

**PERCEPTIONS OF TEACHERS AND PUPILS ON FACTORS AFFECTING
ACADEMIC PERFORMANCE OF PUPILS WITH HEARING IMPAIRMENT IN
SELECTED SPECIAL SCHOOLS IN MUCHINGA AND NORTHERN PROVINCES,
ZAMBIA**

BY

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**A Dissertation Submitted to the University of Zambia in Partial Fulfilment of the
Requirements for the Award of the Degree of Master of Education in Educational
Psychology**

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DECLARATION

I **Mumba Dennis**, do hereby declare that this dissertation on perceptions of teachers and learners towards factors that affect academic performance of learners with hearing impairment is my own work and that the sources I have used or quoted have been indicated and acknowledged by means of complete references.

Signed:.....

Date:.....28-03-2022.....

DEDICATION

This dissertation is dedicated to my wife, Janet Mulwanda Mumba, for her unwavering support, encouragement and understanding during the time of my study, and my children Emmanuel, Chibuye, Dennis Junior and Marian for their understanding and encouragement during the research. Furthermore to my friend, Kalimaposo Daniel and Daniel D. Phiri for the unending assistance during the process of production of this work.

CERTIFICATE OF APPROVAL

This dissertation by **Mumba Dennis** is approved as a partial fulfilment of the requirements for the award of the Degree of Master of Education in Educational Psychology of the University of Zambia.

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ABSTRACT

Academic performance of learners with hearing impairment has continued to decline far below their hearing counterparts. Further comparison tests on performance in various subjects among different SEN learners indicate that those with Hearing Impairments (HI) were lagging behind. Therefore, this study explored perceptions of teachers and pupils on factors affecting academic performance of pupils with hearing impairment in selected special schools in Muchinga and Northern Provinces of Zambia. The study was guided by the following objectives; 1) To identify the perceptions of teachers and pupils on factors affecting academic performance of pupils with hearing impairment in the study sites. 2) To explore perceptions held by teachers and pupils over factors affecting academic performance of pupils with hearing impairment in study site. 3) To explore challenges teachers and pupils encounter in the teaching and learning of pupils with hearing impairment in study site. 4) To ascertain measures that might be taken to address perceptions held on factors affecting academic performance among pupils with hearing impairment. This study adopted a case study design supported by qualitative approach for data collection. The target population was Hearing Impaired pupils, Special Education teachers, and the head teachers of special Schools/Units in two study sites. The total sample was 22 which consisted of 10 teachers of HI pupils, 2 head teachers of special schools or Units and 10 pupils with hearing impairment from the two study sites. An interview guide was used to collect data from teachers and head teachers while focused group discussions and classroom observation checklist were used to collect data from pupils. Expert sampling technique was used to select teachers and head teachers, while purposive sampling was used to select pupils. Data was analysed thematically. The findings revealed that hearing impairment significantly affected the academic performance of pupils. It was also found that teachers and pupils believe that the following factors affect HI pupils in academic performance; teachers perceive HI pupils to have poor academic background, perceive schools to have insufficient resources, clouded school curriculum, pupils perceive ill-preparation of teachers (inadequate sign language skills), believe that schools have poor learning infrastructure. The study further revealed there were few sign language teachers, and those few were not adequately trained to teach using sign language, as such, they were not very supportive and had negative attitudes towards these pupils. The study has revealed so many perceptions on factors affecting the academic performance of HI pupils held by teacher and pupils and these range from shortage of teaching and learning materials, inability to effectively use sign language by teachers to effectively teach, limited learning resources, clouded school curriculum, lack of hearing devices, shortage of special education teachers, and lack of infrastructure both classrooms and desks. The study made the following recommendations; (i) School administration should improve the learning environment for pupils with hearing impairment by securing appropriate teaching/learning materials, (ii) The government, through the MOE should train more teachers in sign language and that only specialized teachers in sign language should be deployed in classrooms for the HI pupils, (iii) Teachers to avoid having a preconceived negative attitude towards pupils with hearing impairment.

Key words; Zambia, Hearing Impairment, Perception, Sign language.

ABBREVIATION ACRONYMS

AEO	Area Education Officer
COAEPHD	Centres for Preferential Educational Attention for Hearing Disability
CWD	Children with Disabilities
CHI	Children with Hearing Impairment
CPD	Continuous Professional Developments
CSEN	Children with Special Education Needs
DEBS	District Education Board Secretary
DHH	Deaf and Hard of Hearing
ECEC	Early Childhood Education and Care
ECZ	Examination Council of Zambia
ESO	Education Standard Officer
HI	Hearing Impairment
ICT	Information and Communication Technologies
I EP	Individualised Educational Program
IYDP	International Year of Disabled Persons
IPA	Interpretive Phenomenological Analysis
KSL	Kenyan Sign Language
LWPHI	Learners with Partial Hearing Impairment
MOGE	Ministry OF General Education
NAMPLN	National Assessment Program Literacy and Numeracy
ORISD	Opinion Relative to Integration of Students with Disabilities
SEN	Special Education Needs
SHI	Students Hearing Impairment
SNS	Special Needs Students
TATSNSQ	Teachers Attitude Towards Special Needs Students Questionnaire
UN	United Nation
UZREC	University of Zambia Research Ethics Committee
ZAMISE	Zambia Institute of Special Education
ZNCRDC	Zambia National Crusade Research of Disabled Children

OPERATIONAL DEFINITION OF KEY TERMS

Academic performance – level of schooling successfully completed and the ability to attain success in studies

Curriculum - This refers to organized experiences that occur in the educational process that include the instructional sequence, the subjects taught, the subject content, the school and classroom environment and other activities that take place inside and outside the classroom. It provides guidelines on the content, sequence of activities, teaching methods/ format, time schedules, educational resources and evaluation procedures. Its framework is aimed to teach average pupils.

Deaf - A Deaf person has little to no hearing ability, a condition which is sometimes referred to as Hearing Impairment or Hearing Loss.

Deaf Culture - Beliefs, values, history, norms, attitudes, behaviours and characteristics shared by Deaf people and communities.

Hearing Impairment - Refers to inability to hear.

Zambian Sign Language –This is visual language with its own structure and uses manual signs that have meaning and are used to pass message. This is the primary language for pupils with hearing impairments and used in school and other settings. It is always used alongside the other communication approaches. It is the backbone of communication of pupils with HI in any setting.

Language of Instruction - This is the language used by teachers in delivering curriculum content to pupils. For Pupils with hearing impairment, the recommended language of instruction is Sign Language, which refers to hand and arm movements used to communicate.

School Environment - This refers to infrastructure and facilities available in the school for the pupils with hearing impairment that supports learning and the general well-being of the pupil. It includes the physical environment as well as school policies, disciplinary procedures and the general school culture that affects pupils and school staff.

Socio-Cultural Factors - These are societal forces that determine behaviour and way of life of a community. They include customs, religion, language, beliefs, values, economic status, politics and laws that determine members of a community.

Teaching and Learning Resources - These are materials such as text, videos and visual aids used by teachers and pupils in the teaching-learning process.

CHAPTER ONE: INTRODUCTION

1.0 Overview

This chapter presents background to the study on the perceptions of teachers and pupils on factors affecting academic performance of pupils with hearing impairment in Muchinga and Northern Provinces respectively. The chapter further presents the statement of the problem under investigation, the purpose of the study, research objectives and research questions, significance of the study and its limitations, ethical considerations, and theoretical framework.

1.1 Background to the Study

Education is a tool through individual can fight poverty. All individuals including those with disability require access to education and training to fight poverty. Through education and training hearing impairment individuals are likely to have opportunity to employment and feed for themselves in the after school life. However, hearing impairment individuals have an opportunity to access learning and hoping to perform well academically like other peers. As such the quality of education at all levels play a pivotal role in the development of any country. Education increases human capabilities and improves productivity in labour, and national growth (Mayaka, 2012). As a result increased access to education and quality of education offered to all children including those with hearing impaired matters (unesco, 1994). In Zambia and through policies (1977 Education Reforms, 1992 Focus on learning and current education policy1996 (Educating Our Future) committed itself to provide for education of persons with disabilities including those with hearing impaired (Muganda and Mwangi, 2002). Because of these policies we seek setting up of special education schools and education units which included those for hearing impaired.

The education for the deaf children originates from Europe, in the eighteenth century. In America, the first school for the deaf was opened by Thomas Hopkins Gallaudet and Laurent Clerc in 1817. Since then, the concept has spread throughout the world in many developed countries and later in under developing countries.

In Zambia, the education for children with hard of hearing and deafness emerged around the year 1955 through the Dutch Reformed Church Missionary (Kanyanta, 2003). With the growth of the number of children with learning disabilities, the government of the Republic of Zambia took the

responsibility of running such schools in 1971 in Eastern Province at Magwero Mission School and in Copperbelt Province in Kalulushi (District) at St. Joseph Mission School, catering for the needs of the disabled pupils such as the deaf (MoE, 1977). The national policy on the formal Education of Children with Special Educational Needs (CSEN) in Zambia began to develop following the accomplishment of Zambia Nation-wide Crusade to reach Disabled Children (ZNCRDC), which was prompted by the UN declaration of 1981 as the International Year of Disabled Persons (IYDP). The campaign produced statistical approximations of the occurrence of various types of disability among the population of basic school age (5–15 years). It was found that, existing special educational provisions were reaching less than 10 percent of those determined as severely disabled (MoE, 1992).

According to Mayaka (2012) children with hearing impairments in Zambia have not been doing well in terms of academic performance. Similarly, Mpofu et al. (2013) also showed that pupils with hearing impairments have been consistently trailed behind their hearing counterparts in academic performance as reflected in the examination results. For example, during national examination, the pass rate for pupils with hearing impairments in Grade 9 in Mpika District during the years 2018 and 2019 ranged between 27.01% and 31.04% (ECZ, 2018/2019). In addition, Grades 9 and 12 in Kasama District, the pass rate percentages for 2018 and 2019 ranged between 30.01% and 36.07% (ECZ, 2018/2019).

Hearing impairment pupils do not perform well in comparison with their hearing peers in national examination. When they are ranked with other regular schools, deaf schools rank among the bottom positions in terms of passing percentages. For instance, in 2018 the pass percentage for grade twelve examinations by HI learners who sat for the examination was 37.08% while that of hearing learners was 61.17%. In Mpika pass rate percentages for Grades 9 and 12 during the years 2018 and 2019 ranged between 78.03% and 86.9%, and Kasama the pass rate percentages for Grades 9 and 12 ranged between 81.06% and 93.02% during the years 2018 and 2019 (ECZ, 2018\ 2019).

However, studies conducted in other parts of the world have also shown that learners with disabilities and in particular, the hearing impairments perform poorly in academic work and often had difficulties to progress. In Israel, a study conducted by Shamai (2008) found that parents were

involved in the education of their children with hearing impairments. The support was in form of counselling, provision of necessary school requisites and health care, including the provision of a healthy home environment. This study by Shamai only focused on the education support, and remained silent on perceptions of teachers and pupils on factors affecting academic performance of pupils with hearing impairment, which was the concern of the present study. In South Africa, for example, Bell (2013), found that despite the various pupils with hearing impairment receiving support towards education, their performance during the examinations still remain poor.

In Zambia, studies conducted on the welfare of the pupils with hearing impairment have also shown that, they receive different kinds of support from the government. A study done by Serpell and Folotiya (2011) revealed that, pupils with special needs which include those with hearing impairment receive support from government in form of policy document on the education of Special Education Needs Children.

In the quest to improve the education of the SEN children, the Government of Zambia has made deliberate efforts to improve the enrolment of pupils with hearing impairments into schools through awareness creation programmes, establishment of units for example Musakanya Special, Kabale Special, Chinsali Special and Isoka Special Schools in Muchinga province are attached to regular primary schools, establishment of more secondary schools, and affirmative action in admitting more pupils with hearing impairment into institutions of higher learning. This initiative has seen an increment of enrolment of children with SEN, which includes those with hearing impairments, also the number of qualified teachers in this sector has not been adequate enough to cater the needed education to these pupils. A recent shift in policy at the college in response to this problem has involved preparing graduates with skills to address the special educational needs of children with hearing impairment. Several lines of evidence are reviewed on these trends, including government policy documents and statistical reports. Given this background, this study intended to investigate the perceptions of teachers and pupils on factors affecting academic performance of learners with hearing impairment in special selected schools in Muchinga and Northern Provinces of Zambia.

1.2 Statement of the Problem

Hearing Impairment (HI) is one of the disabilities found among pupils (Hallahan, Kauffman and Pullen, 2013). In the year 2019 Grade 12 national examination, HI pupils pass percentage was 39.51% while 74.63% was for hearing learners (ECZ, 2019). Meanwhile, the pass rate for pupils with HI in Grades 9 in Mpika district Special Unit Schools during the years 2018 to 2019 ranged between 27.01% and 31.04% while for hearing learners was 68.61% and 84.23% respectively (ECZ, 2018 to 2019). And in Kasama district Special Schools the pass percentages for Grades 9 and 12 in 2018 - 2019 was 30.01% for HI learners, 89.04% for hearing pupils at Grade 9 and 36.07% for HI pupils, 92.04% for hearing pupils at grade 12 respectively (ECZ, 2018 & 2019). From the statistics given it is clear that HI pupils do not perform well comparably with their hearing peers in national examination. MoE (2012) report on examination indicates that, poor academic performance among learners with disabilities and more so among the hearing impaired. The issue has from time to time raises concerns bordering on the quality of education being provided to the hearing impaired. The situation is worse among pupils with hearing thereby raising a question as how do teachers and pupils perceive, education of pupils with hearing impairment in Zambian schools? It appears less is known on the perceptions held by teachers and pupils on factors affecting academic performance of pupils with hearing and education in general in Zambia. In light of the above noted poor performance of hearing-impaired pupils, the researcher embarked on this study to establish the teachers and pupils perceptions towards the factors that affect academic performance of learners with hearing impairments in Muchinga and Northern Provinces of Zambia

1.3 Purpose of the Study

This study explored perceptions of teachers and pupils on factors affecting academic performance of pupils with hearing impairment in selected special schools in Muchinga and Northern Provinces of Zambia.

1.4 Objectives of the Study

The study was guided by the following objectives;

1. To identify the perceptions of teachers and pupils on factors affecting academic performance of pupils with hearing impairment in the study sites.

2. To explore perceptions held by teachers and pupils over factors affecting academic performance of pupils with hearing impairment in study site.
3. To explore challenges teachers and pupils encounter in the teaching and learning of pupils with hearing impairment in study site.
4. To ascertain measures that might be taken to address perceptions held on factors affecting academic performance among pupils with hearing impairment.

1.5 Research Questions

The study used the following research questions;

1. What perceptions do teachers and pupils have on factors affecting the academic performance of pupils with hearing impairment in the study site?
2. How do teachers and pupils perceive the various factors affecting academic performance of pupils with hearing impairment in the study?
3. What are challenges do teachers and pupils face which might have affected their perceptions on academic performance of pupils with hearing impairment in study site?
4. What measures can be put in place to address to improve on the perceptions of teachers and pupils over factors affecting academic performance of pupils with hearing impairment in study sites?

1.6 Significance of the Study

It is hoped that findings of this study would be utilized by organizations and institutions to design and manage programs that aim to bring quality to education of the HI. It is further hoped that the outcome would also enable education experts and stakeholders to plan effectively for an all-round kind of education for pupils with hearing impairment through development of policies and guidelines. It is also hoped that this study would add valuable knowledge to the education of the hearing impaired.

1.7 Scope and Delimitation of the Study

The study was conducted in Mpika District and Kasama Districts of Muchinga and Northern Provinces of Zambia because of the high number of special education schools and units there. The study targeted only the pupils with hearing impairment, teachers handling the pupils with HI and

their head teachers participated in the research because they had relevant information required to support the study.

1.8 Limitation of the Study

The researcher only worked with individuals who were willing to provide the required information for the study. However, triangulation of instruments was used in order to address this limitation. This was done by using instruments such as interview schedules and focus group discussion so as to capture the information that could not be gathered through the use of the single instrument. Due to limited resources, time and transport to cover all schools across the country, the study was confined to Mpika District in Muchinga Province and Kasama District of Northern Province.

1.9 Theoretical Framework

This study was guided by instructional model for children with special educational needs by Frew and Klein (2009). Instructional model is a model that uses many approaches and instructions to good teaching of pupils with special needs. The approaches and instructions involved: identification of pupils' relevant predispositions, specification of appropriate objectives and sequence, utilization of appropriate instruction procedure and assessment of learner's performance.

Special education grew out of a concern for meeting the needs of children not fully served by regular education. During the past two decades, there has been a dramatic increase in the number of handicapped children served. In addition, research has contributed significantly to the technology of instruction for all handicapped children (Haring, 1978; Haring and Eaton, 1978). Special education has brought individual learning needs of handicapped children to the fore. There has been much less emphasis, however, on a systematic approach to content analysis, curriculum, and the process of education for handicapped students.

Bruner (1968), in his book 'Toward a Theory of Instruction', defines instruction as "leading the learner through a sequence of statements and restatements of a problem or body of knowledge that increases the learner's ability to grasp, transform, and transfer what he is learning" (p. 45). Thus, from this perspective, instruction entails more than the mere transmission of skills and knowledge

from teacher to student. The organization and transformation of information to be taught is a complex arrangement that we refer to as an *instructional model*.

