero. In 2012, 100% of hearing impaired students got division zero. In 2013, 25% of hearing impaired students got between division I and IV, while, 75% got division zero. In 2014, 50% of hearing impaired students got division II, while 50% got division zero. And in 2015, 100% of hearing impaired students got division zero. (MTSS, 2015)

The government's objective on inclusive education was to improve access for the hearing impaired to participate and perform well in inclusive classes (URT, 2014). the trend above shows that the hearing impaired have access to secondary school education, but, they are not performing well along with other ordinary students, this trend indicates that there is unrevealed problem.

### **1.3 Statement of the Problem**

Education is a right for all, and every person should have access to it, this involves children with disabilities (UN, 1948). The learning needs of the disabled children

demands special attention and various of steps needs to be taken in order to provide equal access to education to every category of disabled persons as an integral part of education system and inclusive education in particular (UNESCO,1990).

Inclusive Education is very crucial to hearing impaired children, since, it exposes them to the real life where they can interact and build their social, psychological, emotional and academic life. Hence, education makes them capable of utilizing different endowments they have to sustain their lives and deal with challenges they may face in life due to their disabilities. Thus, education enables them to be self-dependent and add to the development of their societies and the nation at large.

As far as the background of this study is concerned, there is a tremendous failure of hearing impaired students in Form Four National Examinations for consecutive five years at Moshi Technical secondary school (see Table 1.1 below).

**Table 1.1: Comparison of Form Four National Examination Results for Hearing Impaired Students and Ordinary Students at Moshi Technical Secondary School from 2011-2015.**

Year of Exam	Year of Exam	Total Number of Students Total Candidates	Distribution of Division for Ordinary Students					Distribution of Division for Hearing Impaired Students						
			Div. I	Div. II	Div. III	Div. IV	Div. 0	Withheld	Total Total	Div. I	Div. II	Div. III	Div. Iv	Div. 0
2011		140	29	21	33	30	27	-	13	-	-	-	01	12
2012		158	16	26	24	47	38	07	17	-	-	-	-	17
2013		171	24	38	40	39	23	07	12	-	-	-	03	09
2014*		169	27	30	22	58	29	01	02	-	01	-	-	01
2015		241	21	35	32	91	35	-	27	-	-	-	-	27

Source: Moshi Technical Secondary School. (2014-2015)

\* **N.B.** The 2014 results were given in the form of GPA, whereby, distinction = division I, merit = division II, credit = division III and pass = division IV.

Table 1.1 above shows clearly that there are some problems that need to be addressed in order for hearing impaired students to achieve better in their form four final examinations. Since, there is no study done in this area in Moshi Technical secondary school, this study anticipated to find out problems which hindered hearing impaired students to perform well in form four national examinations. Hence, it gives recommendations for examination improvement of the hearing impaired students at Moshi Technical Secondary School.

## **1.4 Research Objectives**

### **1.4.1 Purpose of the Study**

The purpose of this research was to investigate factors influencing academic performance of hearing impaired students in inclusive education, a case of Moshi Technical secondary school.

### **1.4.2 Objectives of the Study**

This research was guided by the following objectives:

- i) To examine perception of teachers and students towards inclusive education in relation to hearing impaired students.
- ii) To investigate whether inclusive education teaching and learning environment is friendly to hearing impaired students.

## **1.5 Research Tasks and Research Questions**

The following research tasks and research questions guided the investigation.

**Task I:** To explore teachers' and students' perception towards inclusive education.

**Questions:**

- i) Do teachers think it is conducive to teach hearing impaired students in inclusive classes?
- ii) Are ordinary students helpful to hearing impaired students in inclusive classes?
- iii) Would hearing impaired students want to have their own classes?

**Task II:** To investigate whether inclusive education teaching and learning environment is friendly to hearing impaired students.

**Questions:**

- i) What is teachers' experience in teaching hearing impaired students?
- ii) Do teachers use sign language when teaching in the classroom?
- iii) Are there teaching and learning facilities for hearing impaired students?
- iv) What are professional qualifications of teachers in teaching hearing impaired students?

## **1.6 Significance of the Study**

This study is important, it provides education stakeholders with a general understanding on the factors influencing academic performance of hearing impaired students in inclusive education at Moshi Technical secondary school and suggests the ways to reduce or diminish them, hence creating conducive environment for hearing impaired to learn comfortably. As a result of the efforts by stakeholders will lead to students' good national examination performance for hearing impaired at Moshi Technical secondary school.

Furthermore, the results of this study might be used by other researchers as a source of knowledge and reference for literature review for those who wish to conduct the similar research in the future.

### **1.7 Limitations of the Study**

Limitation of the study refers to conditions beyond the researchers' control that might place limits on study conclusion and its application to other situations (Best and Kahn, 1998). For the case of this study it was difficult to get proposed equal sample size from each O- level class because by the time of data collection four students were doing their national examinations. Thus, the researcher could not interview the planned number of special needs teachers for hearing impairment. However, the researcher tried his best to meet study objectives.

### **1.8 Definition of Key Terms**

**Academic Performance:** Refers to the extent to which a student is achieving educational goals.

**Inclusive Education:** This is the form of education whereby students with special needs and ordinary students are learning in the same classes at different levels of education.

**Hearing Impaired Students:** Refers to students with hearing disability.

**Ordinary Students:** Refers to students who have no hearing disability.

**Ordinary Teachers:** Refers to teachers who have no special needs education.



**Perception:** Refers to an attitude or understanding based on what is observed or thought.

**Special Needs Teachers:** Refers to teachers who have been trained in special needs education.

**Teaching and learning environment:** Refers to the diverse physical locations, contexts and cultures in which students learn. It includes how individuals interact with and treat one another as well as the ways in which teachers may organize an educational setting to facilitate learning.

### **1.9 Dissertation Structure**

The dissertation is divided into five chapters. Chapter one gives the background of the problem, statement of the problem, research purpose, research objectives, research tasks and questions, significance of the study, limitations of the study as well as definition of key terms. Chapter two presents the literature review on the factors influencing academic performance of hearing impaired students, research gap and conceptual framework of the study. Chapter three presents the research approach, research design, study area, study population, sample, sampling, data collection procedures, data collection instruments, validity of the instruments, reliability of the instruments, ethical considerations, data trustworthiness as well as data analysis procedures. Chapter four presents the data presentation, analysis and discussion. Chapter five presents summary of the findings, conclusion and recommendations.

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents various studies conducted with relevance to this study which aimed at investigating the factors influencing academic performance of hearing impaired students, a case of Moshi Technical secondary school. The reviewed literatures include the cases for developed countries, developing countries and Tanzania in particular.

#### **2.2 Academic Performance**

The academic performance of hearing impaired students are traditionally measured through the use of standardized test scores which is a valuable tool to compare the academic performance of hearing impaired students with that of ordinary students to national norms (Allen, 1986) and Traxler, (2000) in Antia *et al.* (2015).

#### **2.3 Hearing Impaired Academic Performance**

According to WHO (2001) in CBM (2016) There are an estimated 250 million people with hearing loss in the world, of whom approximately 30 million are hearing impaired. Based on available figures, less than 1% of hearing impaired children in developing countries has access to any form of education. The education of hearing impaired children is affected by controversies of philosophical and methodological nature. Hearing impaired generally does not have access to appropriate services and tend to be neglected within available structures. Hearing impaired students are recognized as linguistic and cultural minorities that use a gestural or visual language as their basic learning form and that they need trained and experienced professionals (Baldwin, 1994).

The report about inclusive education for hearing impaired done in United Kingdom shows that the attainment of hearing impaired children in England falls below the national average. Only 32.9% of hearing impaired children achieves five General Certificate of Secondary Education (GCSEs) at grades A to C, compared with a national average of 57.1%. On the other hand, the Scottish government has confirmed that a considerable attainment gap exists when comparing the average Scottish Qualifications Authority (SQA) tariff scores for qualifications obtained by hearing impaired pupils at the end of S4, taken at age 16, with those of ordinary pupils. Showing the similar trend in Northern Ireland, hearing impaired children are 25% less likely to get five or more GCSEs at grades A to C than all pupils, and are 31% less likely to gain the equivalent of two A levels (NDCS, 2008). From the literature above, hearing impaired students experience poor performance in their examinations. Let us now look at the factors that influence their poor academic performance.

