

**Investigating access to education for learners with hearing
impairment at secondary schools.**

By

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CERTIFICATION

This to certify that this dissertation has been read and approved as having met the requirements of the Faculty of Education, the National University of Lesotho, for the award of the degree of Master of Education.

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DECLARATION

I, Hopolang Lehloa, declare that the research reported in this dissertation, except where otherwise indicated, is my original work, and has not been submitted for any degree or examination at any other university.

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ACRONYMS

ASL	American Sign Language
IE	Inclusive Education
KSDC	Kenya Society for Deaf Children
IDEA	Individuals with Disabilities Education
LSL	Lesotho Sign Language
MOET	Ministry of Education and Training
NPE	National Policy of Education
NCLB	No Child Left Behind
NNPE	Nigerian National Policy of education
SL	Sign Language
SINTEF	Stiftelsen for Industriell og Teknisk Forskning
TC	Total Communication
UD	Universal Design
UDL	Universal Design to Learning
UNESCO	United Nations Educations Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund

ABSTRACT

The study investigated the access to education for learners with hearing impairments. As such, a qualitative methodology was employed in the conduction of the study. The study was developed using the interpretivist paradigm. In that regard, purposeful sampling was considered in selecting the participants, and, data were collected using questionnaires and semi-structured interviews methods. The findings were presented in words, based on content analysis and interpreted within the theoretical framework of the study.

The study uses sociocultural theory which emphasises the importance of language, society and culture for child cognitive development. The theory further notes that, learners with special needs need to be viewed positively and be treated as normal people. The study has explored education and its access in general as well as its access to learners with hearing impairment. The study has further discussed assessment of learners with hearing impairment along with the strategies used so as to improve their access to the general curriculum.

The study has revealed that learners with hearing impairment seem to cope at school. Besides, they feel accommodated, as the presence of sign language interpreters and the use of sign language on the school campus makes their learning possible. The data also reveal that sign language interpreters feel capable of helping learners. However, they pointed out the need for their training for specialization, and the need for the school to have many interpreters so that they can have some time off from classes to plan for their lessons. The study further indicates that teachers feel they accommodate learners as the presence of sign language interpreters makes their work easy. On the other hand, teachers show that learner-centered teaching methods are effective in teaching learners with hearing impairment. However, in using such teaching methods, they encounter a challenge in time management and unsuitable resources. The study has found that there is a need for training sign language interpreters and a clear policy on inclusive education.

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CHAPTER ONE: AN OVERVIEW OF THE STUDY

1.1 INTRODUCTION

This chapter presents the background to the study and the problem statement of the study. It presents the research aim, the objectives and research questions of the study. It also explains the rationale as well as theoretical framework for the study. Finally, the layout of chapters for this study is presented followed by a summary of the chapter.

1.2 BACKGROUND TO THE STUDY

Helping learners with a hearing impairment to acquire knowledge and skills needs survival in the adult world. Such skills require the education system designed to create support mechanisms for curricula accessibility beyond efforts made in teaching any ordinary curricula. This has brought forward the concept of inclusive education. According to UNESCO (2005, p. 9), Inclusive Education (IE) originates in Special Education (SE) which “involved a series of stages during which education systems explored different ways of responding to learners with disabilities, and those who experience difficulties in learning.” According to the UNESCO (2005), Special Education started as a supplement to general education provision, with its practices being moved into the mainstream through an approach known as integration. Integrating learners with disabilities into mainstream schools was not accompanied by necessary changes in the organisation of the ordinary school, its curriculum as well as the teaching and learning strategies (UNESCO, 2005). As such, this lack of organisational change proved to be one of the major barriers to the implementation of inclusive education policies.

Inclusive education (IE) and its principles were developed for the world through international standards such the Salamanca Statement (UNESCO, 1994) and, as an approach IE is becoming dominant in relation to education across the world (Tellah, 2015). The UNESCO (1994) states that enabling all children to learn together, wherever possible regardless of any difficulties or differences provides a great platform for cognitive and psychosocial development. Thus, many developed and developing countries have accepted IE as an educational approach to learners with barriers to learning (Prinsloo, 2001). In the same vein, Estell (2009) argues that this is done because inclusive settings create an opportunity for learners with special needs for appropriate peer modelling and acquiring skills needed to engage collaboratively with all learners. The UNESCO (1994) further states that inclusive schools should not only know, but they should

also respond to the diverse needs of learners, use different styles and rates of learning and, ensure quality education to all through appropriate curricula, organisational arrangements, teaching strategies as well as using available resources.