Lembo (1969) describes five essential components of an adequate instructional model. These include, 1) identification of the learner's relevant predispositions; 2) specification of appropriate objectives and sequences; 3) utilization of appropriate instructional procedures; 4) assessment of student's performance; and 5) formulating and testing hypotheses (p. 24). These components can be applied to a wide variety of instructional models used in both regular and special education.

There are many approaches to good teaching and instruction for non-handicapped and handicapped students. A model of teaching as used in this paper refers to a plan or organizational model which is used to guide the selection of objectives in the curriculum, instructional materials, environmental organization, and teachers' actions. It is not our purpose here to suggest a particular model. Rather than advocating one best model, we are suggesting that there are many possible models from which to select. The research evidence dealing with this issue is ambiguous and largely inconclusive (Garfunkel and Blatt, 1977; Joyce and Weil, 1972).

1.10 Identification of pupils needs

Frew and Klein (2009) state that, identification of pupils' needs is the process used to decide if a child has a disability or not. When a child has a disability, the needs have to be identified and addressed through Individualized Education Programme (IEP). According to Frew and Klein (2009), identification of pupils' needs, assists in responding to the diverse needs of pupils with special needs. In case of pupils with hearing impairment, a learner has to be identified as having hearing problems. After being identified with hearing problem the needs of a learner have to be further identified. Other needs that need to be identified apart from academic needs are the needs for personal development such as social needs. If the needs are not identified and addressed, they affect the child's performance during their examinations.

1.11 Specification of appropriate objectives

According to the model, specification of appropriate objectives is one of the approaches and instructions to good teaching. Objectives are the foundations which an educator can use to build lessons and assessment of pupils and can prove to meet the overall course or lesson goal (Flew and Klein, 2009). Furthermore, objectives ensure that learning is focused and clearly understood by

the learners and a teacher teaching them. Objectives can also help in addressing the needs of learners by designing relevant activities and assessment. In the event of teaching and assessing learners with hearing impairment, educators should derive their objectives based on addressing learner's needs as pointed out earlier on. The educator can also set objectives which can help in achieving the intended goal of passing the examinations. Educators can also set objectives for the lesson that can help learners with hearing impairment clearly understand the skills, concepts and knowledge being taught. If objectives are not set according to this model, performance of pupils with hearing impairment can be affected negatively during their examinations. Educator's curriculum content has to match with the learner's capabilities in order to enable the learners manage their examination.

1.12 Curriculum

According to the model the term curriculum refers to all the organized and planned experiences that are provided in schools and the classroom to help learners develop holistically (Frew and Klein, 2009). They further said, curriculum is the key component which consists of subjects taught, subject content, school and classroom environment and activities that take place in and out of the classroom. When educating learners with hearing impairment they should be taught subjects which are examinable for example subjects like mathematics, integrated science, social studies, English, computer studies, and business studies and other subjects. The educator should consider the grade level and deliver the lessons within their subject matter or content of each subject. The school and class environment should also be conducive for learners with hearing impairment for example, the sitting arrangement, ventilation and the classrooms have to be acoustically treated, classrooms should have talking walls with visual aids materials. Educators should offer different activities in and outside the classroom to learners with hearing impairment that are tailored to their needs which helps them in physical and academic performance. For instance, academic classroom activities include exercises, group work, pair works just to mention a few. The physical activities may comprise of sports, drama, cultural dances and practical skills may help them refresh their minds and learn effectively and possibly do well in their examination. If the curriculum is designed in this manner, it can be of benefit to learners with hearing impairment resulting in passing of their examinations. However, if the curriculum lacks some of these components, academic performance of learners with hearing impairment may be affected.

1.13 Instructional Materials

The understanding of the model concerning the instructional materials is that, these are tools used in education lessons which include active learning and assessment. Basically, any resource a teacher uses to help teach learners is an instructional material (Frew and Klein, 2009). When educators are handling learners with hearing impairment, the teacher may use many types of instructional materials under traditional resource, graphical organizers and teacher made resource as explained below.

Traditional resource includes textbooks and worksheets. Graphic organizers are presentation of information such as diagrams, charts, flow charts and graphs. Instructional materials such as diagrams, pictures, graphs and flow charts are very essential in the teaching and learning process and more so to a learner with hearing impairments as they reduce language and reading demands. This is because visual methods of teaching and learning create a more lasting experience and relate most readily to other sensory experiences. Then the teacher can make resources which may include anything that the teacher creates for instance, handouts, worksheets, quizzes, projects and tests materials. All instruction materials used by educators when teaching learners with hearing impairment should be appropriately related to the learning objectives for each lesson and this will also determine the level of performance on a given assessment to these pupils.

1.14 Assessment of learner's performance

According to the model, assessment of learners' performance is one of the approach and instructions to good teaching. The understanding of the model is that, assessment is a process that involves the systematic collection and interpretation of a wide variety of information on which to base instructional intervention decisions. Assessment which is summative is primarily a problem-solving process which determines a child's specific learning strength and needs (Frew and Klein, 2009).

Educators need to assess pupils with hearing impairment using correct instruction interventions for instance the use of total communication, individualized education approach, question and answer method, experiments, role-play, and fieldtrips. Before assessing learners with hearing impairment preparations have to be intensified with the use of remedial work, revising the work already covered, the use of activities such as debate and formative assessment such as classroom

exercises, weekly and monthly tests in order to make the learners to be fully prepared for their examination or summative assessment. Learners' ability have to be taken into account by educators such as the performance levels of being below average, average and above average in order to help them according to their abilities. If instructional intervention, remedial work, revision, formative assessment and learner's ability are not addressed, it may affect the performance of learners in their examinations or during summative assessment. This model worked well with the current study because of having the aspects of identification of learners' relevant predispositions, specification of appropriate objectives and sequence, utilization of appropriate instruction procedure, assessment of learner's performance which helped the researcher by acting as a guide in assessing the perceptions of teachers and pupils towards the factors that affect academic performance of learners with hearing impairment.

1.15 Summary

Generally, chapter one based on the report of the research which includes; back ground of the study, problem statement and theoretic frame work, objectives, research questions and significance of the study. Hence, this chapter carries general overview of the whole research questions which is based on the perceptions of teachers and pupils towards the factors that affect academic performance of learners with hearing impairment.

CHAPTER TWO: LITERATURE REVIEW

2.0 Overview

This chapter reviews literature related to the problem under study. It is an in-depth analysis of work that has been done by other people related to this area of the study compared to the research being undertaken pertaining to Perceptions of teachers and pupils towards the factors that affect academic performance of learners with hearing impairment in selected special schools in Muchinga and Northern provinces of Zambia. Literature has been presented in themes according to objectives.

2.1 Perceptions of teachers and pupils on factors affecting academic performance of pupils with hearing impairment

A study conducted by Sambu, Otube and Bunyasi (2018) which aimed to assess the academic performance of learners with hearing impairment in special primary schools in Kenya. This study was conducted from five selected special primary schools across five countries in Kenya. The population of this study was 369, which comprises of 5 head teachers, 111 teachers, and 253 pupils. From this target population, a sample size of 112 respondents was selected: 5 head teachers, 57 teachers, and 50 pupils. Purposive sampling was applied to select countries, schools, head teachers and the pupils, while a simple random sampling procedure was applied to select teachers in each school. The instruments used for data collection in this study included questionnaires, interview guides, and document analysis guides. Data obtained from questionnaires was analysed quantitatively, using descriptive statistics while data collected using interviews and observations were coded, quantified, categorized and analysed following themes derived from the research objectives. Both data were integrated to get the findings of the study. The study found that the use of Kenyan Sign Language to instruct learners with hearing impairment had led to an improved in their academic performance. Head teachers and teachers felt that learners' performance after the official introduction of Kenyan Sign Language (KSL) in 2004 was better compared to performance prior to that. While KSL as a subject was found to be the best performed, the scores in certain subjects, such as Social Studies were very low and performance of learners with hearing impairment was still below average as compared to their hearing counterparts. The study recommends that the regular primary curriculum be modified and made easily understandable especially in Social Studies.

A related study by Mwanyuma (2016) conducted in Kenya which investigated some factors in Kilifi Country, specifically at Sahajanand School for the Deaf in the south coastal region of Kenya. The factors that were investigated by this study are: Socio-cultural factors, curriculum factors, language of instruction and availability of teaching and learning resources. This study was conducted from a target population of 46 respondents which is the entire population under study. The researcher therefore, employed census sampling technique to sample 46 respondents which comprised of 1 head teacher, 37 teachers and 8 parent representatives of Sahajanand School for the Deaf. The target population from the Sahajanand School for the Deaf was randomly selected as a representative population of the 12 Deaf schools spread across 6 countries in the coast province. The experiences within this population are similar to those of Deaf schools and institutions in other areas of Kenya. A pilot test with a retest preceded the main research to test the research instrument in preparation for the actual study. The research instrument was subjected to the expert opinion of the supervisor to determine content validity and utilized the test-retest method and Pearson's Moment correlation coefficient to test for its reliability. Questionnaires and interview guides were used as data collection instruments. Quantitative data was organized and analyzed using simple statistical techniques including tables, mean and standard deviation. The study findings revealed that negative community and societal attitudes towards the Deaf influence their achievement in Education, the present curriculum does not cater for all learners with Special Educational Needs in terms of coverage of curriculum content and that the few available teachers are not very familiar and fluent in using Kenyan Sign Language. Most of the schools offering special education to children lack adequate teaching and learning resources. The study further recommended societal awareness on deafness and the benefits of educating Deaf children; curriculum adaptations and flexibility in terms of content and time; intensive in-service training of teachers on Kenyan Sign Language and methods of teaching Deaf learners; and more government allocation of resources to Deaf schools. The Ministry of Education in conjunction with Kenya Institute of Curriculum Development and other stakeholders should revise and simplify the curriculum used in examinations and textbooks to suit the needs of Deaf learners in order to improve academic achievement of Deaf learners. Deaf learners can only achieve their best potential in academics when these factors are critically considered by all in stakeholders.

Aseery (2016) conducted another study in Saudi Arabia which investigated teachers' attitudes toward including Deaf and hard of hearing students in regular education classrooms in Saudi Arabia. In addition, the study analyzed how the teachers' attitudes toward inclusion were influenced by the following variables: teaching position, training on inclusion the teachers had received, years of teaching experience, the teachers' gender, prior work with students with disabilities, and having a family member with disabilities. The study employed the "Opinion Relative to Integration of Students with Disabilities" (ORI) online survey to collect responses from 196 teachers. Overall, the results showed that teachers in Saudi Arabia showed slight negative attitude toward teaching D/hh students in regular education classrooms. The independent variables of prior training about inclusion and previous experience teaching students with disabilities were significant variables that influenced the teachers' attitudes. Other variables, including the area of education, gender, years of teaching experience, and having a family member with disability, did not seem to influence the teachers' attitudes toward teaching D/hh students in regular education classrooms in Saudi Arabia.

Mangiti (2018) conducted a study in Kenya which investigated how effects of psycho-cultural factors influence academic performance of learners with hearing impairment (HI). There was a great significance focus on the effects of psycho-cultural factors such as self-esteem, peer pressure, perception, beliefs of parents and teachers, parental engagement, gender mainstreaming and emotional adjustments, cultural practices and attitude of the community in this study. The study was carried out at Fr. Oudra a Special School in Siaya Country in Nyanza Region. The target population for this study was all teachers, support staff, one EARC officer, the head teacher and available parents of St. Oudra a special school Siaya Country. The researcher used a descriptive survey design to identify teacher related challenges in the implementation of inclusive education in Fr. Oudraa Special School in Siaya Country, Kenya. The study applied a mixed approach for probability and non-probability. Stratified and random sampling was used to sample teachers and learners; this was to ensure equal representation across the stratum. Purposive sampling was used to select an EARC officer, the head teacher, 12 parents and 6 support staff to allow gender representation. This study used Questionnaires, an interview guide and Focused Group Discussion (FDGs) to gather information from teachers, head teachers, the sub-country EARC coordinator, parents and learners. The findings in this study showed that there was a strong positive correlation ($r = 0.907$) between self-esteem and academic performance which is statistically significant ($p =$

0.037; $p < 0.05$). This shows that statistically significantly as self-esteem rises, the academic performance of learners with HI improves. However, for self-concept, there was a weak positive correlation ($r = 0.264$) between self-concept and academic performance which is statistically significant ($p = 0.003$; $p < 0.05$). The findings show that there is a weak negative correlation ($r = -0.156$) between cultural factors and academic performance which is statistically significant ($p = 0.041$; $p < 0.05$). The study further recommended that the Ministry of Education should put up plans to sensitize the teachers, students and parents on the need for inclusion of the learners with special needs to increase their self-esteem and self-concept.

Another study was conducted by Manchishi (2015) in Zambia which attempted to highlight the factors that contribute to low achievement levels in mathematics among pupils with hearing loss and to suggest measures that would improve their performance. The focus was to establish methods used in teaching pupils with HI, ascertain factors that contribute to poor performance in mathematics among learners with HI as well as to determine the qualifications of teachers in teaching mathematics to learners with HI. The study also explored measures that can improve performance of learners with HI in mathematics. The research adopted a case study design and employed both quantitative and qualitative research methods. The population comprised of pupils and teachers from two schools, one primary and the other secondary school in Zambia. A sample of 10 teachers and 22 learners were purposively drawn. Questionnaires, interview guides, classroom observation checklists and group discussion guides were used to collect data. The learners were clustered into groups of 6 (Grade 5, 6 and 7), (Grade 11) and (Grade 12) before being engaged in group discussions. The findings of the study showed that hearing loss significantly affected their ability to learn mathematics due to their failure to comprehend the mathematics language. Teachers were not enough and not all of those available were well qualified, supportive and with positive attitudes towards learners with HI. Teaching and learning materials were also inadequate. The study recommended the need to ensure that only trained and specialized teachers are deployed in classrooms for the HI. While schools offer literacy programs such as Primary Reading Program.

Kumatongo and Muzata (2021) conducted a study from Zambia, the study sought to investigate the perceptions of lecturers on academic performance of student teachers with hearing impairments. The study was guided by these two objectives; i) to find out the perceptions of

lecturers on academic performance of student teachers with hearing impairments at Kitwe College of Education, **ii**) to establish the perceptions of student teachers with hearing impairments towards their academic performance. This study used a descriptive case study as a research design. The study used a sample size of seven (7) participants who were purposively sampled, this included three (3) Lecturers and four (4) student teachers with hearing impairments. The study gathered data using interviews and analyzed qualitatively using thematic analysis techniques based on emerging themes from the study. The study revealed that lecturers perceived student teachers with hearing impairments as average and below-average performers academically. The study further revealed that student teachers with hearing impairments had mixed feelings towards their academic performance and perceived their academic performance as being influenced by their inability to understand concepts as well as lecturers' inability to handle them appropriately. The study recommended the need by educators of students with hearing impairments to have positive perception towards students in order to instill self-positive regard in students.

Agyire-Te ttey, Cobbina and Hamenoo (2017) conducted a similar study in Ghana which aimed to elucidate challenges that prevent SHIs from high academic achievements, using the case of students in Tetteh Ocloo State School for the Deaf in the Greater Accra Region of Ghana. A qualitative research approach was used and data was collected through in-depth interviews. Data analysis and the interpretation of the responses of thirty participants (12 Students with hearing impairments, 11 parents and 7 special educators). The findings showed that challenges which hinder SHIs academic performance emanate from different systems and actors including SHIs themselves, their parents and other institutional barriers that exist in deaf education. Further, the findings also indicated that parents influenced the academic performance of their children with hearing impairment (CHI) through their responsibilities, expectations and the learning assistance they gave to their wards at home. The findings of this study also established that institutional barriers such as effective instructional procedures adopted in deaf education, availability of facilities, teaching, reading learning materials, and curricular contents posed challenges to the academic performance of students with hearing impairment. The study concluded that the identified challenges which prevent SHIs from higher academic performance are from different systems of SHIs' environment and the interplay between them. Finally, the study recommended that interventions must be directed at the different systems within their environment.

Pérez-Jorge, Rodríguez-Jiménez, Ariño-Mateo and Sosa-Gutiérrez (2021) conducted a study which aimed to demonstrate the attitudes and perceptions of teachers regarding the educational inclusion of students with hearing disabilities in Spain. The objectives were; i) Assess the attitudes and perceptions of teachers towards students with SEN, derived from hearing impairment, ii) To demonstrate the humanity that teaching staff attribute to the students with hearing disabilities, and iii) Demonstrating the assessment of the training received by teachers in the field of hearing impairment. A quantitative cut methodology was used, based on the use of the Questionnaire of Opinions, Attitudes and Competencies of Teachers towards Disability (CACPD). The sample of the study consisted of 128 teachers from the Canary Islands, of which 72 of them worked in ordinary centers and 56 in Ordinary Centers for Preferential Educational Attention for Hearing Disability (COAEPHD). The researchers stated that the results of this study do not allow them to affirm that the teachers showed positive attitudes towards inclusion, expressing concern about offering a correct and adequate response to the students with hearing disabilities. They considered that educational inclusion requires important improvements focused on the training and specialization of teachers in the field of inclusion.