## **2.4 Factors Influencing Academic Performance of Hearing Impaired Students**

There are several factors that influence academic performance of hearing impaired students in inclusive setting, and hence, these factors need to be addressed in order to enhance the academic performance of hearing impaired students in inclusive education.

### **2.4.1 Teaching and Learning Facilities**

A study done by Adoyo (2008) in Kenya on educating deaf children in an inclusive setting in Kenya revealed that teachers should use the latest techniques and materials for instruction when working with children with hearing impairment. More emphasis should be laid on showing the practical things to students, so that they can easily understand the lesson. Teachers should make diagrams on the chalkboard for explaining the things.

On the other hand, the research done in Bangladesh by Khan (2012) on secondary school teachers' perceptions of inclusive education show that the practice of inclusive education in secondary schools is facing several barriers including lack of teaching materials that hinders teaching process.

Again, Wilson's (2005) study in Jamaica on the effectiveness of international development assistance from American organizations to hearing impaired communities show that lack of resources is part of the cause for poor education provision, lack of specially trained teachers and interpreters, and absence of medical care, vocational programs, legal and social services for hearing impaired people.

Also, UNESCO (2003) in Nydal (2008) shows that practice of inclusive education in Tanzania and the countries of the south face limited resources and inadequate facilities, lack of teachers and other qualified staff. Teaching and learning facilities are important in teaching hearing impaired in order to capture their understanding of a lesson, these goes together with teaching and learning methods used by teachers in the classroom.

#### **2.4.2 Teaching and Learning Methods**

Cawthon (2001) study on teaching strategies in inclusive classrooms with hearing impaired students shows that the teaching and learning methods for hearing impaired in inclusive classes should be focused on individualized approaches of teaching that takes into account the differences and needs of each learner so that every learner could learn effectively.

On the other hand, Reed *et al.* (2008) study on academic status of hearing impaired and hard-of-hearing students in public schools shows that classroom factors promoting

success for students with disabilities, including students who are hearing impaired include amount of classroom time devoted to the academic curriculum so that each learner could reach the set objectives.

Again, Adoyo (2004) study in Kenya on Kenyan sign language and simultaneous communication; differential effects on memory and comprehension in hearing impaired children shows that poor performance of hearing impaired is attributed to inappropriate teaching methods and communication problems across the curriculum.

Also, URT (2008) report on teacher development management strategy shows that curriculum and teaching such as inappropriate teaching methods can be barriers to students with hearing impairment during the learning process. Apart from teaching and learning methods for hearing impaired students also teachers' attitude to hearing impaired students can contribute to their academic performance.

### **2.4.3 Teachers' Attitude**

Teachers' attitude towards inclusion is a very important component for successful inclusion; this determines how teacher treats the learners and the whole processes of teaching and learning (Reed *et al.* 2008). On the other hand, UNESCO (2009) report on policy guidelines on inclusion in education reveal that teachers' positive attitude towards inclusion depend strongly on their experience with learners who are perceived as disabled, teacher education, the availability of support within the classroom, class size and overall workload of teaching in inclusive classes.

Furthermore, Sacks (2001) in Gudyanga *et al.* (2014) study on challenges faced by students with hearing impairment in Bulawayo urban regular schools revealed that the ordinary teachers were least prepared for inclusive education of children with

disabilities. The teachers had little training in dealing with individual differences and specific instructional processes developed for special needs students. The roles and responsibilities of ordinary education teachers were never clearly defined in this process. These teachers and their ordinary students were not prepared for the inclusion of children with disabilities. Again, Petersen's (1994) in Gudyanga *et al.* (2014) ascertained that the teachers from schools had generally positive attitudes towards the integration of hearing impaired students. The teachers strongly supported the belief that the inclusive classes were superior academically, socially and emotionally to the separate special classes. Apart from teachers' attitude, students also have their own attitudes on inclusive education.

#### **2.4.4 Students' Attitude**

The study done in Netherland by Booth and Ainscow (2003) show that many students with hearing impairment who had been included in regular classes wanted to go back to their special schools after suffering stigmatization and isolation. Adding on the same note, the study done in Bulawayo by Gudyanga *et al.* (2014) show that teachers and their regular education students were not prepared for the inclusion of children with disabilities.

#### **2.4.5 Use of Hearing Aids**

Hearing aids are worn by hearing impaired learners in their ears to help to amplify sounds, hence helping them to hear sounds in the process of teaching and learning, however, the hearing aids should be used in calm environments in order to avoid the amplification of unwanted voices that may distract hearing impaired learners from following up the lesson (Booth and Ainscow, 2003) in Gudyanga *et al.* (2014).

In addition, the study done by Quigley and Paul (1984) in U.S.A on language and deafness revealed that variables like regular use of hearing aids, has a vital role to play in academic performance of the hearing impaired children. Regular use of hearing aids should be emphasized by the educational planners and administrators to ensure effective inclusive education. Also, URT (2008) states that curriculum and teaching such as lack of assistive devices, can be barriers to students with hearing impairment during learning process.

#### **2.4.6 Use of Sign Language and Communication Skills**

The teachers who teach in hearing impairment inclusive classes should be competent in sign language so as to sign for the hearing impaired students to follow-up and understand what is going on in the lesson. Moreover, the interpreters can be used in the classroom to translate teacher's speech, voicing student sign language, mediating communication between hearing impaired students and their peers, and monitoring overall classroom behavior (Cawthon, 2001). Furthermore, some students may require lip reading to reach a normal level of comprehension and these will need preferential seating arrangements (Chimedza and Peterson, 2003) in Gudyanga *et al.* (2014). Also, a hearing impaired child in an inclusive class may lack attention from the teacher due to language barrier which may lead to isolation and loneliness on the part of the hearing impaired (Adoyo, 2004).

#### **2.4.7 Physical Environment**

According to Cawthon, (2001) in order for the inclusive classes to be effective and manageable the classes should be small, so that the teacher could closely attend to diversity needs of learners in the classroom. Also, Ainscow (1995) in Gudyanga *et al.* (2014) suggested the ideal physical environment for students with hearing impairment

that the classrooms should be away from noise and controlled for acoustics that affect hearing aids. There is a need to add carpets, window treatments, or acoustical wall and ceiling coverings to absorb sound and reduce noise from furniture scrapping on hard surfaces by attaching rubber shoes to the legs of students' desks and chairs. The classrooms should also be well lit to enable the hard-of hearing and hearing impaired students to speech read and to read the signs. On the other hand, Stinson and Whitmire (2000) in Gudyanga *et al.* (2014) suggested the arrangement of the classroom so that students with hearing impairment can see facial expressions, read lips, and assess body language of the educator and other students and provide preferential seating. Apart from all these, students with hearing impairment problem also need moral and social support in order to learn.

#### **2.4.8 Moral and Social Support**

Reed *et al.* (2008) assert that teachers and general staff should support students' peer relationships, relationships between general educators and special educators that are based on respect of each other's roles and competencies. Also Reed (2008) in Gudyanga *et al.* (2014) add that the hearing impaired students are more likely to succeed in regular education classrooms if they receive targeted support services in the classroom. Collaboration between general and special education teachers is of necessity.

On the other hand, a study done in Canada by Peters (2003) on inclusive education; achieving education for all by including those with disabilities and special education needs show that Canada has become one of the leading countries in inclusive education that involved hearing impaired students practice since 1960s. The following are the practices that have been done to conduct classes for hearing impaired in inclusive classes: appropriate learning opportunities, planning individualized learning, developing



support teams, promoting social skills and responsibilities among the children, assessing children's performance, planning for transition from one stage of education to the next, working in partnership with parents and other members of the community, implementing staff development plans, and being accountable. Moral and social support to enhance hearing impaired students to learn well and feel part of the class need also teachers who are academic qualified and professional in teaching hearing impaired students.