1.2.1 Access to Education for Learners with Hearing Impairments: A Global View

Although inclusive education advocates education for all, access to education for learners with hearing impairment has faced some challenges. The qualitative study conducted in Zambia by Mildred and Mulondo (2013) indicates that 8.8 per cent of the hearing impaired population have never been exposed to formal school, 65.5 per cent had completed primary school, and 24.1 per cent had completed secondary school, while 8 per cent had gone through tertiary education. Mildred and Molonda (2013) further note that many teachers claim to have insufficient sign language materials. Moreover, inaccessibility of teaching and learning resources seem to be a challenge in teaching learners with hearing impairments making them drop out of the education system, in this case sign language interpreters, videos and notes writers.

In a similar case, Pakata (2015) indicates that the Kenya Society for Deaf Children (KSDC) is dissatisfied about classroom teachers 'poor communication skills, which lead to deaf learners performing poorly in the national examinations level; as a result, learners with a hearing impairment had a high school drop-out rate, especially from in Class 8, which could be explained by the inappropriate curriculum and poor methods of instruction used. Bell, Carl and Swart (2016) also indicate that, a growing number of students with hearing loss are being granted access to higher education in South Africa due to the adoption of inclusive educational policies. However, their participation in higher education remains low, and research suggests that support for those who do gain access is inadequate.

One would ask whether there are expectations for deaf learners to perform the same way as other students when there are insufficient materials for their learning. The study by Powell (2014) which covers experiences of learners in the United States, United Kingdom and Australia, notes that learners with hearing impairments have learning and participation problems in the curriculum on an equitable manner. For example, in their attempt to participate in the classroom they face mockery, with classes having no accommodative teaching and learning resources such as video recorders to help them in class participation. Similarly, Demissie (2011) argues that hearing impaired child who attended schools face some challenges because the use of sign

language was discouraged in most educational institutions for many years. The hearing-impaired people have been forced to use other languages than their mother tongue to acquire knowledge and pursue formal education.

One critical need for learners with a hearing impairment to access education is the use of sign language as their medium of instruction. Mildred and Mulonda (2013, p. 74) found that sign language as a language used by learners with hearing impairment in the learning environment has some shortcomings that hinder their learning progress. First, sentences in deaf language are constructed in a shallow way which does not give such learners a full exposure of the use of the spoken languages used as media of instruction at schools. Second, normal teachers and students, that is those without any disabilities, lack the ability to read and understand sign language materials. As a result, it requires both the teachers as well as other learners to have exposure to sign language so that learners with a hearing impairment are assisted towards curriculum acquisition. Third, sign language has limited vocabulary which makes learning certain subjects such as Science, Mathematics and Computer Science problematic to learners with hearing impairments.

Consequently, the teaching and learning process for these learners becomes a challenge. Arguing on the same point Marscark and Convertino (2008, p. 2) discussed the need for high quality sign language interpreting in settings which include learners with a hearing impairment. Marscark and Convertino (2008) add that having an interpreter in the classroom does not guarantee full access to instruction; difficulties associated with learning via sign language interpreting involve students' inability to attend to two different sources of visual information, classroom pacing situations of unqualified interpreters being confronted by the multiple conversations and interruptions natural to large mainstream classes.

In the context of Africa, by Storbeck's (1990, p.29) study reveals that there is insufficient training of teachers for including learners with hearing impairment. Teachers of learners with hearing impairment were not required to have specialised teacher training and were employed at schools unaware of issues such as deaf culture, sign language, cognitive and linguistic development of the hearing impaired students. Further, in Zambia Mildred and Mulondo (2013,p.70) claim that graduates from the training institutions join the teaching service with very limited skills in sign language and general interaction with learners with hearing impairment,

they lack both the linguistic and communicative competence in sign language required to effectively teach learners with hearing impairment.