Another study was done by Kalya (2020) from Kenya which aimed at establishing the effect of Kenyan Sign Language (KSL) on academic performance of hearing impaired learners in Kedowa Special School, Kericho Country, Kenya. The objectives of the study were; establish the extent of Kenya Sign Language use by teachers on academic performance of hearing impaired learners in Kedowa Special School; determine the availability of Kenya Sign Language teaching and learning resources on academic performance of hearing impaired learners in Kedowa Special School Kericho Country; establish the effects of teachers training in Kenya Sign Language on academic performance of hearing impaired learners in Kedowa Special School Kericho Country and establish the effects of social factors in use of Kenya Sign Language on academic performance of hearing impaired learners in Kedowa Special School Kericho Country. A case study was used as a research design and used interviews, archival records, questionnaires and observation as its instruments for data collection. The reliability of the instruments was determined using the test-re-test method while its validity was determined by the help of KSL experts and the researchers, lecturers and supervisors. The researchers used purposive sampling technique to arrive at the sample size of 181 respondents. Data was analyzed using the SPSS version 21 by first categorizing the responses from the different respondents, editing them and then computing them in respect to

the objectives and research questions of the study. The findings of the study indicate that KSL was not used in the schools due to lack of teaching materials and resources like books. KSL has a positive influence on learners' academic performance and on other subjects. The teachers who teach in KSL did not have adequate training in Kenya Sign language. This is a big setback in the desire for effective academic performance of learners. The study recommends that the Ministry of Education should provide adequate teaching and learning resources for special schools for the deaf for successful implementation of KSL. Teachers need to display on the wall the charts and diagrams so that learners can read over and over again in order to enhance academic performance. Teachers in special schools should be trained through workshops, seminars or in- serviced on methods of teaching deaf students using KSL and Teachers Service Commission (TSC) should post teachers who have been trained in KSL to special schools for the deaf.

Iyeoma and Toyosi (2017) conducted a study from Nigeria which investigated attitude towards special need students (SNS) among teachers in public secondary schools in Edo Central Senatorial District. This study was undertaken to determine the teachers' attitude and the influence of gender, educational specialisation and experience on their attitude towards SNS. A total number of 369 representing (50%) of the 739 teachers were drawn in the district by proportionate to size sampling. However, only 351 questionnaires were recovered from the participants and used for analysis. The data collection tool used was a researcher developed questionnaire titled "Teachers Attitude towards Special Needs Students Questionnaire-TATSNSQ" with a test-retest reliability alpha of 0.79. Mean (\bar{X}) and standard deviations (S.D) were used to analyze the research question while Mann-Whitney and Kruskal-Wallis test was used to test the hypotheses. The findings of the study revealed that attitude towards SNS among secondary school teachers in the study area were negatively skewed. The test of hypotheses showed that their attitude does not differ by sex (Ucal. 15000.50; $p > 0.05$) but differ significantly by their educational specialisation (Ucal. 7633.50; $p < 0.05$) and years of experience (H-value 24.270; $p < 0.05$). The study further recommended that the Edo State government needs to establish special education schools for special need students in the state.

Another study was conducted by Ntinda, Thwala and Tfusi (2019) on the experiences of teachers of the deaf and hard-of-hearing students in a special needs high school for the deaf in Eswatini. The study sought to explore experiences of teachers of deaf or hard-of-hearing students in a special

needs high school in Eswatini. The following objectives were used; i) identify the strategies teachers used in teaching the deaf and hard-of-hearing students in the special needs high school, ii) determine communication skills that existed between teachers and the deaf and hard-of-hearing students in the special school, and iii) explore how teachers' collaboration with the parents of the deaf and hard-of-hearing students assisted in supporting the students in the special needs school. The study adopted a qualitative approach and was exploratory in nature. The sample size comprised of eighteen (18) purposively sampled teachers of deaf and hard-of-hearing students who participated in individual in-depth and focus group discussion interviews on the teaching and communication aspects with deaf and hard-of-hearing students. Secondary data was collected through documents review. The collected data was analysed thematically for important meanings. The findings have shown that teachers experience gaps in professional competencies to teach the mainstream curriculum for which they needed further education. Variation in sign language impacting learner engagement hindered teachers' communication with the deaf and hard-of-hearing students and their parents. It further revealed that there was need for teachers to start attending in-service professional training which included collaboration, consultation, assessment instruments and language skills. The findings have important implications for policy and practice in educating the deaf and hard-of-hearing students and for interpreting previous research. They recommended that there is an urgent need for the country to consider having a standardized sign language which could enhance positive teaching and learning outcomes as well as social integration for the future lives of these students. Understanding experiences of these teachers from the lived cultural milieu are important for the design and implementation of programmes for supporting the deaf and hard-of hearing learners, their teachers and parents.

2.2 Perceptions held by teachers and pupils over factors affecting academic performance of pupils with hearing impairment

A study conducted in Zambia which aimed to establish the perceptions of students with visual impairments towards their inclusion in the Faculty of Education at the University of Zambia. This study adopted the descriptive phenomenological qualitative design to study, describe and interpret the lived academic experiences of students with vision difficulties at the University of Zambia. Eight (8) students with visual impairments who were purposively sampled were asked three main questions on how they perceived their inclusion and whether lecturers employed any inclusive

strategies in their teaching to accommodate them. The study further established the challenges students faced learning in an inclusive classroom. A 15-20 minutes' in-depth interviews with individual students was conducted and an MP3 recorder was used to record all the interviews for further reflection and analysis with consent by the participants. The collected data was analysed using textual and structural analysis. Under textual analysis, the researcher identified the critical and common descriptions by participants while structural analysis involved the researcher's interpretation of what participants described about their lived experiences. Findings revealed that generally students with visual impairments were satisfied with their inclusion in the Faculty of Education. Most participants acknowledged that there was no discrimination from fellow students during academic discourse although they reported challenges resulting from lecturers' lack of skills to consider their learning needs in inclusive classroom. Further, the findings revealed that students with visual impairments appeared to feel more included academically but felt isolated in out of class activities which some described as a form of discrimination. From the findings, it is recommended that the Faculty of Education should train all lecturers of content and methodology courses in inclusive methodologies and design activities that promote interactive learning beyond the classroom to realise the inclusion of students with visual impairments (Muzata, Simalalo, Kasonde_Ng'andu, Mahlo, Banja and Mtonga, 2020).

Pwokah (2016) conducted another study on perceptions of learners on teaching-learning processes and their academic performance in selected primary schools for the Hearing Impaired in Uasin Gishu Country, Kenya. This research explored the perceptions of learners with HI toward the teaching-learning process (pupil-teacher interactions) and their impacts on performance in examinable subjects in Eldoret Primary School for the HI in Uasin Gishu Country. The study used a close ended questionnaire and structured questionnaire as tools for data collection. The target population was 153 learners with HI in one fully fledged primary school and five units for the HI in Uasin Gishu Country. The researchers randomly selected two units (Kandie and Kamagut). The respondents were selected from the upper classes (Class Six, Seven and Eight). There were 68 pupils in Classes Six, Seven and Eight in Eldoret School for the Deaf and 14 pupils in the same classes in Kandie and Kamagut units. The sample size in total was 82 pupils. The collected data was then analyzed through SPSS software and data was presented using percentage distribution. The relation between the students' perception of the teaching-learning process and the subsequent influence on academic performance was computed to give the inferential statistic index using Chi-

square correlation coefficient. One-way ANOVA was also computed to test if the use of instructional materials influences on academic performance of learners with HI differed in the selected primary schools. Findings were presented in pie charts, bar graphs and cross-tabulations. The results of the study revealed that academic performance of learners with HI in the sampled schools was generally below average with an overall mean score of 34.18% for the five examinable subjects. When Chi square correlation coefficient was computed to determine the measure of association between learners' perception of teacher-pupil interaction and academic performance, a significant relationship was found ($\chi^2 (3, N= 70) = .789, p= 0.003$). Besides, a Chi Square Correlation coefficient computed to determine the measure of association between learners' perception of teachers' use of instructional time and academic performance yielded a significant relationship ($\chi^2 (3, N= 70) = 0.815, p= 0.001$). Further, a Chi Square Correlation coefficient computed to determine the measure of association between learners' perception of teachers' use of instructional materials and academic performance yielded a significant relationship ($\chi^2 (3, N= 70) = 0.721, p= 0.005$). Besides, a One-way ANOVA which was computed to test if the use of instructional materials influences on academic performance of learners with HI differed in the selected primary schools found no significant difference in the use of instructional materials and academic performance in the selected schools (f-value was found to be significant at ≥ 0.05 , $F=1.157, = .317 > 0.05$). The study recommended that: efforts should be made by the quality assurance and standard division in the Ministry of Education in organizing for relevant in-service programmes for all teachers and head teachers in the special schools where they can be enlightened and sensitized on communication approaches, sign language and even instructional materials; teachers should provide opportunities for learners in class and support to learners with hearing impairments to enable them participate in the teaching and learning process in a bid to create healthier teacher-pupil interactions and enhance learners' academic performance; head teachers should organize sign language workshops and lesson presentations at school level to assist the teachers in the teaching and learning process as well as in class time management in a bid to enhance academic performance of learners with HI; and, teachers need to employ more of the instructional materials to keep the pace with their hearing counterparts in regular schools.

Another study was conducted by Yabbi (2015) in Kenya which sought to investigate the influence of social, economic and cultural factors on academic performance among pupils of St. Martin school for the hearing impaired. The research design used was a case study design incorporated with both qualitative and quantitative approaches. The target population will include all the thirty-five teachers teaching at St. Martin School for the hearing impaired, all four hundred and twenty pupils, the head teacher, three hundred and seventy-five parents and the Area Education Officer (AEO). Purposive sampling was used to sample the head teacher 1, 30 parents and 1 AEO, stratified random sampling and simple random sampling was used to sample 15 teachers and 60 pupils, 20 from each class, standard six, seven and eight respectively. Questionnaires for pupils, teachers, parents and interview guide for the head teacher and the area education officer was used to collect data that guided the researcher in answering the four research questions: To what extent do social factors influence academic performance in St Martin School for the hearing impaired? What economic factors influence academic performance in St. Martin School for the hearing impaired? Which cultural factors influence academic performance of St. Martin school for the hearing impaired? What recommendations can be made to solve the challenges posed by social, cultural and economic influences of academic performance at St. Martin School for the hearing impaired? The participants of this research were the head teacher, the AEO, Pupils, teachers and parents selected using stratified random sampling and purposive sampling. The findings were presented using percentages, frequency tables and graphs. The findings of the study revealed that social factors influence academic performance in St. Martin School for the hearing impaired to a high extent. Furthermore, the research revealed that factors that influence academic performance in St. Martin School for the hearing impaired were noted to be the low income of the parents, lack of hearing devices and lack of textbooks were leading factors to poor academic performance of the pupils in the school. Cultural factors such as negative community perception towards HI children lead to discrimination, poor performance in school, and low motivation of the pupils, traumatization and segregation. It is recommended that the government needs to employ more teachers who have been trained to handle special needs children, Government should have affirmative action and train more teachers in sign language. The government should consider lowering the cost of hearing devices to enable pupils from poor background to acquire them. This is because most of the parents are low income earners and lack money to buy the hearing devices for their HI children.

Chizingwa (2018) conducted a similar study in Tanzania which explored the factors leading to poor academic performance for HI pupils in inclusive primary schools, which intend to identify the factors, associate the identified factors with the academic performance of pupils with hearing impairment and to suggest possible strategies to overcome the poor academic performance problems of learners with hearing impairment in inclusive primary schools. The study used mixed methods where both qualitative and quantitative approach were applied. A total of 72 respondents of different categories were selected from 6 inclusive primary schools in Dodoma Municipality. Data were collected through interviews guidelines, observation checklist, documentary review, and questionnaire (Likert scale). Thematic analysis was used to analyze qualitative data while quantitative data was statistically analyzed using Statistical Package for Social Sciences (SPSS). Findings of this study have shown that factors leading to poor academic performance for HI pupils in inclusive primary schools were categorized by various factors, lack of teaching and learning resources; Inappropriate pedagogical approach; Syllabus incompleteness and inappropriate instructional session, Reduced total communication skills and inadequate skills on classroom management. The study recommended that the government should prepare a conducive learning environment, enough budgets and review the current Teacher Education Curriculum for HI to integrate content and competencies in Sign Language skills. Hence to enable every teacher trainee in special needs to have skills in sign language.

Solvang, Naalsund, Tønder, Hansen, Hagan, Mnyanyi, Tronstad, Nkya and Øygarden (2020) conducted a study where they examined the prevalence and etiology of hearing impairment among primary school children in the Kilimanjaro region within Tanzania. A cross-sectional study of primary school children aged 6–17 was conducted to determine the prevalence of hearing impairment. Tanzanian primary school children were screened for hearing loss and an otoscope was performed on those who failed the screening. The findings of the study have revealed that out of 403 children who were screened from three schools in rural areas of Tanzania, the prevalence of hearing loss was found to be 7.1%, 10.8% and 16.7% in the different schools. Cerumen was proven to be the most common possible cause of hearing impairment. Other possible causes of hearing impairment were found to be (in descending order) otitis (all types), no abnormalities and perforation of the tympanic membrane. These results show a need for better identification of hearing impairment in school-going children and implementation of prevention

and treatment options in Tanzania and other developing countries. This can further improve children's potential for language development, communication and academic achievement.

A similar study was conducted by Rishaelly (2017) from Tanzania which 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. 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. The study sample was purposively sampled 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 collection tools the study used were interviews, Focused Group Discussions and classroom observations. Then the data was analyzed 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 indicate 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.

Mandyata and Kamukwamba (2018) conducted another study which examined views of stakeholders on the use of Sign Language as a medium of instruction in the learning of hearing impaired in primary schools of Lusaka, Zambia. It was case study design which utilized qualitative methods of data collection. The following objectives guided the study; (i) To establish the views of held by various stakeholders on the use of Sign Language as the medium of instruction in classes for the hearing impaired, (ii) To assess factors that might have led to the call for use of sign language alone as a medium of instruction in the learning of the hearing impaired, (iii) To ascertain

measures that may contribute to improved use of sign language as a language of instruction in the learning of the hearing impaired. A case study design supported by a qualitative data collection method was used. The sample size was 57, which consisted of teachers, pupils, curriculum specialist, education standards officers, lecturers and advocators on the rights of persons with disabilities. The researchers used purposive sampling techniques to select the sample. Interview and focus group discussion guides were tools for data collection. The study findings revealed significant differences in views of stakeholders on use of Sign Language alone as medium of instruction. While most participants felt sign language alone was ideal for learning, others believed learners needed exposure to total communication (combination of oral and sign language) to learn better. The findings further revealed that those who felt using sign language alone was better, believed the practice had more positive effects on learning and that use of oral language, total communication often led to confusion in classroom communication among learners with hearing impairments. Participants who opposed use of sign language alone were of the view that teachers: were ill-prepared; signs were limited in scope; education system lacked instructional language policy and learning environment were inappropriate to support use of sign language alone in the learning process. The researchers recommended strengthening of training of sign language teachers and introduction of sign language as an academic subject before it can be used as the sole medium of classroom instruction in the Zambian primary schools.

2.3 Challenges teachers and pupils encounter in the teaching and learning of pupils with hearing impairment

Banda (2019) conducted a study in Zambia which aimed at analyzing language practices in selected inclusive education classrooms that have learners with hearing impairments in selected secondary schools of central province. The study used two objectives which are: analyze language strategies teachers used when teaching English Language in inclusive classes and to assess the nature of interaction between the pupils with hearing impairments and those without hearing impairments. It was a mixed method study where both qualitative and quantitative data was collected. The study employed descriptive design through face to face interviews, document analysis, focus group discussions and classroom lesson observations. The sample size comprised of 16 teachers of English Language and 180 pupils who were purposively sampled to participate in the study and the findings were analyzed thematically and statistically. The study findings

established that there were various Language Practices that teachers and learners used when teaching/learning in inclusive classes of the hearing impaired learners and the non-hearing impaired. The Language Practices that were mainly used were simultaneous use of verbal and sign language, use of language interpreters among teachers who did not know sign language, interpretation of sign language to verbal language in a class where teachers could not only use sign language as well as use of pictures and videos to deliver lessons. The nature of nature was such that pupils interacted in class when the teacher was around but did not interact outside where teachers were not present. There was discrimination and abuse of with each other which led to groups avoiding each other. The study recommended that government should put in place a deliberate policy to train more teachers of special education on how to use the standard sign language to alleviate the shortages.

A similar study was conducted in Eswatini by Mamba and Mafumbate (2019) which sought to explore the challenges faced by learners with partial hearing impairment (LWPHI) in Lubombo mainstream high schools. A social constructivism research paradigm and a qualitative research method was used in this study. A phenomenological research design was utilized to find out how mainstream high school environment can handicap the LWPHI from reaching the vital and most cherished goal of independent living 14 participants in the study were purposively selected using criterion sampling. Data was collected using an individual semi-structured interviews and conducting of non-participant observation. Data was then analyzed using thematic analysis. The findings revealed that restrictive school environment robbed LWPHI equalized opportunities for meaningful participation in educational activities. Hence, modified instructional strategies and social environment are pertinent if the education sector really needs to combat academic discrepancies between the 'normal' and the LWPHI.

Mtuli (2015) conducted another study in Tanzania with the aim to assess the challenges in the teaching and learning process of hearing impaired students enrolled in regular primary and secondary schools. Specifically, the study aimed at examining the challenges of teaching and learning to students with hearing impaired and examining the factors contributing to poor academic performance of hearing impaired students enrolled in regular secondary schools. This study used a case study design where interviews and observations were conducted in order to evaluate the challenges of teaching and learning of hearing impaired students enrolled in regular primary and

secondary schools. Purposive and simple random sampling procedures were used to select participants of the study who were students with hearing impairment according to their level/class they were studying, teachers of special education, heads of school and the District Education Officer for special education. Hence the study involved data collection that utilized observation, interviews to the respondents and both quantitative and qualitative research approach. The findings showed all participants revealed that the new system of inclusive education needs more innovation for preparing quality education to the hearing impaired students of secondary schools. Furthermore, it was found that lack of qualified teachers of special education in sign language led to poor performance for the hearing impaired students in secondary schools, lack of in-service training for total communication for the new system of inclusive education as a set back to the hearing impaired students' performance and lack of funds for implementing the curriculum at the school discouraged teachers of special education. The study made the following recommendations: There should be improvement in the inclusion system of education like the use of competent teachers in sign language, making available related teaching and learning facilities. Further research should also be carried out of related areas.