## **2.5 Teachers' Academic Qualifications and Professional Qualities in Teaching**

Worldwide, teaching has become a principal career that forms basis for other professions, since any knowledge or skills acquired are facilitated by a teacher. A teacher has been considered as a key player in the learning process. Teachers should have academic qualifications and professional qualities that enable them to facilitate learning at various levels effectively; those academic qualifications differ slightly from one country to another depending on the education policies and education system in general. In Tanzania's context, the Education and Training Policy (1995) stipulates the teacher's academic qualifications needed at various levels of education from primary to tertiary level. For instance, the policy states that the minimum admission requirement for the Teacher Education Certificate Course shall be Division III of Certificate of Secondary Education Examination; these teachers are entitled to teach in primary schools. However, the minimum entry qualification for the Diploma Teacher Certificate Course shall be Division III in the Advanced Certificate of Secondary Education Examination; these Diploma teachers are entitled to teach in secondary schools at lower classes. For the case of teachers who teach special needs students in special classes and in inclusive setting should have obtained the special needs education teachers' training at a given level (URT, 1995).

Teachers are expected to have certain professional qualities in order to be effective and efficient in teaching regardless of the levels of learners. Generally, the basic qualities that a teacher is supposed to possess include the following: personality traits that consist of sense of humor, sense of fairness, enthusiasm, patience, creativity, care and interest in the students; pedagogical skills and knowledge that include subject knowledge, knowledge of learners, curriculum knowledge, teaching methodology, general pedagogical knowledge, and knowledge of contexts (Liakopoulou, 2011). On the other hand, the Tanzania's government education policy stipulates that teachers should be good models in the teaching and learning process by adhering to the following principles: reflection on the learning process, patience, justice, feelings, understanding the learning environment, understanding learning differences, relationship, problem solving, mastery of the subject, discipline, interaction and motivation (URT: 2008).

In Tanzania, there is lack of specialized equipment and teaching/learning materials; insufficient specialist teachers for special need education provision. The educational opportunities for disabled children are extremely limited. Worse still the few available opportunities are almost exclusively available to the urban population (URT, 2000).

## **2.6 Teachers' Professional Ability to Communicate Effectively**

The issue of teacher's professional ability to communicate effectively is very crucial in the process of teaching and learning, since, the facilitation of teaching and learning process involves the interaction and communication between the teacher and the learner. Teacher's professional ability to communicate effectively can be described as mastery of language used as a medium of instruction in the teaching and learning process, together with the effective use of sign language for the case of teachers who teach

hearing impaired learners. In Tanzania, the languages used as medium of instructions are Kiswahili and English whereby Kiswahili is used as medium of instruction in primary schools except in English medium primary schools, while English is used as medium of instruction in secondary schools (URT, 2014). However, a good teacher is supposed to master communication skills in teaching that include the effective use of voice, gestures, body language and movements.

## **2.7 Research Gap**

Studies have been done on inclusive education in different countries across the world. For instance, the study done by Adoyo (2008) show that the practice of inclusive education was faced with several challenges such as inadequate teaching materials as well as inappropriate teaching and learning techniques. On the other hand, study done by Antia et al (2015) show that hearing impaired students were not performing well along with their fellow ordinary students. In Tanzania, the study done by Nydal (2008) show that the practice of inclusive education in Tanzania and the countries of the south were facing limited resources and lack of teachers and other qualified staff.

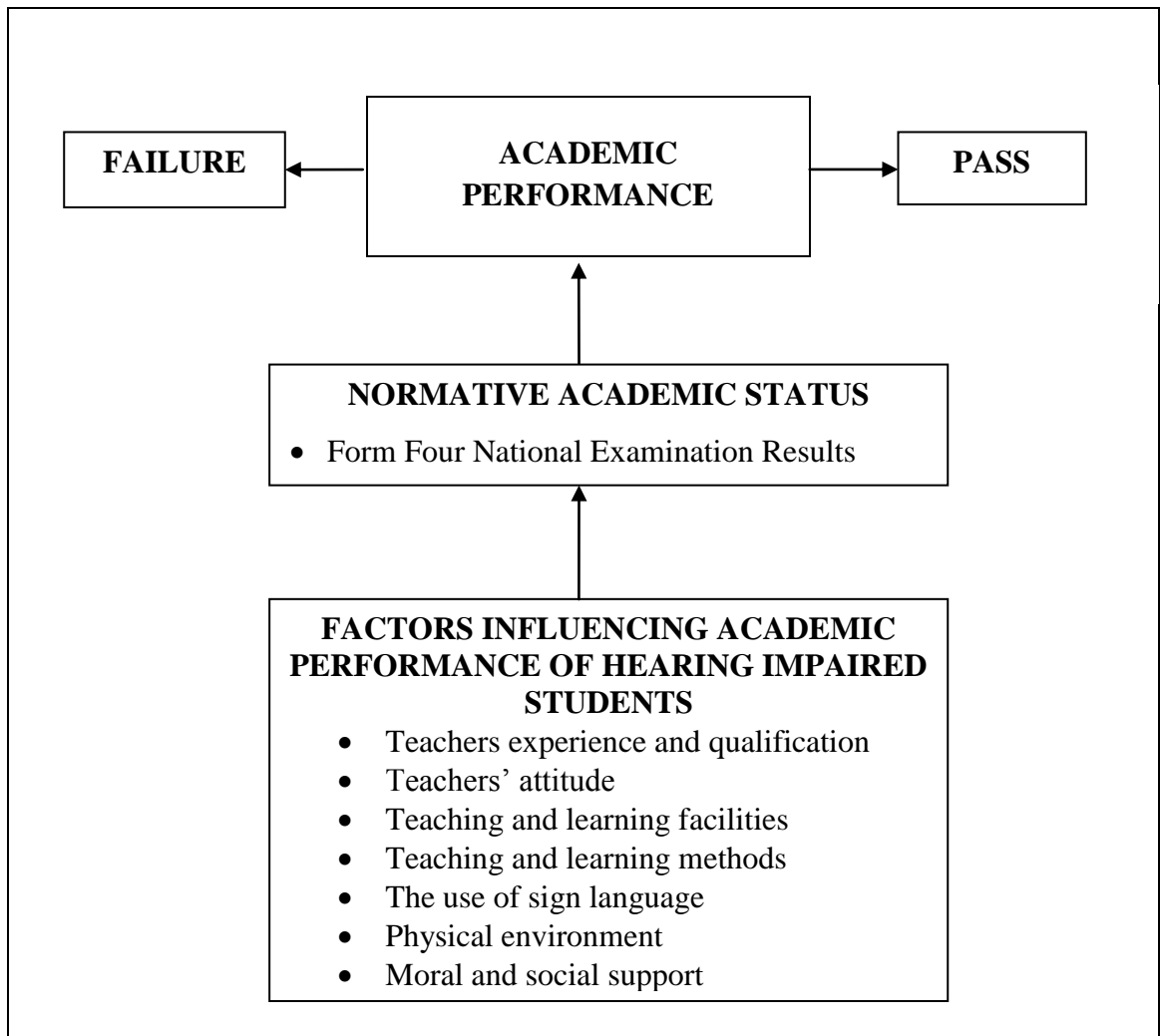
However, no studies have been conducted on academic performance of hearing impaired students in inclusive education in Tanzania and specifically in Moshi Municipality. This study aimed to fill this gap by investigating on the factors influencing academic performance of hearing impaired students in inclusive education at Moshi Technical secondary school due to the fact that their performance in form four national examinations was tremendously low. This study anticipated finding out the root cause of the problem and suggesting remedies through recommendations.