Curriculum is yet another factor that influences the performance of learners with a hearing impairment. Mildred and Mulonda (2013,p.75) suggest certain adaptations to an ordinary curriculum such as removing certain topics like sound in science, because such learners cannot hear sounds; modifying the syllabus has also been seen as critical so as to suit the hearing-impaired learners. Regionally and internationally, countries pride on creating policies to facilitate access to education for learners with disabilities. For example, the Nigerian National Policy of Education (NPE, 1981, 2003 & 2004) states that education is a right of every citizen. To that affect, the federal government established schools to cater for the educational needs of individuals with special needs from pre-primary to tertiary levels. In terms of placement for these individuals, the policy states that placing students with disabilities at regular schools is the most realistic form of special education. This Nigerian National Policy of education (NPE 1981, 2003, 2004) initiatives concur with Salamanca's Statement (1994) which mandates national governments to create schools at which children should learn together regardless of their difficulties and differences.

Similarly, one of the features of the American Public Law 94-142, as stated by Kirk and Gallagher (1989), is that persons with disabilities should be educated in the least restrictive environment. South Africa is not an exception in driving towards inclusive education as the South African Educational Act of 2014 states that public schools should admit learners and serve their educational requirements without any unfair discrimination. The Act states that 'where reasonably practicable', the state must provide education for children with special needs at ordinary public schools and provide relevant educational support services for such learners. Furthermore, public schools should take all reasonable measures to ensure access to the physical facilities by disabled persons.

On the similar case in Brazil, The Basic National Educational Guidelines - Lei de Diretrizes e Bases da Educação National- LDB, Act Nr. 4.024/61, have granted the "exceptional students" the right to education, stating in Article 88 that in order to integrate those students in the community, they should be placed, as much as possible, in the mainstream educational system. It is understood that in this mainstream system both would be included, the regular educational

services and the special ones, but it can also be understood that when the education of students with disabilities does not fit the mainstream educational system, a special system should be created, becoming a separate sub-system.

1.2.2 Access to Education for Learners with Hearing Impairment in Lesotho

Lesotho, like any other country, is not an exception in working toward inclusive education. The Education Sector Strategic Plan (2005-2015) stresses the idea of equality which emphasizes the need to ensure that distribution and utilization of opportunities in education would be fairly targeted in order to reach the disadvantaged groups in society (Ministry of Education and Training, 2005). The target calls for specific measures and explicit strategies in favour of groups, which had not fully participated in the education involving people with different learning needs.

In order to make inclusive education a success, policies have been enacted which mandate education of learners with learning needs. The Curriculum and Assessment Policy recognises the pluralism of the Basotho nation and the existence of other languages besides the two official languages. Those are Sesotho and English, and the framework asserts that mother tongue will be used as a medium of instruction up to Class 3. However, English will be taught as a subject at this and other levels. It goes further to indicate that sign language shall also form part of the new language.

Despite the call for inclusive education, access to education for learners with hearing impairment in Lesotho still faces challenges that hinder educational progress of learners with a hearing impairment. This is seen in some studies which show failure to implement inclusive education for learners with a hearing impairment. Mosia (2014) states that inclusive education in Lesotho faces several threats such as poor perception of inclusive education, slow policy developments on special education and poor development of education resources to allow inclusive education. In addition to that teachers are not willing to go an extra mile (Lehohla & Hlalele, 2012). Inclusive education necessitates new roles and responsibilities for teachers. A teacher has to take the responsibility that all the learners are included in his teaching; the class has to change so that all learners are accommodated.

According to the Ministry of Development and Planning (2013,p.308), the government of Lesotho strives to provide all citizens with education to meet the country's development aspiration despite a challenge of insufficient resources such as video, sign interpreters and

trained teachers. On that note Shelile and Hlalele (2014) argue that teachers are most valuable resources to make education of learners with special educational needs a success and should be trained to teach effectively in a classroom of learners with different learning needs. The insufficient resources make implementing the policy of universal access to education difficult. As such, Shelile and Hlalele (2014) indicate that the Ministry of Education and Training fails to conduct continuous professional training for teachers due to inadequate human resources, lack of funding for continuous professional teacher training and work overload for available staff, amongst others.