Getnet (2019) conducted a similar study in Ethiopia which aimed to explore the communication challenges between hearing impaired students and EFL teachers in Inclusive English Language classrooms. To achieve its objectives, the study used Biftu Nekemte Senior Secondary School as research site and employed qualitative methods of data collection and analysis, in which classroom observation, interviews and document analysis were used. Tools for collection of qualitative data were used to gather data from the study participants. To gather data from classroom interaction six lessons were observed. 1 English teacher, 4 hearing impaired students from profound to severe impairments and 1 hearing impaired students' counselor participated in the interview. Teacher's lesson plans and students' texts were analyzed and used to check the consistency of the plans with teaching materials and the lessons observed. The study found out that the students with hearing impairments are placed in regular classrooms without special organization that can meet the needs of both groups of students, the regular classroom teacher teaches the inclusive class without sign language interpreter. The communication challenge is more prevalent during English language classes especially, listening and speaking lessons. Unlike the findings in the literature, students at all levels of impairment can understand teacher's speech; this makes difficult communication among hearing impaired students themselves. On the other hand, the problem of making sounds is

so difficult that automatic vocalization and reproduction is found to be problematic; there is problem of substitution of consonants, omission of sounds and transposition of letters. Since there is no sign language interpreter in the classrooms, the challenge is weighty. To improve these problems of communication intermission, this study recommended that issues related to teachers and facilities need to be reorganized to transform the conventional classrooms to classrooms suitable for the hearing impaired. Furthermore, teachers need to be trained with sign languages besides the qualifications to teach the language (English). Materials and plans for lessons need to be designed to consider the needs of the hearing impaired students.

Yitayih (2018) conducted a study which aimed to investigate the challenges and opportunities SHI faced in their learning in Bakel primary integrated school. It was a case study which used qualitative design to achieve the objectives. Interviews were held with SHI, principals and parents. Whereas, FGD was held with teachers, SHI, and hearing students. Moreover, observation was conducted to supplement the data obtained through FGD and interview. Data was analyzed and presented qualitatively on the basis of common themes. The findings revealed that Lack of communication in the instructional process and poor social integration were hampering in the SHI's academic achievements. Besides iii- equipped Resource rooms and noise distraction hampered the teaching and learning. Collaboration among teachers, parents, and NGOs were poorly exercised in the school to maintain financial, material and educational support to enhance the quality of education for SHI. In addition, guidance and counseling is not yet provided to SHI; whereas Library and laboratory services were provided without language interpreter. Furthermore, there are opportunities, like hearing peers provide support for SHI by communicating using gesture; SNE teachers provide interpretation service during radio lesson, Woreda Education Office provide fund to SHI; normal class size, front seating position, and classroom sitting arrangement for class discussion and group works were appropriate. The study recommended the school in collaboration with Woreda educational office need to hire sign language interpreters, fulfill ill-equipped resource center, and make physical environment of the school accessible to render services to address instructional needs of SHI in the integrated classes.

A related study was conducted by Kigotho (2016) in Kenya which examined the institutional and social barriers faced by the hearing impaired students in an inclusive learning environment. The study sample comprised of 10 hearing impaired students at the university and data was obtained

through semi-structured interviews and key informant interviews. The study was guided by a conceptual framework which explained the relationship between institutional and social barriers affecting the hearing impaired students and the learning outcomes achieved when the barriers were present and when the barriers had been eliminated. Data analysis was done through grounded approach in line with specific objectives of the study. The findings revealed that significant barriers for hearing impaired students exist and they included lecturing as a mode of instruction used by lecturers and the framing of examination questions; level of education of the sign language interpreter, knowledge of content taught and a good grasp of signs by the interpreter ; inadequate classroom space and furniture, absence of overhead projectors during lectures, inadequate signage especially in workshops, poor lighting and noisy classroom environment and challenges in socially integrating with the hearing leading to loneliness and isolation. The study then concluded that hearing impaired students are a special population within the university fraternity who require accommodations especially in the class that would ease their learning experience, such accommodations would include the use of overhead projectors and diagrams, avoiding movements and rushed speech while lecturing, ensuring the student seats at the front row in class and providing opportunities for class participation, encouraging note taking during class discussions and allowing extra time during examinations. In addition, there is need for the whole fraternity to shift the negative attitudes and perceptions from that of perceiving hearing impaired students as having a defect, individuals who cannot independently make decisions or have ideas or as a group that needs pity, into seeing them as a minority group of persons who are capable of performing as their hearing peers. The study lastly recommended that the University provide basic sign language training for teaching and non- teaching staff to help ease communication, and because Kenya Sign Language is recognized as an official language in Kenya, it should be introduced as a common course for all students, these steps will help ease communication as well as diffuse the negative attitudes and perceptions that surround deafness.

Hatiye (2016) also conducted a similar study in Ethiopia which aimed to assess the challenges of deaf students in inclusive classes and the students' perception of their inclusion in regular classes of Ligaba Primary School. The study also compared the academic achievement of hearing and deaf students and examined the status of special support services for deaf students in the school. This used a sample size of 92 participants in total which comprised of 16 deaf students, 32 regular class teachers who were teaching integrated class and 33 hearing students who participated in the study.

Eight (8) parents and 3 school principals were also included in the study. Data was collected using questionnaires for deaf students and teachers; interview with school principals, focus group discussion with parents of deaf students, hearing students and deaf students; and outside and inside classroom observation. The Focus group discussion with deaf students were conducted using sign language translator. The results indicated that deaf students are facing academic challenges of communication using sign language, difficulty of understanding instructions of teachers, missing notes that teachers provide for hearing students, mistreatment from hearing peers, negative attitude from teachers towards their potential, absence of resource material center in the school and etc. The three semesters' average academic achievement of deaf students is found to be significantly less than that of hearing counterparts ($p= 0.001$). Deaf students, teachers and school principals reported that insufficient support services were provided to deaf students to benefit deaf students from inclusion. Majority of deaf students and teachers disfavor integration of deaf students in regular class. The study findings further suggest that, to enhance the academic performance and achievement of deaf students and to benefit them from their inclusion, the students should get special attention and support by all concerned bodies. Furthermore, in order to address the challenges, they face in various academic areas such as communication, curriculum, special support provision, etc. specific modifications have to be made to the curricula and other instructional methods have to be strengthened.

Krishnan, Mello, Kok, Sabapathy, Munian, Ching, Kandasamy, Ramalingam, Baskaran and Kanan (2020) conducted a study in Malaysia which aimed to discover the challenges faced by hearing impairment students how it affects the communication and mainstreaming process. The data was collected from 10 hearing impairments students who were purposively sampled, and it was analyzed qualitatively. The participants were aged 19-22 and were at the time of data collection studying foundation programme in culinary arts in a skill transformation center. The participants were interviewed using impromptu interview questions via WhatsApp, which lasted about ten minutes for each participant. The findings show that the hearing impairment students faced four challenges which are; hearing devices, disruption to comprehend the lesson, not familiar with the online devices and emotionally affected during online classes. The findings further revealed that the hearing impairment students hampered their social interactions skills towards others during the pandemic. It is hoped the findings would be useful for academicians, counsellors, doctors and other

job professions to explore further research on hearing impairments and the framing of methodology to assist the hearing impairments in engaging with the society during the pandemic.

In a study by Manga and Masuku (2020) in South Africa which aimed to describe the challenges experienced by educators and assistant educators of children with deaf-blindness. A total number of 10 educators and assistant educators were selected purposively to participate in the study which comprised of (Male = 3; Female = 7; age range 31–49 years). All these participants were recruited from a school for the deaf-blind in Johannesburg. Participants completed semi-structured interviews on the challenges that they experienced when educating learners who are deaf-blind. The findings from this research after inductive thematic analysis suggested the following: (1) under-preparedness of educators and assistant educators, (2) communication challenges, (3) challenges related to the diversity of deaf-blind learners and (4) lack of support structures for educators and assistant educators. The study concluded that there is a need for ongoing in-service educator training on communication strategies, cultural diversity and inclusive strategies. A collaborative model of delivering training and inclusive education that will encompass educators and therapists as a means of supporting both the educator and the learner who is deaf and blind is needed. Such a collaboration may result in positive outcomes for both the educator and the deaf-blind learner.

Muslim (2019) conducted another study in North Sumatera that dealt with the analysis of teaching challenges faced by English teacher in teaching grammar for deaf students. The objective of the research was; describe the challenges faced by English teacher in teaching grammar for deaf students. This study was a descriptive qualitative. The data was collected from the English teacher 's statements which taught English at the X up to XII grade who were purposively sampled from SMALB-B Negeri 1 Batu Bara, province of North Sumatera, based on the observation and interview from July 15 until August 22, 2019. The findings show that there were challenges faced by teachers in communicating with their students using English, the use of vocabulary and translation, pronunciation, and how to make the students understand. There are also other challenges like lack of facilities (computer), no hearing aids/group hearing aids, no learning media (LCD projector, etc.). The study recommended that there is need for continuing training of in service teachers, deaf students should be aided with hearing devices to help them learn properly.

In a similar study by Azizah (2020) which aimed to (1) describe the teaching and learning process of English for the eleventh-grade students of SLB-B YRTRW Surakarta for the 2019/2020 school year and (2) to find the challenges faced by teachers in teaching English in class XI SLB-B YRTRW Surakarta for the 2019/2020 school year. This research uses descriptive qualitative method. The sample of this study was a class XI deaf student at SLB-B YRTRW Surakarta. The researcher collected data using observations and interviews. To prove the reliability of the data, the researcher used methodological triangulation. The results of this study indicated that, the process of teaching and learning English to deaf students of class XI at SLB-B YRTRW Surakarta was carried out using WhatsApp group media. In addition, teachers usually use video calls to hold online classes. Before learning begins, the teachers prepare and explain the material to be used. To optimize learning, the teacher uses tentative time for having the students ready. Method that use teacher to teaching English was discussion in WhatsApp Group. Based on the results of the interview, it was known that the challenges faced by teachers in teaching English at the eleventh grade of SLB-B YRTRW Surakarta in the academic year 2019/2020 it is known that there are six challenges faced by teachers in teaching deaf students, including attract students' attention to take lessons, getting students to maintain their concentration in the learning process, the difficulty of access in delivering information to deaf students in the learning. The process, the difficulty of children learning new information suddenly during the learning process. Students' lack of speed in responding to questions or commands and the limitations of deaf students in communicating so that it influenced students to add vocabulary and use new words.

Su, Guthridge, He, Howard and Leach (2020) conducted a study aimed to investigate the association in Aboriginal children living in the Northern Territory (NT) of Australia. A retrospective, observational cohort study was conducted for 2208 NT Aboriginal children, aged about 8 years, living in remote and very remote communities. The explanatory variable was audiometrically determined hearing level as recorded in the Remote Hearing Assessment dataset. The outcome variable consisted of scale scores in the five domains of the National Assessment Program Literacy and Numeracy (NAPLAN) for Year 3. Other linked datasets used in the study were school attendance records, perinatal records and community level information on relative remoteness, socioeconomic disadvantage and housing crowdedness. Fixed effects linear regression models were used for statistical analyses. The findings indicate that compared with children with normal hearing and after controlling for a range of covariates, children with mild hearing impairment (HI)

scored lower in Writing and Spelling by 15.0 points (95% CI: -22.4 to -7.6 , $p < 0.0005$) and 5.0 points (95% CI: -9.6 to -0.3 , $p = 0.037$), equivalent to 7.3 and 2.1% of the mean score, respectively. Children with moderate or worse HI scored lower in Writing and Numeracy by 13.4 points (95% CI, -24.8 to -1.9 , $p = 0.022$) and 15.2 points (95% CI, -27.6 to -2.7 , $p = 0.017$), both equivalent to 6.3% of the mean score the respective domain. Other factors associated with poorer NAPLAN results included being male, lower Year 2 school attendance, low birthweight, average household size > 5 persons, living in a very remote community and speaking English as a second language. The study concluded that OM-related HI was independently associated with poorer early year academic achievement in Aboriginal children living in remote NT communities. Interventions to improve academic outcomes for Aboriginal children must incorporate actions to address the negative impact associated with HI through early detection, effective treatment and ongoing support for affected children.

2.4 Measures that might be taken to address perceptions held on factors affecting academic performance among pupils with hearing impairment

In a study was conducted by Musonda and Phiri (2017) which sought to examine emerging factors affecting the academic performance of deaf and hard of hearing learners at Chileshe Chepela Wansongo Special Secondary School, Kasama, Zambia. A case study was employed as research design in order to have an in-depth understanding of the problem under investigation. Qualitative and quantitative research methods were utilized in the collection and analysis of data. The study used a sample size of 30 which was distributed as follows: 12 teachers, 2 school managers, 15 HI learners from the special secondary school and 1 Education Standard Officer in charge of Special Education in Kasama district, Northern Province of Zambia. Data was collected from teachers using semi-structured interview schedule, questionnaires and observation checklist. Questionnaires and focus group discussions were used to collect data from administrators and HI respectively. The research investigated how the mode of classroom communication, curriculum content coverage and level of literacy affect the academic performance of learners with hearing impairments. Findings of the study revealed that teachers of learners with HI had limited skills in the appropriate mode of communication and so the teaching and learning processes were negatively affected, thereby leading to poor performance of the learners in the final examination. Besides this, the findings show that learners with HI were also reported to have faulty reading

comprehension and writing skills. Teachers indicated that pupils with HI tend to have challenges in understanding examination questions and this contributes to their underperformance. The study also found that the curriculum currently being offered to learners with HI in most special schools was unsuitable for them in the sense that it was too bulky. Based on the findings of the study, this study recommended that: teachers working with learners who have HI should use variety modes of communication both in teaching and assessing the learners in order to meet their diverse needs; teachers should ensure that the content in syllabus is covered extensively through the use of extra lessons, colleges of education should ensure that trainee teachers are well trained in various classroom communication modes for the deaf pupils; government should revise the school curriculum in order to make appropriate for HI learners; and Examination Council of Zambia should find other formats of assessing HI learners.

Soni, Lynch, Mbukwa-Ngwira, Mankhwazi, Jolley, Virendrakumar, Bedford and Gercama (2020) conducted a related study from Malawi which aimed to explore the development of a sustainable training programme supporting the inclusion of children with disabilities in early childhood, education and care (ECEC) centres in Malawi. This programme is based on a review of literature of curriculum, pedagogy and teaching approaches in ECEC in sub-Saharan Africa, alongside a review of national policy documents. The training was designed to enable staff to value the inclusion of children with disabilities in ECEC centres, as well as suggesting practical ways to do so. They set out their response to the gap in training of ECEC staff through the development of a supplementary integrated training programme, which, whilst respectful of the curriculum, policy and practice of Malawi, challenged staff to consider ways of including children with disabilities (CWD) and their families. They further that suggest this is a pragmatic and sustainable model that could be applied to training in other ECEC settings across the region in sub-Saharan Africa. The study concluded with guiding principles for training those working in ECEC with young children with disabilities in low-income countries.

In another study conducted from Malawi by Khomera, Fayiah and Gwayi (2020) which aimed find out the challenges faced by learners with hearing impairments in a special school environment in Malawi. The objectives of the study were; i) Identifying challenges encountered by learners with hearing impairment at Embangweni Primary School for the Deaf, ii) Exploring how these challenges faced by learners with hearing impairment at Embangweni primary school have

affected their learning, and iii) Suggesting possible solutions to the challenges faced by learners with HIs at Embangweni primary school. It was conducted in selected primary for the deaf in Mzimba District of Malawi in 2013. The study used qualitative research approach as the main method, but questionnaires were used to collect basic demographic information about the respondents. The deaf students, teachers and head teacher of the Embangweni primary school for the deaf were the target groups for this study. The sample size in total for this study was 45, in the ratio of 40 students and 5 teachers). This study has revealed that students with special needs education are facing multiple challenges such as; shortage of hearing aids, communication barrier with the community surrounding the school, negative attitudes by the community, water supply problem, inadequate funding, abandonment by parents and relatives, shortage of teachers and the lack of transportation facility. These challenges posed both long and short term impact on the academic performance of students attached to the center. And the study concluded that disabled students especially those with hearing impairment in rural Malawi are struggling to attain basic education. Further, this study recommended that Malawi government improve financial funding and ensure that basic needed hearing equipment and food supply be made available to all disabled students suffering from hearing impairment.

In a similar study by Shields and L Ennox (2017) in Australia which aimed to address some of the educational needs of students with hearing impairments, for this group has unique learning needs especially in relation to language acquisition. Throughout the course of history there have been two dominant approaches to deaf education, oral (speech) and manual (sign language). Despite conflicting opinions between medical professionals and educators in the field of Deaf education, current research suggests that flexibility and an openness to utilize a combination according to the individual needs of the students is the best approach to forming language proficiency. This paper used these findings to suggest a holistic range of effective management strategies for educators, which target the physical, academic, social, emotional and communicative wellbeing of deaf students.