## 2.8 Conceptual Framework for the Study

Guba and Lincoln, (1994) in Kombo and Tromp, (2006) refers conceptual framework as a research tool that can assist a researcher to develop awareness and understanding of the situation under scrutiny. Using Semmel and Frick (1985) views, there are three frames of reference that can be used on examining the academic performance of the physically impaired students, they include, normative academic status, classroom academic status, and academic progress. Normative academic status refers to students' standing compared with national or state norms and can be obtained through scores on national or state standardized academic achievement tests. Classroom academic status refers to students' achievement in comparison with classmates and can be measured by obtaining teachers' perceptions of students' achievement and ability to learn expected academic content. Academic progress refers to the change in academic achievement from one year to the next and can be measured both by looking at gains on achievement tests and teachers' perception of student change.

Each of these frames of reference is important. Students may do poorly on national or state standardized tests, yet achieve well in their classes. Conversely, students may be achieving well at grade level according to standardized test scores yet be fail behind their classmates academically. Students who begin their school careers achieving below their hearing classmates may make desirable progress from year to year, but yet not make sufficient progress to “catch up” with their classmates. On the other hand, Most (2006), Power and Hyde (2003) in Antia *et al.* (2015) show that standardized tests are a valuable tool to compare the academic achievement of hearing impaired and hard of hearing students to national norms for typically hearing students.

For the case of this study, the normative academic status was used as the conceptual framework by looking at the hearing impaired students' performance in the form four national examinations in comparison with their fellow ordinary students.



Source: The figure was adapted from Semmel and Frick (1985)

**Figure 2.1 : Conceptual Framework on Factors Influencing Academic Performance of Hearing Impaired Students**

## **CHAPTER THREE**

### **3.0 RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Research methodology is defined by Kothari (2004) as a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. This research was aimed at investigating the factors influencing academic performance of hearing impaired students in inclusive education, a case of Moshi Technical secondary school. This chapter describes research approach, research design and methods used in data collection and analysis.

#### **3.2 Research Approach**

The researcher opted qualitative approach to conduct investigation. Qualitative approach was adopted to suit the nature of social phenomenon that the researcher dealt with. Cresswell (2014) argues that there are three main types of research approaches which include quantitative research approach, qualitative research approach and the mixed research approach. Qualitative research approach is a multi-method in focus, involving an interpretive and naturalistic approach to its subject matter. It implies an emphasis on the qualities of entities processes, and meaning that cannot be experimentally examined or measured in terms of quantity, amount, intensity or frequency (Mason, 1998 in Lugenge, 2015). The qualitative approach enabled the researcher to gain deeper understanding of the situation, thus, obtaining real, thick and detailed descriptive data on factors influencing academic performance of hearing impaired students in inclusive education at Moshi technical secondary school.

### **3.2.1 Limitations of Qualitative Approach**

As it has been said, qualitative research approach is a good approach that suits social phenomenon; however, qualitative research has some limitations, whereby, the problem of adequate validity or reliability is a major criticism of qualitative approach. Because of the subjective nature of qualitative data and its origin in single contexts, it is difficult to apply conventional standards of reliability and validity (Hughes, 2006 in Mhonyiwa, 2014). In order to increase the level of validity and reliability of this study, triangulation was used (the use of more than one method of data collection).

### **3.3 Research Design**

This study was guided by descriptive case study research design. Maris and Lapan (2004) shows that case study seek to answer focused questions by producing an in depth descriptions and interpretations of a phenomenon under study, thus, giving a deep understanding of the phenomenon. Descriptive case study enabled the researcher to get a deeper understanding, and hence a deep descriptions and interpretations of data on factors influencing academic performance of hearing impaired students at Moshi technical secondary school in their natural setting.

### **3.4 Study Area**

This study was conducted at Old Moshi Technical secondary school in Kilimanjaro region, Tanzania. The school is located in Moshi Municipal along Moshi to Arusha main road, about 4 kilometers from Moshi town center. Moshi Technical Secondary school has been chosen among 14 public secondary schools because it is the only one that provides inclusive education for hearing impaired students in Moshi municipality.

### **3.5 Study Population**

A study population is the entire accessible group of persons that is of interest to the researcher or that meets the criteria the researcher is interested in the study (Cohen *et al.*, 2000). In this study, the population comprised of all teachers at Moshi Technical secondary school, all ordinary level students at the school, the Head of the school as well as Academic master of the school.

### **3.6 Sample**

A sample is a number of individuals or things selected from a population. It is a subject of population (Ogula, 2008). A total sample of 32 participants from Moshi technical secondary school was used to provide relevant information in respect to this study; it involved ordinary level students that included 14 hearing impaired students as well as 8 hearing students. On the other hand, the sample included 4 special need education teachers as well as 4 ordinary teachers who teach in inclusive classes. The sample also included the head of the school and the Academic master.

### **3.7 Sampling**

Sampling technique is a process used to select some elements of a population in such a way that it represents the actual characteristics of total population (Cohen *et al.*, 2000). For the purpose of this study, purposive technique was used to obtain sample from hearing impaired students, ordinary students who study in inclusive classes, teachers who teach in inclusive classes as well as Head of the school and Academic master.

#### **3.7.1 Purposive Sampling Technique**

Purposive sampling is the process of selecting a sample on the basis of knowledge of a population, its elements and the purpose of study (Babbie, 2011). In this study,



purposive sampling technique was used to obtain sample of 14 hearing impaired students, 8 ordinary students from inclusive classes, 8 teachers who teach in inclusive classes as well as the Head of the school and the Academic master. Hearing impaired students were included in the sample due to the fact that they were the core target participants of this study who could give their views and experience on the factors influencing their academic performance in inclusive classes. Ordinary students from inclusive classes were also included because they learn with hearing impaired students in inclusive classes so that they could give their experience and views on inclusive education. On the other hand, teachers were chosen due to their role of teaching in inclusive classes, thus it was expected of them to understand problems faced by hearing impaired students in inclusive classes. Furthermore, the Head of the school participated due to his role in school's administrative issues. The Academic master was also included in that he was aware of students' academic performance records.

### **3.8 Data Collection Procedures**

Kombo and Tromp (2006) define data collection as the process of gathering specific information aimed at proving or refuting some facts. In this study, the researcher collected data from the original source from students, teachers, the head of school and academic master at Moshi Technical secondary school.

### **3.9 Data Collection Instruments**

Data collection instruments are the tools used to collect research data. For the purpose of this study, the researcher used semi-structured interviews, focus group discussions as well as observation to collect data from the respective participants. These instruments were used to suite the qualitative approach in a case study design.

### **3.9.1 Interview**

Kombo and Tromp (2006) show that interview is a research instrument which involves asking questions orally. The asked questions aims at getting information related to the study. There are various forms of interviews that include unstructured interview, semi-structured interview and structured interview. For this study, the researcher employed semi-structured and unstructured interviews. The semi-structured interview was done by using interview guide that enabled the researcher to have a logical and systematic series of questions that gave the researcher comprehensive information related to this study. Furthermore, the researcher used unstructured interview where it was difficult to get inner feeling of a participant whereby the researcher was flexible in using probing questions to get more information from the participants. The semi- structured interview sessions took about 15 minutes for each participant.

### **3.9.2 Observation**

An ideal complementary data collection technique to interview is observation which is conducted in natural contexts to help fill gaps in data collection which may occur in interview. In contrast to interview, observation allows a researcher to formulate their own version of what is occurring and then check it with the participants. Observation provides a more detailed description of the phenomenon that would not be possible by interview. Hence it provides an additional source of data for verifying the information gained by other methods (Lodico *et al.*, 2010). The researcher utilized structured observation to observe one subject lesson in every O-level inclusive classroom in order to see whether teaching and learning environment for hearing impaired students was friendly. This was done by observing how teachers facilitated teaching and learning process in inclusive classes, teachers' use of teaching and learning materials, teaching and learning methods, use of sign language in inclusive classrooms, how hearing

impaired students use hearing aids, how hearing impaired students follow-up lessons together with how they interact and communicate in the class with teachers and ordinary students.