Apparently, learners with a hearing impairment face challenges in accessing education. Matlosa (2012) reveals that teacher's inability to use Lesotho sign language. (LSL) has hampered learning and acquiring literacy skills for learners with a hearing impairment. For Matlosa (2012), a lack of sign language (SL) exposure for learners with a hearing impairment constrains progress in the literary; as such, few qualified teachers with training from other countries were not fluent. Therefore, such teachers could not express themselves sufficiently using Lesotho sign language. This study explores curriculum accessibility for learners with hearing impairments within Lesotho education system as its gap.

1.3 THE PROBLEM STATEMENT

The Stiftelsen's Industriell of Teknisk Forsking (SINTEF) (2010) report shows that there are challenges if the number of learners with disabilities drops as they progress across levels in their studies. About 21.5 per cent acquired preschool compared to 96.3 per cent who completed primary school, and 23.3 per cent finished secondary school education. For the most part, access declines as they move to secondary education. Lesotho (2006) census report indicates that, there were 9644 people with hearing impairment at the time and out of this number, 28.2 per cent had never been to school, 63.4per cent had acquired primary education, 10.3 per cent had gone through secondary education while 3.4percent have gain tertiary qualification and 10.4percent has other qualifications (The Ministry of Finance and Development Planning 2009). According to the medium-term survey report of the Ministry of Development Planning (2013) 8372 among people living with a hearing impairment, 14.9 per cent has gone to preschool, 19.3 per cent has primary school, 12.9 per cent has secondary school, and 5.1percent has tertiary education and, 6.9 has other qualifications. The current Lesotho census report (2018) compared to the previous

reports has not specified data by the disability but has generalised. It shows that 58 per cent of people with disability at least attended primary while 17 per cent of them have never been at school. The high drop-out rate in number as learners progressing through their studies is a cause for concern hence the need for the current study to explore challenges faced by the learners in accessing education and progressing with their studies.

1.4 THE PURPOSE OF THE STUDY

This study aims to explore access to education for learners with a hearing impairment at the basic education level.

1.4.1 Objectives

- a) To describe how teachers and sign language interpreters perceive their efficiency in using Lesotho Sign Language as a medium of instruction to educate learners with a hearing impairment.
- b) To explore the challenges facing teachers and sign language interpreters in teaching learners with hearing impairment.
- c) To explore how learners with a hearing impairment perceive their access to education at their schools.
- d) To suggest strategies that would address challenges of delivering curricula to learners with a hearing impairment.
- e) To explore career choices suitable for learners with a hearing impairment.

1.4.2 Research Questions

How accessible is education for learners with a hearing impairment at the basic education level?

- a) How do teachers and sign language interpreters perceive their efficiency in using Lesotho Sign Language as medium of instruction for learners with hearing impairment?
- b) What are the challenges facing teachers and sign language interpreters in teaching learners with a hearing impairment?
 - c) How do learners with a hearing impairment perceive their access to education at their schools?
 - d) How could teachers and sign language interpreters facilitate education accessibility for learners with a hearing impairment?

e) What career choices can best suit learners with a hearing impairment?

1.5 THE RATIONALE

This study intends to bring a positive change in terms of improving access to education for learners with a hearing impairment as well as in such a way as to make sign language include Lesotho Sign Language users productively in Lesotho education system. The findings from the study would inform policy and practice on how to use LSL for teaching and learning.

1.6 THEORETICAL FRAMEWORK

This study adopted sociocultural theory as its lens. The theory views how the society uses language as a vehicle to build child's thinking skills, thereby emphasising the importance of society and culture for promoting cognitive development. Viewing learning as occurring first in a society which has its specific norms or a way of doing things, Vygotsky (1979) believed that adults foster children's cognitive development by engaging them in challenging and meaningful activities through the use of language in a society. As Wang (2009) states, the theory explains the relationship between language learning and use and cognitive development of children. Wang (2009) sees cognitive development as a course of social interaction. As such, in order for children to develop cognitively, they need gradual assistance and guidance from an adult in society to prompt cognitive development. Therefore, a zone of proximal development of a child expands. Furthermore, the society that does not expose a child to social interaction leads to unfavourable development of cognitive ability. Wang (2009) argues that in order for one to assess cognitive development of a child, there should be a consistent interactional process giving a true identification of the real potential of a child; cognitive assessment not only finds out a child's initial learning level, but it also pays attention to the level of improvement a child gains from the teaching.