Erbas (2017) conducted a similar study in India which was designed to gather information about the teaching practices of general education teachers in a small sample of K-6 inclusive elementary classrooms in a small town in the Midwest. It was a qualitative study and the purpose was to examine whether general education teachers used strategies that promote the inclusion of students

who are deaf or hard of hearing (DHH) and to identify the ways in which these strategies were applied. Data was collected through observations and interviews with the participation of three (3) general education teachers. From the findings of this study which indicated that FM systems have positive impacts on the speech perception of students who are hard of hearing who use hearing aids. From the findings of this study, it is possible to conclude that the general education teachers attempted to support the inclusion of students who are DHH by employing various strategies. Additionally, this study's findings contribute important information to the literature regarding teachers' educational backgrounds and the support of other staff such as interpreters and special education teachers associated with the education of students who are DHH.

Cawthon (2016) conducted a related study in USA which aimed to investigate teacher speech and educational philosophies in inclusive classrooms with deaf and hearing students. Data were collected from 8 language transcripts, 2 classroom observations, 6 and teacher interviews. Total speech output, Mean Length Utterance, proportion of questions to statements, and proportion of open to closed questions were calculated for each teacher. The findings indicated that teachers directed fewer utterances, on average, to deaf than to hearing students but showed different language patterns on the remaining measures. Inclusive philosophies focused on an individualized approach to teaching, attention to deaf culture, advocacy, smaller class sizes, and an openness to diversity in the classroom. The interpreters' role in the classroom included translating teacher speech, voicing student sign language, mediating communication between deaf students and their peers, and monitoring overall classroom behavior.

Instructional materials include diagrams, pictures, graphs and flow charts which are very essential in the teaching and learning process and more so to learners with hearing impairments as they reduce language and reading demands. This is because visual methods of teaching and learning create a more lasting experience and relate most readily to other sensory experiences. In a study conducted by Marschark (2013) on visual learning styles indicated that, learning styles are attributed to individual either via administration of standardized assessment or simply asking them for instance, how they prefer information to be presented or what kind of mental activity they find most appealing. Teaching and learning are more effective when related to methods and strategies that match learners learning styles. Other areas of instructional materials are the technological explosions which include hearing aids, television, phones and computers. All these devices assist

learners with hearing impairment to communicate and have access to information (Rishaelly, 2017).

Developing an effective communication system is often the greatest challenge a child with hearing impairment faces and it is also the most important. Communication is the key to all learning and access for the child with hearing impairment. A child with hearing impairment learn by doing, by being actively involved in signing and watching, not by listening since it is not a reliable modality. Studies have shown that in countries that have adopted the use of sign language as a medium of instruction in schools for the deaf, an unprecedented success has been achieved in education of the deaf. For instance, in Sweden, the Swedish sign language became the language of instruction as well as a teaching subject (Chupina, 2006). In Kenya, a study conducted by Sumbu (2018) to assess academic performance of learners with hearing impairment in selected special primary school across five districts found out that the use of Kenyan sign language to instruct learners with hearing impairment led to an improvement in their academic performance after the various other modes failed to meet communication needs of learners with hearing impairment.

2.5 Summary

This study looked at perceptions of teachers and pupils towards the factors that affect the academic performance of learners with hearing impairment in Selected Special Schools in Muchinga and Northern provinces and the study had never been conducted in the two provinces respectively. Therefore, the views provided in the above cited studies indicated that there are so many researchers in Zambia and outside countries who have conducted research in the area of hearing impaired HI learners. For instance, studies like that of Agyire-Tettey, et al. (2017); academic Challenges of Students with Hearing Impairment (SHIs) in Ghana, Getnet (2019); communication Challenges between Hearing Impaired Students and EFL Teachers in Inclusive English Language Classrooms, Khomera et al. (2020); challenges Faced by Learners with Hearing Impairments in a Special School Environment, and Kumatongo et al. (2021); barriers to the inclusion of learners with hearing impairments. The stated studies and many others were conducted around the area of HI, however, there is still a huge existing gap of knowledge on perception of teachers and pupils towards the factors that affect academic performance of learners with hearing impairment in selected Special Schools in Muchinga and Northern provinces of Zambia which motivated the researcher to conduct this research.

CHAPTER THREE: METHODOLOGY

3.0 Overview

This chapter presents the methodology that will be used in this study under the following sub-headings; research design, target population, sample and sampling procedure, instruments for data collection, data collection procedure, data analysis and ethical considerations.

3.1 Research Design

Creswell and Plano (2007, p.58) defines a research design as the ‘procedures for collecting, analyzing, interpreting and reporting data in research studies.’ Research design is the overall plan for connecting the conceptual research problems with the pertinent (and achievable) empirical research. In other words, the research design sets the procedure on the required data, the methods to be applied to collect and analyze this data, and how all of this is going to answer the research question (Grey, 2014). Therefore, this study adopted a case study design supported by qualitative approach for data collection. A case study research design was chosen for this study because it enables the researcher explore the behavioural dispositions of participants. It helps the researcher to gain in-depth understanding of the emerging perceptions of teachers and pupils on the factors that affect academic performance of pupils with hearing impairment in selected special schools and Units in Muchinga and Northern provinces of Zambia.

3.2 Research Population

The target population for this study was Hearing Impaired pupils, Special Education teachers, and the head teachers of special Schools/Units in Muchinga and Northern provinces. Peil and Dunning (1982) defines the population as all cases or individuals that fit into a certain specification.

3.3 Research Sample

Peil et al (1982) explains that the sample population is the subset of elements which are, ideally, representative of the whole population. Therefore, the total sample was 22 which consisted of 10 teachers of HI learners, 2 head teachers of special schools or Units and 10 learners with hearing impairment problem from the two selected schools.

3.4 Sampling Procedure

Purposive sampling procedure was used to select hearing impaired pupils from the two study sites. Expert sampling technique was used to select teachers and head teachers of pupils with hearing impairment. In order to have equal representation, girls and boys participated in the study. Johnson and Christenson (2012) postulate that purposive sampling enables the selection of participants with

the potential to provide rich data and thick description of their experiences of the phenomena. Further, Msabila and Nalaila, (2013) contend that purposive sampling involves purposively selecting individuals from the population based on the knowledge and judgment of the researcher. In this study, the selection of the participants was based on the number of years one has been at the school. In this case, only those who had been at the school for two years and above for teachers and at least one year for pupils were eligible for the reason being that they had more exposure to the phenomenon than newly appointed ones.

3.5 Research Instruments

Interview guide was used to collect data from teachers and head teachers. Lindlof and Taylor (2002) supports the use of a semi-structured interview guide in data collection because it allows a researcher to ask follow-up questions to have a clear understanding of the phenomenon. Focused group discussions was used to collect data from the pupils, and lesson observations were done to confirm some information from interview and focus group discussion with learners using observational checklist tool.

3.6 Interview Guide

An interview is a conversation between two or more people where questions are asked by the interviewer to elicit responses from the interviewee. Zohrabi (2013) argues that the purpose of interview is to reveal existing knowledge held by the respondent in such a way that it can be expressed as answers to the interviewer's questions and can be interpreted. A semi-structured interview guide was used to collect qualitative data from the head teachers, teachers of learners with hearing impairment regarding their views and opinions concerning the perception of teachers and pupils towards the factors that affect academic performance of learners with hearing impairment. Lindlof and Taylor (2002) indicate that the advantage of a semi-structured interview guide is that it allows for new questions to be brought up during the interview as a result of what the respondent says. By using this guide, the researcher was able to clarify questions and probe the answers of the respondents, thereby obtaining in-depth information on the subject. Interview Guide schedule was used to the head teachers and teachers of learners with hearing impairment in order to obtain precise information and avoid open ended kind of answering.

3.7 Focus Group Discussion Guide

A focus group discussion is an interactive event guided by an interviewer to stimulate participants, guide discussion and probe in order to obtain highly detailed and specific group data that meet the research objectives (Shedlin and Schreiber 1994). It allows for the richness and flexibility in the collection of data and it also allows for the extensive exploration of the research problem which the researcher must capitalize on while resolving the difficulties it presents (Creswell, 2009). In this study a focus group discussion guide was designed and used to collect qualitative data from learners with hearing impairment. The tool was chosen because it enabled the researcher to collect data through face to face interaction with the hearing impaired learners. Focus group discussion guide was used to all participants of learners with hearing impairment in order to obtain information for the study. This instrument (focus group discussion guide) enabled participants to freely express themselves beyond the guided instrument. One major weakness of this instrument was shyness of the part of participants especially learners with hearing impairment. Nonetheless, the researcher motivated the participants to avoid being shy and participate actively, this was achieved.

3.8 Classroom Observations

In one of the sessions, learners' participation was very good and it was in this session where lesson objectives were clearly stated. In one session, it was average despite the class being small. In four of these sessions, lessons were learner centred but question and answer mode of teaching was mainly used, in one it was a lecture method. The other notable challenge was the struggle to communicate due to poor sign language skills displayed by some teachers. In one session learners were unable to read and understand the questions written on the board and therefore had the class activity wrongly done. Teaching aids were not available in five of the sessions. Only one teacher taught with the support of a teaching aid to explain the subtraction of integers, in another session, the teacher had to improvise stones as counters to explain the concept of addition in mathematics. In two sessions the teacher used pictures from learners' book. In the absence of learning aids, teachers heavily depended on explanations to facilitate learning. In two sessions the strategies seemed to help learners learn and in one, this seemed to work somehow, but in four others it did not work. And only in one session did learners do a group activity, and only one learner did the exercise well. The rest needed help from the teacher.

The researcher observed that teachers had a problem in signing some concepts in Science related subjects. Teachers could also ask learners with hearing impairment on how to sign some concepts in sign language. However, learners were not in the position to know the concepts in sign language as a result the teacher used finger spelling and lip reading. The time which is allocated to teach learners with hearing impairment was insufficient because they are very slow.

3.9 Data Collection Procedure

Permissions were secured from the University of Zambia, Provincial Education Office, District Education Board Secretary and School Head teachers before collection of data. Data collection was done on seven working-days. Three focused groups were conducted with the pupils in the two selected study sites. One on one interviews were conducted with the teachers and the head teachers using the interview guides. A recording device was used during interviews and focused group discussions to make sure that their views are captured without missing any point. To ensure that the participants' contribution is recognized, all the participants were given synonyms to have their voices against their names. Codes for teachers were, T1...T10, the head teachers were coded as Hd1, Hd2 and the learners were coded as L1.... L10. These codes helped the researcher identify and involve all the participants in the study.

3.10 Trustworthiness of data

Pilot study was done, credibility was ensured, instruments were triangulated, for example, different instruments used. A pilot study is a small study to test research protocols, data collection instruments, sample recruitment strategies, and other research techniques in preparation for a larger study.

3.11 Data Analysis

According to Conjecture Corporation (2014) data analysis is defined as, 'a practice in which raw data is ordered and organized so that useful information can be extracted from it. Kasonde (2013) state that the process of organizing and thinking about data is key to understanding what the data does and does not contain. There are so many ways in which researchers can approach data analysis, and it is easy to manipulate data during the analysis phase to drive to certain conclusions or agendas. For this reason, it is important to pay attention when data analysis is presented and to think critically about the data and the conclusions which were drawn" (Conjecture Corporation,

2014:1). Therefore, the collected data was analysed thematically in order to capture the views and imaging themes from the participants. Thematic analysis is one of the most common forms of analysis within qualitative research. It emphasizes identifying, analysing and interpreting patterns of meaning within qualitative data.

3.12 Access to Research Sites

Prior to data collection, the researcher obtained a letter of ethical clearance approval from the University of Zambia Ethics Committee (UZEC). This is a requirement by the University for every study involving human participants. Permission to conduct the study was also sought from relevant authorities who included the Ministry of General Education (MOGE), the District Education Board Secretaries (DEBS) in Kasama and Mpika districts. The authorization letter obtained from DEBS office was presented to head teachers in the two selected special schools in Muchinga and Northern provinces. This allowed the researcher collect data from the learners with hearing impairment, teachers of learners with hearing impairment and head teachers themselves. A letter of authority is appended in the appendix section.

3.13 Ethical Considerations

Ethical concerns were considered of paramount importance in this study because of the sensitive nature of the topic and the vulnerability of the participants. In order to carry out this research, the researcher first sought for the ethical clearance approval from the University of Zambia Research Ethics Committee (UZREC). Attesting to the fact that people with hearing impairment are sensitive to issues of research being conducted on them, informed consent was also sought directly from the participants above 15 years of age, and assent from parents for those who were 15 years and below. This was done before commencing the process of data collection. Additionally, the researcher explained to them the nature and purpose of the study, duration and type of participation expected, so as to give them an opportunity to decide whether to participate in the study or not. At all times the confidentiality and privacy of the respondents was respected. They were informed that data collected in form of personal views, opinions and attitudes would only be shared with those involved in the study and withheld from others. Autonomy of the participants was also put into consideration by allowing participants to withdraw from participation at any point in the process without any penalty and to choose not to respond to any question when they felt uncomfortable with it.

3.14 Summary

This chapter has described the research methodology which was applied in this study. The research used a case study design in which qualitative method was used for data collection and analysis. The study used interview guides, focus group discussion guide and document analysis to obtain data from respondents concerning perception of teachers and pupils towards the factors that affect academic performance of learners with hearing impairment in selected special schools in Muchinga and Northern Provinces of Zambia.

CHAPTER FOUR: PRESENTATION OF FINDINGS

4.0 Overview

This chapter presents the findings of the study aimed at establishing perceptions of teachers and pupils towards the factors that affect academic performance of learners with hearing impairment in selected special schools in Muchinga and Northern provinces of Zambia. The findings are presented according to the research questions which are; 1) What perceptions do teachers and pupils have on factors affecting the academic performance of pupils with hearing impairment in the study site? 2) How do teachers and pupils perceive the various factors affecting academic performance of pupils with hearing impairment in the study? 3) What are challenges do teachers and pupils face which might have affected their perceptions on academic performance of pupils with hearing impairment in study site? and 4) What measures can be put in place to address to improve on the perceptions of teachers and pupils over factors affecting academic performance of pupils with hearing impairment in study sites?

4.1 What perceptions do teachers and pupils have on factors affecting the academic performance of pupils with hearing impairment in the study site?

The study identified several perceptions related to factors affecting the academic performance of pupils with HI. Teachers who participated in the study stated that they perceive hearing impaired pupils not to learn so easily. This is what the teachers said;

I believe that it is not an easy thing teaching pupils with hearing impairments because we have to repeat almost everything for them to understand. You find that even after putting in so much effort to make them understand others still don't do well when it comes to academic performance. So, I now perceive them hard to teach pupils, that is why their performance has been very bad. But because I chose to be a teacher and am passionate about my job, I love teaching them despite it being tiresome sometimes. That's what I can say about my experience. (T3, 24.02.2020).

Another teacher also registered her perceptions on factors affecting the academic performance of pupils with HI;

I perceive pupils with HI to have a very poor educational background. From my experience, usually the pupils with hearing impairments underperform as compared to other hearing pupils because of their poor educational background even though they share the same educational background somehow, but for the hearing impaired pupils it seems they face a lot of challenges when it comes to paying attention because sometimes they don't understand when teachers. So, it seems like apart from that these learners have a lot of factors which contribute to their poor academic performance and one of them is that as teachers we lack on materials and effective teaching and learning methods. And that as teachers we have a preconceived beliefs that pupils with HI cannot do well in school because of their condition. (T7, 25.02.2020).

Other respondent lamented that;

Schools have insufficient resources, clouded school curriculum. We don't perceive ourselves any different from our fellow hearing pupils no, just that we lack some learning materials needed for us to learn well. We have the same abilities in academic achievements just with every child. We are very much capable of doing extraordinary things that even our hearing counterparts cannot do, just that they have a hearing advantage over us. We feel that the school curriculum is just to clouded and that if it can be worked on by making it fit for all the pupils including us with hearing impairment. (L2, 26.02.2020).

From the above participants, it is clear that some teachers have a preconceived belief that HI pupils are difficult to teach because of their condition and this result into them not paying much attention. It is also clear from the above findings that some teachers believe that HI pupils have a poor education background which affects their academic performance at a later stage in their academic life, while pupils in the above findings believe that schools have insufficient teaching and learning resources coupled with a clouded school curriculum.

Other respondent had this to say;

Some of us teachers are not trained in sign language, this makes it difficult for them to communicate effectively when teaching HI pupils. As for me, I have my own experience with the pupils with hearing impairments I believe that these pupils most of the time are not paid attention to by teachers in classes. This could be that because teachers are not competent enough to use sign language as a medium of instruction. (T5, 26.02.2020).

Similarly, other respondent also had this to say;

The schools have poor infrastructures which does not support the effective learning of the hearing impairment pupils. It's really difficult to communicate with these pupils with hearing impairment because some of them the situation is very bad such that they can hardly hear no matter how much loud you may be when teaching in class. This time at least they understand sign language which makes it easy for us teachers to effectively teach them. All we need now is more sign language teachers because we are only two here who can teach using sign language. (T1, 27.02.2020).

The participants whose views are cited above indicated that there is no good infrastructure to support effective learning of HI pupils. They have further indicated that there are some changes now as compared to the way it used to be in the past when they had no sign language interpreters. Equally like T6, also has stated that pupils with hearing problems need proper care because these are special pupils who need special education too. This was said in the cited comments below;

I have seen that the performance of pupils with hearing impairment in academic has been poor. One would wonder why this is happening, I believe there are so many reasons ranging from school infrastructure, teaching and learning resources, government policies, lack of hearing aid devices and so many other factors. Though at school level as a teacher I try my best to make sure that I give the best to my learners regardless of how they are weather they are differently disabled with hearing problems or not. (T5, 27.02.2020).