### **3.9.3 Focus Group Discussions**

Focus group discussion is a category of interviews whereby several subjects are interviewed at the same time. Its advantage is that participants respond not only to the researcher but also to other participants and their responses. The interaction between participants usually reveals more about the subjects' point of view than would be the case with the researcher-dominated interview (Ary *et al.*, 2010). For the case of this study, there were two focused group discussions whereby each group included 3 hearing impaired students as well as 3 ordinary students. The discussion took about one hour for each group.

### **3.10 Validity of the Instruments**

Validity is described as the extent to which an account accurately represents the social phenomena to which it refers. Internal validity asks the question, how congruent are one's findings with reality? (Silverman, 2000 in Barnes, 2011). For the case of this study, the validity of instruments was assessed by research supervisor and other three educational experts. However, important corrections were made after identification of mistakes and errors before the instruments were used in the field.

### **3.11 Reliability of the Instruments**

This study used triangulation strategy to assess the reliability of data where by the researcher generated data in multiple ways and from different sources. Triangulation strategy was used so as to complement the weaknesses of using one instrument of data

collection. According to Terre Blanche *et al.* (2006) in Barnes, (2011) triangulation allows the researcher to inspect the phenomenon from different angles thereby providing a clearer understanding.

### **3.12 Ethical Considerations**

In this study, ethical issues were taken into consideration in all stages of conducting the study. The research permission was sought from all necessary authorities from university level to the school level where the study was conducted. All participants were informed about the study and its benefits, informed consent was obtained from each participant to participate and any participant had the right to withdraw at any stage of data collection process. Security was guaranteed to the participants by making sure that no participant was harmed in any way in data collection process. Confidentiality and anonymity were guaranteed by informing the participants that they should not mention their names during interviews and focused group discussions, and that, all the collected information would be confidential and would be used only for research purposes. This could give the participants freedom to participate and give their views without fear or possibility of raising individual conflict in the school.

### **3.13 Data trustworthiness**

According to Shenton (2004) Trustworthiness in qualitative research involves credibility, transferability, dependability and conformability. Credibility helps to address the issue of internal validity whereas transferability addresses the issue of external validity. Dependability addresses the validity whereas conformability addresses the objectivity.

The researcher ensured the trustworthiness of this study through different ways. Credibility of this study was ensured through purposive sampling where by samples were carefully and purposely selected in order to ensure that the participants are familiar with the phenomenon under scrutiny were by samples were drawn from hearing impaired students, ordinary students who study in inclusive classes, teachers who teach in inclusive classes for hearing impaired students as well as the head of the school and the academic master.

Transferability was ensured by providing thick description of the phenomenon under study whereby direct quotations from the participants were provided. Where necessary, tables and figures were presented in order to ease understanding of data. Dependability was maintained through triangulation. Triangulation involves the use of more than one data collection instrument. This was done by using interviews, focused group discussions as well as classroom observations to collect data. The role of triangulation was to minimize the limitations of using one method and maximize their respective benefits. Thus, it helped the researcher to obtain rich research data from different angles that could not be possible by using only one data collection instrument.

Conformability was maintained through neutrality whereby this work was checked by other educational experts whereby their critical and constructive ideas were taken into consideration.

### **3.14 Data Analysis Procedures**

Data analysis refers to examining what has been collected in a research or experiment and making deductions and inferences. It involves uncovering underlying structures; extracting important variables, detecting any anomalies and testing any underlying assumptions (Kombo and Tromp, 2006). This study utilized audio recorders to record

verbatim the interviews and focus group discussions which were later transferred to computer where they were transcribed into Swahili and translated into English. Furthermore, observation guide form was used to record observed information. Data was analyzed by using descriptive thematic analysis framework, whereby all recorded and transcribed interviews and focus group discussions were dated and sorted by categories in which similar events, words or phrases were grouped in the same category by the guide of research tasks and questions.

### **3.15 Chapter Summary**

This chapter presents research methodology which include research approach, study area, study population, sample, sampling, data collection procedures, data collection instruments, validity of instruments, reliability of instruments, ethical considerations, data trustworthiness and data analysis procedures. The following is chapter four which deals with data presentation, analysis and discussion.

## CHAPTER FOUR

### 4.0 DATA PRESENTATION, ANALYSIS AND DISCUSSION

#### 4.1 Introduction

This study investigated the factors influencing academic performance of hearing impaired students in inclusive education, a case of Moshi Technical secondary school. Two research objectives guided the investigation. The findings from the study are presented and analyzed according to the themes derived from two research objectives. Thus, the following presentation provides participants' accounts and experiences of the practice of inclusive education for hearing impaired students. The accounts emerged from interviews as well as focused group discussions obtained from a total of 32 participants. The accounts were presented in narrative form in order to make a reader to get the real words from the participants.

The participants included 8 teachers who participated in interviews, four (4) of them were special needs teachers while other four (4) were ordinary teachers. The Head of school and Academic master were also involved. Twenty two (22) students, among them fourteen (14) were hearing impaired students, while other eight (8) were ordinary students. Twelve (12) students participated in focused group discussions whereby two groups were formed comprising three (3) hearing impaired students and three (3) ordinary students each. Though the study aimed at 34 participants the reality in the field was not so, two special needs teachers for hearing impaired students could not participate in the interview due to different reasons.

The researcher could not present all stories from the participants, only few stories are presented. Stake (1995) in Lugenge (2015) comments that choice is inevitable although

many researchers would like to tell the whole story. According to this study, choice was made according to the purpose of the study. Data collected was recorded by using digital audio recorder whereby after recording the data were transferred to computer and later transcribed, translated, sorted and analyzed according to the specific objectives of the study presented below:

- i) To examine perception of teachers and students towards inclusive education in relation to hearing impaired students.
- ii) To investigate whether inclusive education teaching and learning environment is friendly to hearing impaired students.

## **4.2 Teachers and Students' Perception on Inclusive Education In Relation to Hearing Impaired Students**

Under this objective we are focusing on teachers as well as students' perception on inclusive education at Moshi Technical secondary school. To begin with, let us see teachers' perception on inclusive education.

### **4.2.1 Teachers' Perception on Inclusive Education**

The study findings indicated that 100% of teachers felt that it was not conducive to teach in inclusive classes. It was found that both ordinary teachers and special needs teachers said that it was not conducive to teach in inclusive classes. The ordinary teachers who teach in inclusive classes gave the reason that; it was not conducive to teach in inclusive classes due to inability to use sign language in teaching and learning process. Giving his views on this issue, one ordinary teacher narrated:

*For me it is not conducive at all to teach in an inclusive class, because, I don't know sign language, a teacher who teaches in inclusive class should know sign language. In an inclusive class most teachers teach generally without considering hearing impaired students' needs. Hearing impaired students take more time than*



*normal students to understand. Hence they need more attention during the lesson. Because there is no enough attention given to them, most of the time the hearing impaired students lag behind in examination performance in the class.*

Apart from the reasons given by the ordinary teachers, special needs teachers also had their reasons that it was not conducive to teach in inclusive classes because it consumes a lot of time to teach by using sign language and ordinary language at the same time in inclusive classes. Voicing her views on this issue, one special needs teacher narrated:

*It is very difficult to teach in an inclusive class. Few teachers are conversant in using sign language but majority of them do not know that language. We need an assistant who can translate materials in sign language which the hearing impaired students understand, but unfortunately we do not have such people here at our school. The alternative we have is to use students who have the idea of sign language to help their fellow hearing impaired students to get what the teacher is teaching in the lesson. Unfortunately, the students give what he/she has from the lesson, if he/she got the concepts wrongly and the recipients (hearing impaired students) would understand the concepts wrongly too. Unfortunately, even those who understand sign language it becomes difficult for them to teach hearing impaired and normal students at the same time, because it consumes a lot of time so they do not favor inclusive education. They view it as a burden.*

The perception of teachers towards teaching in inclusive classes for hearing impaired students decreases teachers' morale to teach in these classes which in turn affects teaching and learning process. This contributes to poor performance of hearing impaired students.