In an interview with the head teachers who participated in the study, one head teacher pointed out that the school was inadequately funded. He continued to say that the budget allocation for the education sector keep reducing each year, for the year (2020) it was even worse making it difficult for even us administrators. This is what he said;

Some teachers have negative attitudes on learning of HI pupils. They perceive them as people who cannot do well in school because of their impairment coupled with limited learning time for repeating lessons. These contributed to poor academic performance to the HI pupils. For example, the employment of sign language teachers should also be treated as an urgent thing because it will help a lot to improve performance of HI pupils. (Hd1, 24.02.2020).

Other respondents said this;

I have been here for two years now, it is my first time to teach hearing impaired pupils in an inclusive class. For me it becomes difficult to teach in an inclusive classroom because I am not a special education teacher and I don't know sign language. So, what helps me is that, the pupils who have the idea of sign language assist their hearing impaired peers in understanding what is being taught, and it takes time for hearing impaired pupils to get the concepts of the lesson because the pupils 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. (T10, 25.02.2020).

4.2 How do teachers and pupils perceive the various factors affecting academic performance of pupils with hearing impairment in the study?

A question was asked to establish pupils' perceptions towards the factors that affects the academic performance of pupils with hearing impairment in school during focus group discussions. Generally, pupils described their experience of these factors as both enjoyable and challenging;

I have been at this school now for two years. The experience has somehow been not good for us learners who have hearing problem, and at the same time I can say somehow okay. That's how I can put it. Another learner said, in addition, I believe in my abilities and I know that given all the support needed I can perform far much better. So far so good, we are enjoying because we are put in the same class with other pupils. There is nothing like

stigmatization, and/or isolation. Maybe it can come from within the heart of a person but physically we don't experience that.... another adds, when it comes to learning I would say partly we are also adapting but partly we are disadvantaged. (L3, 28.02.2020).

From the views above, participants revealed that they socially interacted well with their peers both in class and also in the classrooms without any discrimination, stigmatization or isolation. For other participants it has been a different experience. They registered their experience with the researcher as follows;

The time I was coming to this school in grade eight my fellow pupils used to avoid me, that made me start believing that I am not a member of them. Even in class it used to be difficult because teachers used to concentrate on other pupils with hearing problems, this time I even help my friends solving class exercise. Another learner also added that when it comes to learning in class rooms, I still have challenges because we don't have sign language interpreters in these classes. And teachers perceive the use of sign language as tiresome. That really affect us educational wise. We feel sign language interpreters are very important people in our classroom to help develop our academic performance. (L1, 28.02.2020).

From the participants above, it appears there is a change for others and others still feel it has really changed. The other participant seems to be happy with the change in experience and acceptance that fellow pupils who used to avoid her were no longer doing so. The learner seemed to acknowledge the role of education in changing people's perceptions towards persons who are differently disabled. When persons with disabilities interact with peers without, at least they see more of common things now. This change in experience is very important for inclusion, just like other pupil has stated below;

The experience is really different from that of the school where I was. At first, it used to be different because we used to be separated from other pupils without hearing impairments and that used to make us feel inferior, we used to be in a class of not more than 10 pupils. But now, that is not the case as we learn together with others in class with over 30 pupils. Another added that she believes that the introduction of inclusive education has really helped because it allows us to interact with peers without hearing impairments. Another learner also said that, I like it when we are in class and 'us' pupils with hearing problems

are given front seats in order to help us get what is being said. Even when a learner with hearing problems ask a question, the teacher when answering moves closer to the learner, at least this makes us feel part of the process. (L3, 24.02.2020).

Other participant also lamented that they experienced some forms of discrimination had this to say;

When it comes to socializing with these pupils with HI as teachers we are trying our best to make sure that they are socialized well and are free to share with their hearing peers their education challenges. We believe they are just like any other pupil and that they can do better too. (T4, 24.02.2020).

I am able to interact with my friends though there maybe sometimes where it can seem that I am a little bit isolated in some activities. Sometimes when it seems like that, like for example when we are given group work in class, other class members don't seem to be comfortable with me in the group so they would change and join another group. (L8, 25.02.2020).

Another learner had this to say;

Even when come to there are some who have accepted and others have not. Some are not comfortable with us in class because they feel we are not teachable. I remember in grade 9 when I asked a question in class on something I wanted the teacher to explain to me, before he explained it he had to make a joke out of my question first which made me feel very bad and in the process ended up stopping asking questions in class to avoid teachers making jokes out of me. So, you see this is a challenge we are facing also from teachers. (L6, 25.02.2020).

4.3 What are challenges do teachers and pupils face which might have affected their perceptions on academic performance of pupils with hearing impairment in study site?

In an interview with teachers who took part in the study when asked on challenges they face when teaching learners with hearing impairment. The teachers talked to revealed that the hearing impaired pupils need more time for them to understand concepts during a lesson in class compared to their non-hearing impaired pupils. This was because of lack of teaching and learning material to cater for the hearing impaired pupils. This is what the teacher said;

There are so many challenges we face as teachers when teaching hearing impaired pupils, and these challenges ranges from teaching and learning materials, infrastructure which support hearing impaired pupils. The government under the Ministry of education should consider providing the school with enough teaching and learning materials to all schools providing the education of pupils with hearing impairments that would help in improving the academic performance of the pupils with hearing impairments. (T2, 26.02.2020).

In other interviews, two teachers complained that in most instances, the syllabus was not even fully covered and yet the hearing impaired pupils would be required to sit for the same examination as the other pupils who are non-hearing impaired. In their own words the participants said this;

Hearing impaired pupils are slow by nature when it comes to understanding new concepts that are taught to them compared to their fellow pupils without. One has to repeat a concept several times in order for them to get it. This makes the rate at which we move covering the contents of the syllabus slow resulting into us failing to finish and yet at the end of the year they are required to sit for the same exam with the non-hearing impaired pupils. In this school, teachers are not using visual aids during our lessons. They could just provide extra visuals, such as illustrated notes for hearing impaired pupils to read. They use the chalkboard to explain concepts, not the problem is these pupils don't hear what we explain. They also read and explain verbally. They just never make an effort to use the sign language to communicate with learning impaired pupils. (T10, 27.02.2020).

From both schools the teachers interviewed revealed that teaching and learning materials was one of the major challenges they faced as a unit offering this type of education to the pupils hence, the poor academic performance of these pupils. Teachers complained of the rate at which the learners with hearing impairments take to understand a concept. He said learners with hearing impairments take more time to understand a concept that was taught to them compared to the non-hearing impaired pupils. This made it difficult for them to cover the contents of the syllabus in time. However, with or without completing the syllabus, the pupils were required to sit for the same examination with the pupils without hearing impairments. This made the pupils with hearing impairments mainly to perform poorly in the National Examinations. Below are the words of the teacher;

The hearing impaired pupils are slow in capturing what is being taught to them, even when you become fast so that you move fast towards finishing the syllabus content with them, you cannot move faster leaving the other pupils behind. This result into us not to finish the syllabus and it is one of the reasons that the hearing impaired pupils usually perform poorly in the National exams. (T9, 06.02.2020).

Another teacher revealed that it was not easy for her to handle special pupils as she was not a special education teacher to be able to communicate with the hearing impaired pupils using sign language as she was not particularly taught sign language at the College she attended.

Major challenges for some of us who didn't do sign language when it comes to teaching these hearing impaired pupils is how to make them understand what we are teaching. This is so because some of them really need a sign language interpreter to interpret to them the whole lesson. (T1, 24.02.2020).

Another female teacher said she had to learn how to use sign language though she is not very good at it. Because she was not a fluent user of sign language this also disrupted the rate at which they had to cover the content of the schemed work for each term leading to a delay in covering the contents of the syllabus. The participant had this to say;

The challenge I have is that am just learning sign language because of my interest in it, and it is usually difficult when you are a beginner and you have been given a class which has both the hearing impaired learner and those without. (T5, 28.02.2020).

Other teachers said that it was not easy to communicate with the hearing impaired pupils during lessons as most of them did not even know the standard sign language. Now when you go in class to teach and you are using the standard sign language, usually there is communication breakdown. The teacher said it was difficult for him because he first had to start teaching the pupils what he termed standard sign language before he could go into teaching the actual content of the syllabus. This consumed most of his time as pointed out earlier that these pupils take time to grasp a concept. The teacher had this to say;

What the majority of our pupils' use is street sign language, so when you receive the pupils, you have to start with teaching them first the standard sign language. This on our part as teachers takes a lot of our time for teaching the syllabus contents. (T8, 03.03.2020).

The head teachers too have their experiences on the challenges teachers face when teaching pupils with hearing impairment. In interviews they clearly stated that there are so many challenges their members of staffs are facing when it comes to teaching the children who are hearing impaired and they can range from shortage of teachers, lack of teaching and learning materials, poor infrastructure, lack of hearing aid devices and many other. The lamentations of the two head teacher are cited here under;

Our teachers face so many challenges when teaching hearing impaired pupils, they lack teaching and learning materials, the pupils too do not have hearing aids, talking about the classrooms are not fit for pupils with hearing impairment. As if that is not enough, the numbers for members of staffs who are specialized in special education. So, there are really serious challenges which needs quick attention if we are to improve the academic performance of the hearing impaired pupils. (Hd2, 03.03.2020)

There are so many challenges teachers face when teaching hearing impaired pupils which result into their poor academic performance. Pupils do not have hearing aids, even classrooms are not good for special children. The shortage of teachers is also another challenge, there is a shortage of teachers of special education in these school. It would have been of great help if the school had enough teaching and learning materials too for these special pupils. (Hd1, 03.02.2020).

4.5 What measures can be put in place to address to improve on the perceptions of teachers and pupils over factors affecting academic performance of pupils with hearing impairment in study sites?

It was revealed during interviews with the participants when they were asked to comment on the measures that can be put in place to address challenges teachers face when teaching learners with hearing impairment in Muchinga and Northern Provinces, this is what the head teachers said;

The Government should at least use the money allocated to education sector to meet these other challenges which just need money like infrastructure, teaching and learning materials and others if we are to eliminate the factors that are affecting the academic performance of pupils with hearing impairment. Teachers have been complaining about the infrastructure and materials for some time now. Do you think they can work happily? They are affected and even the pupils are affected too. As an administrator, I have to keep encouraging them to do their best to use what they have to teach the pupils. Otherwise government can fund the schools to end this. (Hd2, 25.02.2020).

Teaching materials and hearing aids is one of the things which H1 talked about. He stated that with good teaching materials a teacher is able to deliver the intended learning outcome to his or her pupils. This is what he said during the interviews;

Since we have a low budget from the Government we use only local made teaching materials. We cannot provide good teaching materials such as computers and video systems. When we use the locally made teaching materials, some of the children do not show any interest in learning because they do not really meet their needs to help them do better in their academic. Teachers try to use their locally made materials in trying to help the hearing impaired pupils to effectively teach. You and I that teaching and learning materials are one of the most important things a teacher needs to consider before entering a class especially for children with hearing impairment. (Hd1, 03.03.2020).

In another interview with focused groups of pupils, they had this to comment when asked on what can be done;

The Government should make sure that more special education teachers who are specialised in sign language are employed to make sure that we as hearing impaired pupils too have the same opportunity of education just like our friends without. So, the Government through the ministry of education should quickly act on this issue otherwise this problem has contributed a lot to our poor performance in academic for a long time now. (L7, 24.02.2020).

Another learner added by saying;

For me, what I need is a teacher specialised in sign language then all my problems will be solved. We don't sign language teachers here who are competent that they use it when teaching us. I know sign language very well because I have been using it since grade 1. Am saying this because I hardly hear when teachers are teaching in class using the ordinary way of teaching no. (L5, 24.02.2020).

From the above participants, it is clear that the learner really need many specialised teachers in sign language, and this can be done if the government employ more of such teachers. A teacher also elaborated that they have only two classrooms for teaching. This is what she had to say;

This school only has two classrooms which can be used to hearing impaired pupils. This has been making our work difficult as teachers because pupils are in different grades which means that they have to be learning separate but at the same time. The Government should assist us by building more classrooms which can accommodate pupils with hearing impairment. Here that has been one of the factors contributing to poor performance. Teachers should stop having a preconceived mind that HI pupils cannot be taught, they should instead view them just like any other pupil. (T4, 03.03.2020).

With just two classrooms for special pupils, it is clear that teachers are willing to teach these hearing impaired pupils what is hindering them is just the infrastructures. Another teacher said this during an interview;

The school environment is not good for the teaching and learning process of pupils with hearing impairment. The classrooms which the school has for now are just good for ordinary pupils because sometimes they give feedback when one is teaching. This now worsen the situation of hearing impaired pupils because they get different sounds. The is need for soundproof classrooms in order to effectively teach HI pupils. (T6, 28.02.2020).

Another respondent added that;

The classroom environment should be in a good condition to accommodate all the pupils those with and without hearing impairment. Most of the special needs unit lack good classrooms that can motivate both the teachers and the pupils. Effective teaching and learning for hearing impaired pupils can only take place from a classroom that is feedback free. There is also an urgent need for learning and teaching materials to be provided as they are a factor in ones' academic performance. (T7, 24.02.2020).

During the interviews other teacher participants said that the curriculum should be reviewed, they noted it is too wide with things which does not make sense to pupils. This was indicated as a solution to the problem under discussion;

The government should review the school curriculum. For me, the curriculum has a lot of unnecessary things. We are at the bottom and there is nothing we can do to change the curriculum; the policy makers are not here when we face challenges with the pupils. The curriculum for these children should be flexible thus giving us chance to make an individual plan for every child in the unit depending on their ability. (T8, 27.02.2020).

Beside this, other teachers talked to stated that the curriculum should be a bottom-up structure, meaning that the policy makers should get ideas from the teachers regarding what a curriculum should contain because the teachers are the ones working directly with the children, and thus they understand them better than policy makers. Parents too have a bigger role to play in the education of their hearing impaired children to make sure that they start performing better. One teacher had this to say during an interview;

Many parents of pupils with hearing impairments sent the children to school without providing them with hearing aids. If this can change and parents start contributing to the education performance of their children, they should start supporting their children fully. In our society many parents do not want to assist their children with what they need for them to acquire the needed education. They consider them hopeless individuals who cannot do well no matter help they are given. The parents should look at these children just like any other child they have home without hearing impairment because they have the same abilities. The curriculum developers also should understand the fact that this curriculum is meant for all pupils, therefore there is need to assess the availability of teaching and learning materials for other differently disabled pupils. The situation of our pupils with hearing impairment is becoming worse because they lack a lot of basics for them acquire the needed education. (T9, 03.03.2020).

The above participants indicated that it was time that the society learned to accept that children with special educational needs can be useful in many ways once properly guided. Further, learner participants condemned the lack of teaching and learning material which many special schools are lacking, the pupils said this during focused group discussion;

This is a challenge for me because I want to use modern learning materials such as projectors and TV. Most of the time our teachers use local made teaching materials, which sometimes do not attract our attention as pupils because they do not communicate to us effectively. Government should start funding the schools direct so that the schools buy things they want for their pupils to learn. She added that with good planning, the Government and society at large could manage to provide the necessary teaching materials for children with hearing impairment in all the special school in the country. (L4, Female, 24.02.2020).

Participants clearly explained that Zambia has many colleges training teachers in special education to cover the need of special needs schools all over the country. And some of these teachers are trained in sign language.

Zambia has few specialised special education teachers employed that provide special needs education. If I'm not mistaken, we only have two special needs teachers who are specialised. The least the Government could do is to employ more special needs education

teachers who are specialised in sign language. This school is old too, it has not been receiving fund for renovation or to build more classrooms that can accommodate pupils with hearing impairment. As you know that these pupils are special in their own way and they need to learn from special classes which does not give feedback. So, if funded to construct more classes for these pupils then we will have solved so many challenges. (T3, 25.02.2020).

Government and communities should work together to support the children. Moreover, as learning environments help pupils to relax and develop positive vibes about themselves. Another participant said this;

Our classroom does not have enough desk many of our pupils sit on the floor due to lack of desks, the blackboard is not good, and the ceiling boards are missing which make us getting some kind of feedback when teaching. With these conditions the teaching and learning process for hearing impaired pupils is made difficult. Pupils with hearing impairment cannot enjoy learning with the feedback as it confuses them. There is an agent need for this to be worked on almost in all the schools. (T1, 25.02.2020).

From the above comments, it is clear that creating a good learning environment help children with hearing impairments to concentrate on their tasks and improve their academic performance. Others still feel the curriculum should be reviewed. The curriculum is prepared by the Ministry of Education; this curriculum is not inclusive in the manner it is prepared because it disadvantages other learners who have hearing impairment. It is evident from the participants' views above that the government has a major role to play in making sure that the education of hearing impaired learners is to be improved. It is only when the government respond positively to the needs of these learners then their education performance will improve. Therefore, this chapter has presented the findings in line with research questions as indicated in the forgoing discourse.

CHAPTER FIVE: DISCUSSION OF RESEARCH FINDINGS

5.0 Overview

This chapter discusses the findings of the study on Perceptions of teachers and pupils on factors affecting academic performance of learners with hearing impairment in selected special schools in Muchinga and Northern provinces of Zambia. The discussion of findings are presented in accordance with the objectives of the study which are to: perceptions of teachers on factors affecting academic performance of learners with hearing impairment in selected special schools in Muchinga and Northern provinces; perception of pupils on factors affecting academic performance of learners with hearing impairment in selected special schools in Muchinga and Northern provinces; challenges teachers face when teaching learners with hearing impairment in Muchinga and Northern Provinces; and measures that can be put in place to address the perceptions of teachers and pupils on factors affecting academic performance of learners with hearing impairment in selected special schools in Muchinga and Northern provinces.

5.1 Perceptions of teachers and pupils on factors affecting academic performance of pupils with hearing impairment in the study sites.

In the findings under this objective some teachers have revealed that they believe it is difficult teaching learners with hearing impairment because they had to say the same things again and again for the pupils to understand. The participants further stated that they started believing that HI pupils cannot be taught because even after putting in so much effort to make them understand others still don't do well when it is time for assessment to evaluate their academic performance. The teachers continued by saying that some of them their experiences with hearing impaired pupils can be described as bad because of the fact that they needed to be using the sign language to teach or interpret in class which they did not know. This forced some of the teachers who have some basics in sign language to start using it even if they were not competent enough.

It was also revealed in the findings that the school curriculum was very wide making it difficult for teachers to teach other subjects to lack of teaching and learning materials. Learning subjects such as mathematics and science due to its abstract nature is one factor which has been established in current research as determining the academic performance of pupils with hearing impairments. This is compounded with the language demands of mathematics and science instructions. Moores

(2000), stated that this challenge is obvious because much of the expositions in mathematics and science techniques rely on the use of verbs, adverbs; an area where the HI have a challenge. Some topics were said to be complicated, with long formulas. Some words were difficult to comprehend. The findings in this study are consistent with those of Manchishi (2015) in her study that highlighted the factors that contribute to low achievement levels in mathematics among pupils with hearing loss and to suggest measures that would improve their performance. She found that hearing loss significantly affected their ability to learn mathematics due to their failure to comprehend the mathematics language. It can also be seen argued by the teachers that several distinct features of concepts in some subjects make learning complex and foreign for many pupils, including having familiar words with precise meanings that differ from their normal meanings. This suggests that the interpretation of these concepts with their ambiguous vocabulary is particularly challenging for both the teachers and the pupils with hearing-impairment, for they find it difficult to understand verbal and written concepts.

Other teachers feel and believe that hearing impaired pupils are just like any other learner who is also capable of doing fine in academic. Contrary to other participants, some teachers showed some confidence in the HI pupils and they revealed that they try to do the best they can to make sure that they are moving together in class with their peers without. Learners with hearing impairment have the same abilities in educational achievements with those without. They are very much capable to do extraordinary things that even their colleagues without hearing problems cannot do, all they need is support from us the teachers, parents and other stakeholders who are also directly connected with these pupils. Teachers stated that sometimes they feel that these learners also need role models they can be looking up to. This can help the pupils with hearing impairments to gain confidence in themselves if they can be seeing teachers with the same problem like theirs teaching them.

In other interviews, the participants further indicated that there are some changes now as compared to the way it used to be in the past when there were very few sign language interpreters and even learners with hearing impairment used to straggle to learn. The findings show that there was a slit change in the way things were being done as many of the teachers now were learning sign language to help them effectively deliver to their HI pupils. Equally, some teachers stated that pupils with hearing problems need proper care because these are special pupils who need some kind of special

education too and also special education teachers who will understand their challenges and still be able to carry them along.

As stated from the above, learners with hearing impairment are being ignored because they rely on sign language for them to understand and learn effectively. Teachers of learners with hearing impairment are not conversant with sign language for interpreting some mathematical, science and other subjects' concepts, for instance, some mathematical terms like calculus and integers are difficult for teachers of pupils with hearing impairment to explain especially that such words do not even appear in sign language dictionary. This usually makes teachers to finger spell or ignore such difficult words or topics at the disadvantage of pupils. As a result, this leads to poor academic performance of learners with hearing impairment.

Lack of use of effective teaching methods was also one of the challenges which was found to be among the factors contributing to poor academic performance of pupils with HI. It was revealed by the study that teachers mainly used question and answer, teacher exposition, demonstration and observation methods. To some extent others tried to incorporate cooperative learning by introducing group activities during lessons. But complained that the method was ineffective as HI pupils faced difficulties engaging in group discussions as well as giving feedback during presentation. The study found that teaching methods used were limited as reported by some teachers and that they lacked resources to handle learners with hearing impairment.

The head teachers also lamented on their experiences with who participated in the study, one head teacher pointed out that the school was inadequately funded. He continued to say that the budget allocation for the education sector keep reducing each year, for the year 2020 it was even worse such that schools even stopped receiving grants funds making it difficult for even them as administrators find it difficult to work with. It was further revealed that schools with special pupils were facing so many challenges which emanated from this reduction of the budget allocated to the education sector. For example, the employment of teachers was not taking place and if they recruit, only a few teachers were being recruited due to reduction of budget allocation to education sector which in turn affected teacher recruitment in the area of special education will be very small resulting into the shortage of teachers. The funding is not enough resulting to also lack of money purchase the needed materials and devices to aid the pupils with hearing impairment. The findings have also revealed that pupils do not have any help when it comes to the school providing them

with hearing aid devices. Therefore, some learners who do not have hearing aids and their parents cannot also afford buying for them resort to the quitting school or they end up failing. The community on the other hand doesn't encourage these pupils by taking active in sponsoring their education.

It is also clear from the findings that, 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 needs more time for one to teach using both ordinary language and sign language at the same time. Zambia is one of the least developed countries in Africa and the World at large, therefore it faces challenges when it comes to finance the running of almost all the sectors supported by the government and the special education schools for pupils with special needs in Muchinga and Northern provinces are not an exception.

The findings of this study on this objective are in line with the findings of Agyire-Tettey et al. (2017) who conducted on challenges that prevent students with hearing impairments (SHIs) from high academic achievements. Their findings show that challenges which hinder SHIs academic performance emanate from different systems and factors including SHIs themselves, their parents and other institutional barriers that exist in deaf education. They further indicated in their findings that parents influenced the academic performance of their children with hearing impairment (CHI) through their responsibilities, expectations and the learning assistance they gave to their wards at home. Also in support of these findings is Ntinda et al. (2019) who found that teachers experience gaps in professional competencies to teach the mainstream curriculum for which they needed further education, this was in their study on the experiences of teachers of the deaf and hard-of-hearing students in a special needs high school for the deaf.

5.2 Perceptions held by teachers and pupils over factors affecting academic performance of pupils with hearing impairment in study site

The findings on this objective clearly show that teachers and pupils held different perceptions over factors that are affecting academic performance of pupils with hearing impairment as indicated by the participants that they have different beliefs all together. It is clear from the views of participants that the perceptions held on factors affecting academic performance of HI pupils within the two groups were similar and this is because these groups had similar characteristics and also presented with the same situations which have an impact on the roles they perform in the school environment

and also in the academic performance of these pupils. These include; teachers believing that pupils with HI are unteachable, HI-pupils perceive teachers sign language skills as incompetent, believes that curriculum is clouded and does not meet the HI pupils half way, Engagement in learning processes, Inadequate Learning Resources, Negative self, Hearing Impairment and its implication on learning. The discussion of these details are contextualized as follows:

The findings have revealed that a number of the pupils with HI prefer to using sign language as medium of communication and language of instruction in class. However, the teachers were seemingly not prepared to communicate through this medium. The findings show that some of the teachers were not ready to teach using sign language due to the fact that they don't know it too and the ordinary verbal in class to communicate with both the pupils citing that more time is needed for them if they were to teach and translate themselves into sign language. As if that was not enough, it was also discovered from the findings that some of the teachers actually did not even know the sign language. Some of the teachers lamented that they did not attend any special education trainings but just found herself teaching special pupils at a special school.

It has further been discovered in the findings that pupils who have been at this school for more than two years held a perception that their peers do not like them as they were viewed as difficult to learn pupils by their mates, and at the same time were also feeling fairly treated because they allowed them to learn together in class with other pupils without hearing problems. These pupils stated that they were taken in by their peers without hearing impairments without any form of stigmatization, and/or isolation. This means that the pupils with HI enjoyed a very good relationship amongst their friends. The pupils indicated that they were adapting when it comes to learning in class though they were being disadvantaged on the language used when teaching other subjects which did not have sign language interpreters.

The lack of understanding of sign language has been found to be one of the major obstacles in the teaching and learning of the pupils with hearing impairments resulting in poor academic performance. Sadly, the study findings show that at times, the teachers who are supposed to teach the pupils were being taught by the pupils on how to apply sign language in the delivery of lessons. Other teachers held the perception that due to poor education background some pupils do not understand sign language. This in other ways show that even those teachers who were able to use sign language were not competent enough to teach in class using it as medium of instruction. This

came to light when the pupils lamented that the school in Muchinga and Northern provinces has a few number of qualified special education teachers and these also were not very competent enough to teach using the sign language.

The competent of teacher with the language of instruction strongly determines the ability of pupils to comprehend and learn. This has been established in a study conducted by Zaitseva et al (1999) in which they discussed Vygotsky's attitude towards sign language. As way back as the 1930's Vygotsky noted the importance of sign language to HI pupils as a complex language with its own syntax, a very richly developed language fully capable of expressing different abstract concepts, including ideas thoughts and facts of socio political nature. Vygotsky argued further that sign language is not only a means of interpersonal communication but also a means of inner thought in the child himself or herself. Contrary to the findings of this study under this objective, Sambu et al (2018) in their study which assessed the academic performance of pupils with hearing impairment in special primary schools, found that the use of Kenyan Sign Language as a medium of instruction to instruct pupils with hearing impairment had led to an improved in their academic performance.

The findings show that some teachers lack skills when it comes to teaching an inclusive class where there are special learners. This is because the pupils revealed that teachers did not pay attention to their needs in class but rather paid attention to other kinds of disabilities. They need to pay more attention to the needs of pupils with HIs too as they teach in class. When the teacher is explaining maybe sometimes the teachers don't give much attention to the pupils with hearing impairment. These findings are in line with the findings of Cawthon (2016) who indicated that teachers directed fewer utterances, on average, to deaf than to hearing students but showed different language patterns on the remaining measures.

From the above discussion, the researcher's point of view, it is clear that the sign language did not work to help the learners with hearing impairment improve their academic performance. But to the contrary, it was difficult for the pupils to see themselves improving where academic is concerned. The obstacle to this is that most of the teachers who are given to teach these pupils are not adequately trained in sign language or have not been trained in sign language. This results in poor academic performance since the pupils fail to take the concepts from the teachers who do not

comprehend sign language. Since sign language enhances pupils' thinking and creativity, teachers need to acquaint themselves with the appropriate language so as to facilitate effective learning. It is another way to show that teachers still have a negative attitude towards these pupils with special education needs. In support of these findings are the findings of Aseery (2016) who found that teachers in Saudi Arabia showed slight negative attitude toward teaching Deaf/hard of hearing students in regular education classrooms. This was in a study where the researcher investigated teachers' attitudes toward including Deaf and hard of hearing (D/hh) students in regular education classrooms. Another study similar to these findings is that of Chizingwa (2018) who found that lack of teaching and learning resources, and inappropriate pedagogical approach were some of the factors leading to poor academic performance for HI pupils in inclusive primary schools.

5.3 Challenges teachers and pupils encounter in the teaching and learning of pupils with hearing impairment in study site.

The results from the participants when asked on challenges teachers and pupils encounter in the teaching and learning of pupils with hearing impairment in study site has shown that there are so many challenges they encounter in making sure that they teach the HI pupils effectively. The findings further indicate that the teachers revealed that the hearing impaired pupils need more time to understand some concepts as compared to their non-hearing impaired pupils. This was because of lack of teaching and learning materials to cater for the hearing impaired pupils. This in other words means that schools have little or no teaching and learning materials for effective teaching and learning of the pupils with HI. There are so many challenges they face as teachers when teaching hearing impaired pupils, and these challenges range from teaching and learning materials, infrastructure which support hearing impaired pupils. The current classrooms are not meant for the pupils with hearing impairment because there is a lot of feedback when one is teaching. This is a situation which so many schools are in because these special schools have not been receiving funds from the government through the ministry of education for some time now resulting into the situation of classrooms becoming worse each passing day.

Further, findings from participants from both schools revealed that teaching and learning materials was one of the major challenges they faced as a unit offering special education to the pupils with HI hence, the poor academic performance of these pupils is mostly affected by this factor. The experience of teachers was also reported to be bad as those who participated in the study

complained of the rate at which the pupils with hearing impairments take to understand some concepts. They further said pupils with HIs take more time to understand a concept that was taught to them compared to the non-hearing impaired pupils. This made it difficult for the teachers to cover the contents of the syllabus in time. The unfortunately part is that with or without completing the syllabus, the pupils were required to sit for the same examination with the pupils without hearing impairments. This made the pupils with HIs mainly to perform poorly in the academic.

Shortage of teaching and learning materials/aids were also one of the curriculum factors associated with poor performance of learners with hearing impairments. Through observation of the lessons, the researcher found that teachers delivered lessons to learners with hearing impairments without any visual aids such as charts, pictures, real objects and diagrams. Mwanyuma (2016) also found that availability of teaching and learning materials affects the performance of Deaf pupils. Mwanyuma (2016) found that the government did not provide sufficient support in ensuring that teaching and learning materials were available to the school. This has resulted in pupils having difficulties in comprehending most of the subject matter teachers delivered to them.

The above findings are in line with the United States Department of Education (2007), who cites lack of adequate learning materials as being among barriers to quality learning. In this study, it was revealed that outdated and worn-out textbooks are often shared by six or more students in many parts of the developing world. Workbooks, exercise sheets, readers and other core materials to help students learn their lessons are in short supply. Teachers also need materials to help prepare their lessons, share with their students, and guide their lessons. The persistent digital divide and uneven access to information and communication technologies (ICTs) have severe implications on education. ICTs can transform not only instruction but also the learning process. They empower both teachers and pupils.

Johnson (2012) says that when materials are lacking, pupils have to share everything. It takes longer for a teacher to teach a 40-minute lesson because one has to pass around the books and other resources as the lesson progresses. Sometimes the teacher has to break up pupils into small groups and teach the same lesson a few different times. Small groups are great for children to learn, but they also need to be taught in a whole group. The students need to learn how to act, react, and participate in whole group discussion. This problem takes more learning time away from the class

as a whole and results in not getting through all of the materials. When the teacher does not have the resources to be able to teach every aspect that needs to be taught, the pupils miss gaps on their education and the opportunities for hands-on learning experiences. If the school lacks the supplies to provide these opportunities, then they miss out on a learning opportunity. These missed opportunities result in lack of knowledge and material and subsequent poor academic performance.

The development of each learner into an individual is also affected. This is because the lack of materials means that they are not getting the experience in knowing how to act in a correct classroom setting. They get bored to get down to the depths of it (Joe 2010). The pupils need school supplies in order to enrich their learning experience, and also in order to make sure they are getting the right learning experience. It would be good to have pupils who can do their multiplication, division, addition, and subtract, and also know how to use a calculator to find a logarithm. This means that teachers will be preparing pupils to be able to function in a modern world. So there is need to give teachers the equipment and supplies for them to do their best in educating pupils and their teaching effectiveness will definitely rise.

The findings also indicated that even the head teachers of special schools in Muchinga and Northern provinces complained that their members of staffs (teachers) face so many challenges when it comes to teaching hearing impaired pupils, and the main cause of this is that they lack teaching and learning materials, the pupils too do not have hearing aids devices, talking about the classrooms are not fit for pupils with hearing impairment because they are in a deplorable state such that teaching pupils from there has become very difficult . As if that is not enough, the numbers for members of staffs who are specialized in special education are very small. So, there are really serious challenges which needs quick attention if we are to improve the academic performance of the hearing impaired pupils.

The above findings are in consistent with the findings of Mafumbate (2019) her study who found that restrictive school environment robbed LWPHI equalized opportunities for meaningful participation in educational activities. Another study in line with these findings are that of Mtuli (2015) who found that the new system of inclusive education needs more innovation for preparing quality education to the hearing-impaired students of secondary schools. Furthermore, Mtuli also found that lack of qualified teachers of special education in sign language led to poor performance

for the hearing-impaired students in secondary schools, lack of in-service training for total communication for the new system of inclusive education as a set back to the hearing-impaired students' performance and lack of funds for implementing the curriculum at the school discouraged teachers of special education. 'Students with hearing impairments are placed in regular classrooms without special organization that can meet the needs of both groups of students, the regular classroom teacher teaches the inclusive class without sign language interpreter Getnet (2019) the communication challenge is more prevalent during English language classes especially, listening and speaking lessons.'

5.4 Measures that might be taken to address perceptions held on factors affecting academic performance among pupils with hearing impairment

From the findings, it is clear that the only solution to many challenges which have been reported is that Government and all the stake holders involved should give full support to the special schools and or Units where pupils with HIs go to. The same also goes to the stakeholders who are the parents of HI pupils, non-governmental organisations and other well-wishers to support the education of HI pupils by helping the pupils and also the special schools in Muchinga and Northern even the country at large. Some of the major things that should be worked on to address the established challenges infrastructure, teaching and learning materials and also assisting the pupils with hearing aids. Doing that then we will have eliminated the factors that are affecting the academic performance of pupils with hearing impairment. Teachers have been complaining about the infrastructure and materials for some time now but no one seems to be listening. They are affected and even the pupils are affected too. Head teachers have kept on encouraging teachers to do their best to use what they have to teach the pupils. This has been a very bad experience seemingly to the teachers and also the learners with HIs in the special and/or in inclusive schools in the country at large.