Basing on the above voices of teachers, it is important that teachers who teach in inclusive classes for hearing impaired students should be knowledgeable in sign language skills so as to facilitate communication in the teaching and learning process. This will enable hearing impaired students to learn effectively, hence improve their academic performance.

This finding concurs with Sacks (2001) in Gudyanga *et al.* (2014) on their study about challenges faced by students with hearing impairment in Bulawayo urban regular schools, the study shows that the regular teachers were least prepared for inclusive education of children with disabilities because the teachers had little training in dealing with individual differences and specific instructional processes developed for special needs students. We have seen teachers' perception on inclusive education for hearing impaired students, now let us dwell on students' perception on inclusive education for hearing impaired students.

#### **4.2.2 Students' Perception on Inclusive Education**

Students' perception on inclusive education includes hearing impaired students' perception as well as ordinary students' perception. To begin with, let us deal with hearing impaired students' perception on inclusive education.

The study findings revealed that, 78% of hearing impaired students liked inclusive education due to the support given to them by ordinary students. One of them stated the reasons that drove him to prefer inclusive education; his opinions are presented here below:

*We do not hear what the teacher teaches in the class. There are few teachers who understand sign language. They use it in some parts of the lesson. We come out of class without understanding fully what he/she has taught. Some of our fellow ordinary students understand a bit of sign language, they help us after the lesson to inform us what was taught in the lesson. Sir, we study in a hard way, as a result, when the examination results come out we just hold the tail of the class. Sir, it is not possible to have teachers who know to teach both in sign and ordinary language. Hence, the relationship of both hearing impaired and ordinary students is important; it can build mutual understanding among us. They can help us to understand a bit of the lessons. Hence, increase academic performance.*

The study further revealed that, 22% of hearing impaired students did not like inclusive education. One hearing impaired student had the reason that made her prefer to be in separate classes rather than in inclusive classes. She had the following views concerning the issue:

*When teachers are teaching in inclusive classes they don't use sign language. The ordinary students understand what is taught, but hearing impaired students could not understand ordinary language. When hearing impaired student asks the ordinary students about some points that he/she had not understood they don't cooperate, they see us as disturbing; this is because they don't know sign language therefore, they separate us and avoid us.*

Basing on the above voices of hearing impaired students, it is important for hearing impaired students to accept inclusive education that would help them to build and strengthen their social, emotional and academic abilities, thus, improve their academic performance.

We have seen hearing impaired students' views on inclusive education. The following are the ordinary students' views on inclusive education. The study findings indicated that 87% of ordinary students liked inclusive education. Giving her views, one of ordinary students stated her reasons to prefer inclusive education.

*I like to be with my fellow hearing impaired students in our class. They don't hear what the teacher teaches by using ordinary language, most teachers have little knowledge of sign language and there are no interpreters in our class. I know a bit of their sign language, I feel proud to help them interpret ordinary language into sign language. Though they are not able to get all what teachers teach in class but they get something from us.*

The study further revealed that, 13% of ordinary students did not like inclusive education. One of ordinary students gave his reasons of dislike of inclusive education, he narrated:

*I like to be in our own class because when teachers teach in inclusive class they don't use sign language, our fellow hearing impaired students can't understand ordinary language, when they ask me to help them in understanding some lessons I fail to help them because I don't know sign language, I wish I had sign language skills so that I could help them but I can't. It is difficult to learn sign language, when I try to learn some signs, I forget them. It is better for them to be in their own classes so that those teachers who know sign language could teach them separately.*

Basing on the above voices of students, it is important for ordinary students to accept inclusion with hearing impaired students that will provide a room for building communication and cooperation among them. This could be possible by conducting time to time orientations to ordinary students on the importance of loving, sharing, cooperating, helping and building mutual relationship with hearing impaired students. Hence improve the academic performance of hearing impaired students.

The findings concur with Mushoriwa and Gasva (2008) in Gudyanga *et al* (2014) study on challenges faced by students with hearing impairment in Bulawayo urban regular schools that provide the evidence that mainstream secondary school students are accepting the inclusion of students with disabilities.

### **4.3 Inclusive Education Teaching and Learning Environment**

Under this objective the researcher investigated if inclusive education teaching and learning environment is friendly to hearing impaired students at Moshi Technical secondary school. The objective focused on teachers' academic qualification and experience in inclusive education as well as teaching and learning facilities for hearing impaired students. To begin with, let us see teachers' academic qualification and experience.

### **4.3.1 Teachers' Academic Qualification and Experience in Inclusive Education**

This part is presented into two themes.

#### **4.3.1.1 Teachers' Academic Qualification**

The study findings showed that 100% of the interviewed teachers' academic qualification ranged from Diploma to Bachelor Degree level. 62% of teachers were Bachelor Degree holders while 38% were Diploma holders. This implied that, teachers at Moshi Technical secondary school had academic qualifications needed to be a secondary school teacher. The study further found that, 50% of interviewed teachers were ordinary teachers, while, 50% were special needs teachers. This indicated that, half of interviewed teachers were special needs teachers while half of them were ordinary teachers who had no special needs education.

#### **4.3.1.2 Teachers' Experience**

The study findings showed that 75% of teachers who were interviewed had less than four years of experience in teaching hearing impaired students in inclusive education. This implies that most teachers had no enough experience in teaching hearing impaired students in inclusive education. On the other hand, 75% of teachers expressed that it was their first time to teach in inclusive education for hearing impaired students. Lack of enough experience in teaching hearing impaired students in inclusive classrooms make teachers to be incompetent and incapable to teach in inclusive classes effectively due to lack of necessary skills and knowledge such as lack of suitable teaching and learning methods and techniques; inability to use appropriate teaching and learning materials as well as lack of sign language skills which affects teaching and learning processes, hence, affect the academic performance of hearing impaired students in inclusive classes.

Furthermore, the study findings indicated that, both ordinary teachers and special needs teachers who teach in inclusive classes were facing the challenge of using sign language in inclusive classes. Firstly, the ordinary teachers who teach hearing students in inclusive classes had no sign language skills which could help them to interact with hearing impaired students in teaching and learning process. Giving his views on his experience in teaching hearing impaired students in inclusive classes, one ordinary teacher narrated:

*I have been here for two years; it is my first time to teach hearing impaired students in inclusive class. For me it becomes difficult to teach in inclusive classrooms because I don't know sign language, but what helps me is that, the students who have the idea of sign language assist hearing impaired students in understanding what is taught, and it takes time for hearing impaired students to get the lesson concepts because the students who help them are not competent in sign language. Hence, what they get from my lesson is not complete. I feel sorry; I know this contributes to their poor academic performance.*

Apart from the teacher's narration, it was also observed in inclusive classrooms that, all ordinary teachers stood in front of the class and called a student to assist in interpreting teacher's lesson into sign language for hearing impaired students by seating in front of the class. However, the assistance provided by hearing students was not sufficient and effective. This was due to the fact that ordinary students were not competent enough in sign language especially in technical and science subjects. In one instance, the teacher was just writing calculations on the blackboard while speaking, assistant student was not able to interpret in sign language for hearing impaired students, thus, leaving hearing impaired students behind.

Secondly, though there were few qualified special needs teachers in hearing impairment, they didn't use sign language in classroom frequently due to the reason that it consumes a lot of time teaching by using ordinary language and sign language at the same time. Giving his experience on this matter, one special needs teacher narrated:

*I don't use sign language in inclusive classes because when teaching by using sign language and spoken language at the same time it consumes a lot of time, the syllabus is long, I can't finish the syllabus if I use sign language.*

It is important to note that inappropriate use of sign language in inclusive classes causes difficulty in learning for hearing impaired students due to the fact that they could not learn what is intended to them because of communication barrier. Hence, poor academic performance of hearing impaired students. This situation is a stumbling block for academic performance of hearing impaired students in inclusive classes. Therefore, teachers who teach in inclusive classes for hearing impaired students should be competent in sign language so as the hearing impaired students could follow-up and understand what is going on in the lesson (Cawthon, 2001). Apart from teachers' academic qualification and experience, availability of teaching and learning facilities is very important in teaching and learning process.