The findings from the head teachers showed that the governments' low funding of schools has resulted into schools not meeting even the basics needed for HI pupils to have a decent education. They cannot provide good teaching and learning materials such as computers and video systems. They suggest that if school can be getting reasonable funding, they can help improve infrastructure to meet the needs of HI pupils. It was further disclosed that they use the locally made teaching materials, some of the children do not show any interest in learning because they do not really

meet their needs to help them do better in their academic. In the best interest to help the pupils with HIs, teachers try to use their locally made materials in trying to help the hearing-impaired pupils to effectively teach. The teaching and learning materials are one of the most important things a teacher needs to consider before entering a classroom to teach especially for children with hearing impairment.

Learning for pupils with hearing impairment was an obstacle because they had problems in understanding instructions from teachers. It is very sad some teachers did not even know how to teach in sign language despite them being qualified special education teachers making it difficult for effective teaching and learning to take place. Worse still, some topics were difficult to understand in sign language especially that certain words are not available in most of sign language dictionaries.

Government and other stakeholders should work together in supporting the children with hearing impairments by funding construction of modern classrooms which will support the education, this will help to improve the learning environment for pupils with HI to help them relax and develop positivity about their academic achievements. It was also found that classrooms did not have proper windows and some of the classes didn't have enough desks for the pupils, the blackboard is not good, and the ceiling boards are missing which result into them getting some kind of feedback when teaching. With these conditions the teaching and learning process for hearing impaired pupils is made difficult. Pupils with hearing impairment cannot enjoy learning with the feedback as it confuses them. There is an agent need for this to be worked on almost in all the special schools across the country.

From the above comments, the researcher's point of view, it is clear that creating a good learning environment help children to concentrate on their tasks and improve their academic performance. Another thing that can be done to address the identified challenges and perception which teachers and pupils have is by reviewing the curriculum. The curriculum is prepared by the Ministry of Education, this curriculum is not inclusive in the manner it is prepared because it disadvantages other pupils who have hearing impairment due to the fact that no teaching and learning materials are provided to support the deliverance of the content in it. The curriculum developers should understand the fact that this curriculum is meant for all pupils, therefore, there is need to assess the availability of teaching and learning materials for other different disabled pupils. The situation

of pupils with hearing impairment is becoming worse because they lack a lot of basics for them to acquire the needed education. The study further revealed that there was need for teachers to modify pupils work in order to meet the syllabi outcomes. One way of doing this by teachers was sharing such ideals and skills during Continuous Professional Development (CPD) meetings as they focused on how best to handle pupils with HI. The study revealed that monitoring of teachers of hearing impairment pupils in schools must be strengthened in order to improve the quality of education especially for CSEN. It was found that teachers were not monitored regularly by Education Standards Officers (ESO). Thus, in order to improve the academic performance of pupils with hearing impairment, teachers should be monitored by their supervisors at; School, District, Provincial and National level at least every term.

The need for improving sign language skills for special education teachers offering lessons for the hearing impairment need to be underscored. The study revealed that there must be some preparations of programs for all pre-service special teachers to possess basic qualities of master teachers, who could also handle mathematics and other subject lessons. The research found that well trained instructors in sign language communicated well. Because they tended to demonstrate strong communication skill, employed cognitive strategies, were usually up-to-date, had a passion for teaching, worked collaboratively and created independent pupils.

There are few special education teachers employed that provide special needs education to the pupils with HIs. It was revealed that some of the teachers have a preconceived mind that pupils with HI are unteachable hence, resulting into many teachers not paying attention to these pupils. The findings show that there are few qualified and specialised teachers to teach sign language and the government should therefore, employ more special education teachers who are specialised in sign language to help improve the academic performance of pupils with HI. Schools have teachers who are not qualified to handle special pupils like those with HIs, because of that teachers end up ignoring such words, or finger spell them without providing their meaning, this makes the understanding of certain key concepts difficult for the hearing impaired pupils. These findings are substantiated by the findings of Musonda et al. (2017) who found that teachers teaching pupils with HI had limited skills in the correct mode of communication and so the teaching and learning processes were negatively affected, thereby leading to poor performance of the pupils in the final examination. In support with the above findings are the findings of Khomera et al.(2020) revealed

that students with special needs education are facing multiple challenges such as; shortage of hearing aids, communication barrier with the community surrounding the school, negative attitudes by the community, water supply problem, inadequate funding, abandonment by parents and relatives, shortage of teachers and the lack of transportation facility. Similarly, Sumbu (2018) to assess academic performance of pupils with hearing impairment in selected special primary school across five districts and found that the use of Kenyan sign language to instruct pupils with hearing impairment led to an improvement in their academic performance after the various other modes failed to meet communication needs of learners with hearing impairment.

5.5 Summary

This study has demonstrated the perception of teachers and pupils on factors affecting academic performance of pupils with hearing impairment in selected Special/Unit schools in Muchinga and Northern Province. There are some factors pupils and teachers believe are contributing to poor academic performance of pupils with HI. Some of them are; lack of competent teachers, lack of teaching and learning materials, poor infrastructure and teachers' preconceived mind that HI pupils are difficult to teach among others. Worse still, even the few available teachers are not supportive and lacked positive attitude on learners with Hearing Impairment. Appropriate materials and equipment such as hearing aid devices were lacking making learning of HI pupils difficult, and these resulted into these pupils not doing well in their academic performance.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.0 Overview

This chapter presents the conclusion and recommendation of the study on perception of teachers and pupils towards the factors that affect academic performance of learners with hearing impairment in selected special schools in Muchinga and Northern Provinces of Zambia. The conclusion and recommendations are in accordance with the research questions and findings of the study.

6.1 Conclusion

It is clear from the findings of this study that there are many perceptions towards factors that lead to poor academic performance among the pupils with hearing impairment in general. It has been found that these factors were that, most pupils' needs were not identified as teachers did not have good and consistent methodologies to identify such needs. Pupils with hearing impairment had challenges in acquiring academic skills, knowledge and concepts in their academic subjects and schools lacked trained teachers in special education. Furthermore, most of the teachers did not craft lesson targets to address the challenges faced by pupils with HI; instructional materials were not regularly used because of erratic funding which made the schools not to have enough teaching and learning materials. The learning environment was not conducive as the classrooms were not suitable for learners with HI. The study also established that, pupils with hearing impairment were affected negatively this is because some were labelled unteachable. Most of them failed national examinations and could not proceed to the next level. The study also unveiled measures that would help mitigate the problem once they are put in place and could improve the academic performance of pupils with hearing impairment. These measures were that, more special education teachers to be recruited. These teachers need to be trained and specialised in sign language for them to meet the needs of pupils with HI. Teachers need to be able to identify pupils' needs and set objectives to specifically address the challenges faced by these pupils. It is then important to consider instruction materials to be used and ensure that assessment is continued throughout the year alongside modification of the curriculum.

In this study, it has been found that teachers and pupils have similar negative perceptions towards factors that affect academic performance of learners with hearing impairment. Schools designated to host learners with hearing impairment are not adequately set for such pupils. On the broader

perspective of this study, teachers teaching pupils with hearing impairment are not well equipped with professional skills needed by pupils with such kind of disability (hearing impairment). Similarly, schools, particularly administrators have not taken keen interest to address challenges facing pupils with hearing impairment at school level in order to maximise their academic performance.

Above all, according to the instructional model of Frew et al. (2009) which guided this study states that identification of pupils needs assist in responding to the diverse needs of pupils with special needs. For example, when a child has a disability, the needs have to be identified and addressed through Individualised Education Program (IEP). If the needs are identified and addressed, the pupils' academic performance during formal and summative assessments will improve. According to the model, specification of appropriate objectives is one of the approaches and instructions to good teaching. This is so because they are the foundations at which teachers handling pupils with hearing impairment can use to build lessons and assessment of pupils and can prove to meet the overall course or lesson goal. If the objectives are not set according to the needs of the learners as advised by this model, then academic performance of learners with hearing impairment can be affected negatively.

Further, the curriculum content has to match with the pupils' capabilities in order to enable the learners with hearing impairment to improve their academic performance at all levels. If the curriculum is designed in the manner that it accommodates all kind of the learners including the HI, then it can be of beneficial and progressive on the part of both the learners and the teachers. The model also talks about instructional materials, any resource a teacher uses to help teach pupils for example, charts, atlases, work sheets, textbooks. All instructional materials used by teachers when teaching pupils with hearing impairment should be appropriately related to the learning objectives for each lesson and this will also determine the level of performance on a given assessment to these pupils.

Hearing impaired pupils experience a numerous of barriers in their educational journey to attain their achievement. The study established various factors the HI pupils and also face especially in inclusive education settings. There have been factors linked to the lecture method of teaching and examinations where speech, the expression of ideas and thought and time allocated during examinations for the students have been a challenge. Sign language interpreters seemed to have played a big role in the learning outcomes of the HI pupils in their academic performance. The hearing impaired students felt that the institution had not provided the adequate resources and infrastructure outlined in the institution's disability policy to wholesomely cater for accommodations which would ease their learning experience.

It is evident from the study that teachers and pupils have varied perceptions – positive and negative on factors seem to have led to poor academic performance among the pupils with hearing impairment in the study Schools / Units. These range from shortage of teaching and learning materials, inability to effectively use sign language by teachers to effectively teach, limited learning resources, clouded school curriculum, lack of hearing devices, shortage of special education teachers, and lack of infrastructure both classrooms and desks. As a result different perceptions held by teachers and pupils over factors affecting academic performance of pupils with HI seem to contribute to low academic success and more inclusive learning settings to take place coupled with the shortage of teaching and learning materials, and sign language teacher.

6.2 Recommendations

Basing on the study findings the following recommendations have been made:

1. Schools that host learners with hearing impairment should work to uplift self-esteem of pupils in order to assist them excel in academic performance.
1. Teachers should avoid having a preconceived negative attitude towards learners with hearing impairment.
2. To improve the academic performance, the Ministry of Education should modify the curriculum to suit the learners with hearing impairment.
3. School administration should improve the learning environment for pupils with hearing impairment by securing appropriate teaching/learning materials.
4. In order to address the challenges, the government through the Ministry of Education should

train more teachers in sign language and that only specialized teachers in sign language should be deployed in classrooms for the hearing impaired learners.

5. The special teachers in collaboration with school management should ensure that they have more contact with hearing impairment pupils so that the syllabus content can be covered adequately.

6.2 Future Research

A research on communication mode during the teaching and learning process of pupils with hearing impairment would be significant in order to establish the challenges that affect pupils' assimilation of certain concepts during learning. The research should be conducted nation-wide.

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APPENDICES

Appendix 1: Letters


THE UNIVERSITY OF ZAMBIA
SCHOOL OF EDUCATION

Telephone: 291381
Telegram: UNZA, LUSAKA
Telex: UNZALU ZA 44370

PO Box 32379
Lusaka, Zambia
Fax: +260-1-293702

Date: 11-02-2020

TO WHOM IT MAY CONCERN

Dear Sir/Madam


RE: FIELD WORK FOR MASTERS/ PhD STUDENTS


The bearer of this letter M/Ms. MUMISA DENNIS..... Computer number 2018248049..... is a duly registered student at the University of Zambia, School of Education.

He/She is taking a Masters/PhD programme in Education. The programme has a fieldwork component which he/she has to complete

We shall greatly appreciate if the necessary assistance is rendered to him/her!

Yours faithfully


B. Kalinde (Dr)
ASSISTANT DEAN POSTGRADUATE STUDIES- SCHOOL OF EDUCATION


THE UNIVERSITY OF ZAMBIA
ASSISTANT DEAN (PGS)
11 FEB 2020
SCHOOL OF EDUCATION
P.O. BOX 32379, LUSAKA

cc: Dean-Education
Director-DROS



ALL CORRESPONDENCES SHOULD BE ADDRESSED TO
THE DISTRICT EDUCATION BOARD SECRETARY

IN REPLY PLEASE QUOTE

REPUBLIC OF ZAMBIA
MINISTRY OF GENERAL EDUCATION
DISTRICT EDUCATION BOARD OFFICE
P.O. BOX 450144
MPIKA

11th March 2020

The Head teacher
Musakanya Combined School
Mpika.

Dear Sir/Madam,

RE: AUTHORIZATION LETTER OF FIELD WORK FOR MASTERS-MUMBA DENNIS

The bearer of this letter wishes to conduct his field work at your school. His computer number is **2018248049**, duly registered as a student at the University of Zambia, school of education.

He is currently, taking a masters programme in Education. The programme has a field component which he has to complete.

We shall sincerely appreciate if you render to him the required assistance.

Faithfully yours,



CHIBUYE DURHAM

ESO Gt for

A. P. Bwalya (Mrs)
District Education Board Secretary
MPIKA DISTRICT

APPENDIX 2: Focus Group Discussion Guide for Pupils With Hearing Impairment

Dear participants, I am a student from the University of Zambia studying Master of Educational Psychology in the school of education. This interview guide seeks to obtain information on the perceptions of teachers and pupils on factors affecting academic performance of pupils with hearing impairment. I assure you that this information you are giving me is for academic use only and the findings will be communicated to you, your identities (names) will not be disclosed so you have to be free. You are free to stop the interview at any time you feel like doing so.

Perceptions of teachers and pupils on factors affecting academic performance of pupils with hearing impairment

1. What are the factors that affect your academic performance?
2. How do you perceive these factors you have mentioned above?
3. What is your attitude towards the factors that affect your academic performance?
4. How do you think these factors come about in between you and your education?
5. Are there other reasons you think are contributing to your poor academic performance?
6. Would you tell me how your experience has been as a hearing impaired pupil in class and outside?
7. Would you tell me how teachers treat you when teaching in class?

Challenges teachers face when teaching learners with hearing impairment

8. Would you say teachers have challenges in teaching you? If yes, state.
9. What teaching and learning materials do teachers use when teaching?
10. How do teachers communicate with you in class when teaching?
11. What materials do teachers to explain concepts when teaching?
12. How do teachers help you understand concepts when teaching in class?

Measures that can be put in place to address challenges teachers face when teaching learners with hearing impairment

- 12.1 What do you think should be done to address your perception towards the factors that affect your academic performance?

13. How best do you think you can learn different concepts in different subjects?
14. What do you think should be done to reduce the difficulties you face when learning these subjects?
15. What should the government do in helping to address your perception towards the factors that affect your academic performance?

THANK YOU FOR PARTICIPATING!

APPENDIX 3: Interview Guide for Teachers of Learners with Hearing Impairments

Dear participants, I am a student from the University of Zambia studying Master of Educational Psychology in the school of education. This interview guide seeks to obtain information on the perception of pupils towards the factors that affect academic performance of learners with hearing impairment. I want to assure you that this information you are giving me is for academic use only and the findings will be communicated to you, your identities (names) will not be disclosed so you have to be free. You are free to stop the interview at any time you feel like doing so.

Perception of teachers towards the factors that affect academic performance of learners with hearing impairment

- 1.What are the factors that affect academic performance?
- 2.How do you perceive these factors you have mentioned above?
- 3.What is your attitude towards the factors that affect academic performance of learners with hearing impairment?
- 4.How do you think these factors come about in learners' education?
- 5.Are there other reasons you think are contributing to learners with hearing impairment' poor academic performance?
- 6.Would you tell me how your experience has been as a teacher of learners with hearing impairment?
- 7.Would you tell me how learners respond when teaching in class?

Challenges teachers face when teaching learners with hearing impairment

- 8.Would you say you have challenges in teaching learners with hearing impairment? If yes, state.
- 9.What teaching and learning materials do you use when teaching learners with hearing impairment?
- 10.How do you communicate with your learners of hearing impairment in class when teaching them?

11.What materials do you use to explain concepts when teaching?

12.How do you help learners to understand concepts when teaching in class?

Measures that can be put in place to address the perception of teachers and pupils towards the factors that affect academic performance of learners with hearing impairment

13.What do you think should be done to address the perception towards the factors that affect academic performance of learners with hearing impairment?

14.How best do you think you can teach different concepts in different subjects?

15.What do you think should be done to reduce the difficulties you face when learning these subjects?

16.What should the government do in helping to address the perception towards the factors that affect academic performance of learners with hearing impairment?

THANK YOU FOR PARTICIPATING!

Appendix 4: Classroom observation checklist

1. Preferred mode of communication.
2. Teachers' competency in using the preferred mode of communication.
3. Teacher's ability to explain concepts clearly to the pupils using sign language.
4. Teacher's ability to complete the planned content within the stipulated time.
5. The usage of instructional materials in delivering the lessons for example, books, charts and many more.
6. Whether methods used effectively help the teacher to cover the content adequately.
7. Is the time allocated to the subject adequately to cover the syllabus content?
8. Are pupils interested in the lessons?
9. The pupils' ability to respond to teacher's question

Appendix 5: Guiding Matrix for Document Analysis

DOCUMENT	INFORMATION
School academic records	Mean scores attained in final exams and continuous tests Highest scores attained by pupils overall and in individual subjects Highest achieved marks by individual pupils Position held by school in ranking
Schemes of work	Adaptations made in planning teaching Duration of class hours Curriculum content
Syllabi	Curriculum Content Number of subjects to be covered
Fee Payment Records	Fee arrears, Time taken to pay fees
Admission records	Number of deaf pupils admitted in school each year Number of pupils who complete primary/junior secondary school education Number of school drop outs Government policy on admission Teacher-pupil Ratio