#### **4.3.2 Teaching and Learning Facilities**

The study findings indicated that 83% of hearing impaired students noted that there was shortage of hearing aids for hearing impaired students. It was found that, there were very few hearing impaired students who had hearing aids. Giving her comments concerning the availability of hearing aids, one hearing impaired student had this to comment:

*There are very few hearing aids for hearing impaired students. The school doesn't provide hearing aids to us, I had a pair of hearing aids but they are no longer working because they are old.*

The researcher also noted during classroom observations that there was only one hearing impaired student who had a pair of hearing aids.

The above findings justify that there was a need for hearing impaired students to be provided with enough hearing aids that could help them in the teaching and learning process, thus, improving their academic performance. Regular use of hearing aids has a vital role to play in academic performance of hearing impaired students (Quigley and Paul, 1984).

Apart from shortage of hearing aids for hearing impaired students, there was also shortage of subject textbooks. The study findings indicated that 86% of hearing impaired students had no textbooks. Giving her opinion on the availability of subject textbooks, one of hearing impaired student narrated:

*Books are not enough, they are few, and those available in the library are old and outdated. We need good books which will help us to advance further in the academic field rather than what we are experiencing now, we need to do well in examination like our fellow students who have hearing capacity.*

The study further observed that, there were no hearing impaired student who had subject textbook during classroom sessions. It is very important that hearing impaired students should be provided with enough subject textbooks which could help them in reading what they might miss when teachers are teaching in the classroom which in turn may raise their academic performance. Hence enough textbooks for hearing impaired students are needed in order to improve their academic standards. Books and written materials such as written copies of lessons should be provided to hearing impaired students to facilitate their learning (Adoyo, 2007).

Apart from shortage of books and written materials, there was also shortage of sign language dictionaries. The study found that, in all observed classes, there was no any sign-language dictionary used by hearing impaired students. Sign language dictionaries



could help both hearing impaired and ordinary students to learn and communicate to each other easily. Teachers could also use them to help their hearing impaired students. Lack of sign-language dictionaries for hearing impaired students may affect their learning by lacking wide knowledge of sign language which is their major means of communication, therefore, affecting their academic performance. Khan (2012) study on secondary school teachers' perceptions of inclusive education in Bangladesh noted that the practice of inclusive education in secondary schools is facing lack of teaching materials.

## **CHAPTER FIVE**

### **5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents summary, conclusion and recommendations regarding the factors influencing academic performance of hearing impaired students. The major research findings are based on the two specific objectives of the study presented below.

- i) To examine perception of teachers and students towards inclusive education in relation to hearing impaired students.
- ii) To investigate whether inclusive education teaching and learning environment is friendly to hearing impaired students.

#### **5.2 Summary of the Findings**

The major purpose of this study was to investigate on the factors influencing the academic performance of hearing impaired students in inclusive education, a case of Moshi technical secondary school. The government's objective on inclusive education was to improve access for the hearing impaired to participate and perform well in regular classes. The findings show that the hearing impaired had access to secondary school education, but, they were not performing well along with other ordinary students at Moshi technical secondary school.

The study findings show that the inclusive teaching and learning environment at Moshi Technical secondary school was not friendly to hearing impaired students due to several factors which include shortage of special needs teachers in hearing impairment which caused lack of sign language skills to teachers who teach in inclusive classes; inadequate supply of teaching and learning facilities such as textbooks, hearing aids as

well as sign language dictionaries; improper use of teaching and learning methods as well as shortage of teaching and learning aids.

This implies that hearing impaired students at Moshi Technical secondary school could not learn effectively in this unfriendly environment. This situation affected their learning which eventually resulted into poor academic performance. This might be the main reasons of poor academic performance of hearing impaired students in inclusive education at Moshi Technical secondary school. Khan (2012) found that the practice of inclusive education in secondary schools is facing several barriers including insufficient knowledge of inclusive education, lack of training to teachers on special needs education in inclusive setting and lack of teaching materials.

On the other hand, the findings of this study show that both ordinary teachers and special needs teachers who teach in inclusive classes at Moshi Technical secondary school were not comfortable to teach in those classes due to the fact that ordinary teachers had no special needs education in hearing impairment which made them difficult to teach in inclusive classes because they couldn't use sign language in the teaching and learning processes. Whereas, special needs teachers who teach in inclusive classes felt that teaching in inclusive classes by using sign language and ordinary language at the same time consumed a lot of time which might have hindered them to cover the syllabus.

### **5.3 Conclusion**

Basing on the study findings, the following conclusion was made.

There was shortage of special needs teachers for hearing impairment at Moshi Technical secondary school. It was found that, the school had no enough special needs teachers who could be used to teach in inclusive classes for hearing impaired students.

Teachers who teach in inclusive classes were not comfortable. It was found that, most teachers who teach in inclusive classes were ordinary teachers who had no sign language skills and knowledge on how to deal with hearing impaired students, hence, making them uncomfortable to teach in inclusive classes. Moreover, even those few teachers who had special needs education for hearing impairment didn't use sign language in the classroom effectively due to the reason that it consumes a lot of time to teach by using sign language and ordinary language the same time.

On the other hand, the unqualified ordinary students were used to interpret lessons in the classrooms for hearing impaired students. The ordinary students who interpreted the sign language in the classrooms were not specialized in sign language, which caused them to fail to interpret or misinterpret some concepts. Hence, hearing impaired students missed some concepts or misunderstood what might have been interpreted wrongly. This was evidenced during classroom observations whereby interpreters failed to interpret some concepts. The interpreters' learning became difficult because they couldn't concentrate to learn while they were interpreting, this might have led them to perform poorly in their studies.

In addition, there was shortage of teaching and learning facilities in Moshi Technical secondary school. It was found that, there was shortage of hearing aids, textbooks and sign language dictionaries. The observation revealed that, there was only one hearing impaired student who had hearing aids in one of the classrooms while all other hearing impaired students had no hearing aids. There was no any sign language dictionary in the classrooms, and also, there was no any hearing impaired student who had subject textbook.

The above factors are the reasons of poor academic performance of hearing impaired students at Moshi Technical secondary school. It is obvious that the hearing impaired students could not perform well in their national examinations in such situation. The situation needs to be rectified in order for the hearing impaired students to perform better in their national examinations.

#### **5.4 Recommendations**

There are several recommendations to be made by this study to enforce policy implications, advocacy, reforms and implementations towards inclusive education for hearing impaired students for the sake of improving academic performance of hearing impaired students in inclusive education. The recommendations are directed to education stakeholders and for further research.

##### **5.4.1 Recommendations to Education Stakeholders**

- i) The government through the Ministry of Education, Science and Technology (MoEST) should train more special needs teachers for hearing impairment and post them to Moshi Technical secondary school to curb the shortage of special needs teachers for hearing impairment. The government also should make an effort to expand training on special needs education for hearing impairment by establishing more special needs colleges and universities as well as attracting more students to join the special needs education for hearing impairment courses in order to increase the number of special needs teachers in inclusive schools. Moreover, the government should motivate and encourage in-service ordinary teachers to opt for further studies in special needs education for hearing impairment. The availability of well qualified teachers will diminish the shortage of special needs teachers in hearing impairment. Hence abolition of using ordinary students who are not

qualified to interpret lessons for hearing impaired students, hence improve the academic performance of hearing impaired students.

- ii) The government through the Ministry of Education, Science and Technology to ensure adequate supply of teaching and learning facilities such as textbooks, sign-language dictionaries, hearing aids as well as visual materials. The availability of teaching and learning facilities could facilitate and improve teaching and learning for hearing impaired students, hence, improve their academic performance.
- iii) The school should establish a resource room for hearing impaired students where hearing impaired students could use their extra time to learn what they have learned in inclusive classes. Hence improve their academic performance.
- iv) Regular seminars should be given to teachers who teach in inclusive classes on how to teach in inclusive classes and how to build mutual relationship and friendship with hearing impaired students. This might motivate teachers to teach in inclusive classes, hence, helping to improve academic performance of hearing impaired students.
- v) Regular orientations should be given to ordinary students on how to cooperate and help hearing impaired students in their academic and social life in the school.

#### **5.4.2 Recommendations for Further Research**

This was a case study at Moshi Technical Secondary school, it is therefore, recommended that the same study be carried out in a wider scope in Tanzania.

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## **APPENDICES**

### **Appendix 1 : Interview Guide for Hearing Impaired Students**

#### **INTERVIEW GUIDE FOR HEARING IMPAIRED STUDENTS**

Dear Students,

This interview guide is designed to investigate the factors influencing academic performance of hearing impaired students in inclusive education in public secondary schools. The aim is to conduct a case study at Moshi Technical Secondary school in Moshi Municipal at Kilimanjaro region-Tanzania. This study has nothing to do with students' private affairs rather than factors influencing academic performance of hearing impaired students in inclusive education.

Please, I request you to participate in this research by giving your opinion which will inform the education practitioners on the factors influencing academic performance of hearing impaired students in inclusive education in public secondary schools, so that the factors should be dealt with to improve the academic performance of hearing impaired students in inclusive setting.

#### **Factors Influencing Academic Performance of Hearing Impaired Students in Inclusive Education**

1. Based on your experience in inclusive education;
  - a) Are there adequate teaching and learning facilities for hearing impaired students?
  - b) Do hearing impaired students follow-up lessons when teacher is teaching?
  - c) Would hearing impaired students want to be in their own classes?
2. Are ordinary students helpful to hearing impaired students in inclusive classes?

**THANK YOU FOR YOUR COOPERATION**

**Appendix 2 : Interview Guide for Ordinary Students****INTERVIEW GUIDE FOR ORDINARY STUDENTS**

Dear Students,

This interview guide is designed to investigate the factors influencing academic performance of hearing impaired students in inclusive education in public secondary schools. The aim is to conduct a case study at Moshi Technical Secondary school in Moshi Municipal at Kilimanjaro region-Tanzania. This study has nothing to do with students' private affairs rather than factors influencing academic performance of hearing impaired students in inclusive education.

Please, I request you to participate in this research by giving your opinion which will inform the education practitioners on the factors influencing academic performance of hearing impaired students in inclusive education in public secondary schools, so that the factors should be dealt with to improve the academic performance of hearing impaired students in inclusive setting.

**Factors Influencing Academic Performance of Hearing Impaired Students in Inclusive Education**

1. Based on your experience in inclusive education;
  - a) Would ordinary students want to be in their own classes?
  - b) Are ordinary students helpful to hearing impaired students in inclusive classes?

**THANK YOU FOR YOUR COOPERATION**

### **Appendix 3 : Focused Group Discussions (FGD) for Students**

#### **FOCUSED GROUP DISCUSSIONS (FGD) FOR STUDENTS**

Dear Students,

This interview guide for the Focused Group Discussion (FGD) is designed to investigate the factors influencing academic performance of hearing impaired students in inclusive education in public secondary schools. The aim is to conduct a case study at Moshi Technical Secondary school in Moshi Municipal at Kilimanjaro region-Tanzania. This study has nothing to do with students' private affairs rather than factors influencing academic performance of hearing impaired students in inclusive education.

Please, I request you to participate in this research by giving your opinion which will inform the education practitioners on the factors influencing academic performance of hearing impaired students in inclusive education in public secondary schools, so that the factors should be dealt with to improve the academic performance of hearing impaired students in inclusive setting.

#### **Factors Influencing Academic Performance of Hearing Impaired Students in Inclusive Education**

1. Based on your experience in inclusive education;
  - a) Are there adequate teaching and learning facilities for hearing impaired students?
  - b) Would hearing impaired students want to be in their own classes?
2. Are ordinary students helpful to hearing impaired students in inclusive classes?
  - a) Would ordinary students want to be in their own classes?

**THANK YOU FOR YOUR COOPERATION**

## **Appendix 4 : Interview Guide for Teachers**

### **INTERVIEW GUIDE FOR TEACHERS**

Dear Teachers,

This interview guide is designed to investigate the factors influencing academic performance of hearing impaired students in inclusive education in public secondary schools. The aim is to conduct a case study at Moshi Technical Secondary school in Moshi Municipal at Kilimanjaro region-Tanzania. This study has nothing to do with students' private affairs rather than factors influencing academic performance of hearing impaired students in inclusive education.

Please, I request you to participate in this research by giving your opinion which will inform the education practitioners on the factors influencing academic performance of hearing impaired students in inclusive education in public secondary schools, so that the factors should be dealt with to improve the academic performance of hearing impaired students in inclusive setting.

#### **Personal Particulars**

1. Position of the respondent.....
2. Professional Qualification.....

#### **Factors Influencing Academic Performance of Hearing Impaired Students in Inclusive Education**

1. Based on your experience in inclusive education;
  - a) What is your experience in teaching hearing impaired students?
  - b) Do you use sign language in inclusive classes?

- c) Do you think it is conducive to teach hearing impaired students in inclusive classes?
2. As far as academic and professional qualifications are concerned;
- a) How many teachers for special needs education for hearing impairment are there in your school?

**THANK YOU FOR YOUR COOPERATION**



**Appendix 5 : Interview Guide for the Head of the School and the Academic Master**

**INTERVIEW GUIDE FOR THE HEAD OF THE SCHOOL AND THE ACADEMIC MASTER**

Dear The Head of the School/ Academic Master,

This interview guide is designed to investigate the factors influencing academic performance of hearing impaired students in inclusive education in public secondary schools. The aim is to conduct a case study at Moshi Technical Secondary school in Moshi Municipal at Kilimanjaro region-Tanzania. This study has nothing to do with students' private affairs rather than factors influencing academic performance of hearing impaired students in inclusive education.

Please, I request you to participate in this research by giving your opinion which will inform the education practitioners on the factors influencing academic performance of hearing impaired students in inclusive education in public secondary schools, so that the factors should be dealt with to improve the academic performance of hearing impaired students in inclusive setting.

**Personal Particulars**

1. Position of the respondent.....
2. Professional Qualification.....

**Factors Influencing Academic Performance of Hearing Impaired Students in Inclusive Education**

1. Based on your experience in inclusive education;
  - a) What is your experience in dealing with inclusive education for hearing impaired students?
  - b) Are there adequate teaching and learning facilities for hearing impaired students?
  - c) Do teachers feel comfortable to teach hearing impaired students in inclusive classes?
2. As far as academic and professional qualifications are concerned;
  - a) How many teachers for special needs education for hearing impairment are there in your school?
3. Do students feel comfortable to be in inclusive classes?
4. Are ordinary students helpful to hearing impaired students?

**THANK YOU FOR YOUR COOPERATION**

**Appendix 6 : A Classroom Observation Guide for Inclusive Classes for  
Hearing Impaired Students**

**A CLASSROOM OBSERVATION GUIDE FOR INCLUSIVE CLASSES FOR  
HEARING IMPAIRED STUDENTS**

Date.....Class.....

PERIOD	SUBJECT	TIME	No. of Students						
			Ordinary			Deaf			
			M	F	TOTAL	M	F	TOTAL	

CATEGORIES	DESCRIPTIVE NOTES	REMARKS
Teacher's use of sign language		
Students' use of hearing aids		
Teaching methods used		
Availability and use of textbooks/sign language dictionaries		
Availability and use of teaching aids (visual, audio, audio-visual)		
Hearing impaired involvement in teaching & learning process		
Hearing impaired follow -up of lessons		
Hearing students' support		
Challenges observed		
Any other observation		