Addressing the role of language and society, the theory emphasises the importance of society in a child's development. According to Steiner and Mahn (2009), human development starts with dependence on caregivers, that is, the developing individual relies on the vast pool of transmitted experiences of others. Vygotsky's (1978) genetic law of development, emphasised the primacy of social interaction in human development, stating that every function in the cultural development of the child comes on the stage twice: first, in the social; later in the psychological; second, in relations between people as an interpsychological category, and afterwards, within the

child as an intra-psychological category. In this view, all higher psychological functions are internalised relationships of the social kind and constitute the social structure of personality.

Learning first occurs at home where it happens socially as a child hears and sees adults talking and doing some activities and, learns through imitations. According to Kozulin, Gindis, Ageyev and Miller (2003), through the mediation of others and adults, the child undertakes activities, since absolutely everything in the behaviour of the child is merged and rooted in social relations. Thus, the child's relations with reality are from the start social relations, so that the new-born baby could be said to be in the highest degree a social being. However, according to Ghaari (2016.p 1), ‘

The quality of parents communication and their attitudes towards deafness may be considered as the most important factor in the social development of deaf children, parents who are more accepting and positive towards their children's deafness are more flexible and seek effective paths of communication as language is essential to brain functions such as abstract thinking, memory and self-awareness.”This in return, results in a huge linguistic failure since adults cannot assess the linguistic growth of hearing impairment child. This denies them a chance for cognitive development.

1.7 RESEARCH DESIGN AND METHODOLOGY

This section explains research paradigm, approach, design and methods of data collection and analysis as well as ethical issues addressed by the study.

1.7.1 Research Paradigm

The study was guided by the interpretivist paradigm. According to Cohen (2007), interpretivism is about understanding and interpreting the world in terms of its actors. Furthermore, the paradigm allows the researcher to think from an inductive point of view. Adding to that, Creswell (2009) argues that research work is guided by an inductive thinking the researcher process from specificity to generality. For Crabtree and Miller (1999), an interpretive perspective means the study accepts people's lived reality as true account of life. Therefore, it will devise ways of collecting their unbiased true essence of life. Denzin and Lincoln (2005) view an interpretative research as recognising the importance of the subjective human creation of meaning, without necessarily rejecting outright some notions of objectivity. “People are not

passive followers in social, political and historical happenings but possess the inner capacity which allows individual judgement, perceptions and agency” (Coetzee 2011, p. 68). In this case the paradigm allows a researcher to accommodate opinions from teachers, learners with a hearing impairment and sign language interpreters. The paradigm interprets what is being communicated by all participants, and allows different opinions worth considering in undertaking this study.

1.7.2 Research Approach

This study adopts a qualitative research approach. Singh (2006) states that qualitative approach attempts to gain an understanding of the underlying reasons and motivations for actions, establishing how people interpret their experiences and the world around them and providing insights into the setting of a problem. Qualitative approach procedures rely on text and image data, with the researcher collecting data through examining documents, observing behaviour or interviewing participants (Creswell, 2009). Qualitative research is inductive, subjective and contextual, in nature and, it offers an opportunity to capture the unique experiences and beliefs of participants in their interaction with their context (Morgan, 2014). For Merriam (2002, p. 178), qualitative approach strategy is inductive, with descriptive outcomes and a mediated meaning is through the researcher as an instrument. Denzil and Lincoln (2003) see qualitative research as a mainly situated activity which locates the observer in the world and consisting of interpretive practices which render the world visible. Adopting interviews, this study used the qualitative approach to gather information on the participants’ perceptions on how learners with a hearing impairment access education.

1.7.3 Research Design

The current study aims at investigating education accessibility for learners with hearing impairment. As such, the study adopted a case study as it can best explain and give an insight lived realities of teachers ,sign language interpreters as well as learners with hearing impairment in relation to access to education for learners with hearing impairment. Kothari (2004) defined case study as a decision regarding what, where, when and how much by what means concerning an inquiry. According to Kumar (2011), a case study is a useful research design that is used when people explore an area where their knowledge is very limited or where they want to have a brought understanding of the situation, phenomenon, episode, group or community. Kumar

(2011) continues to say that this design is most relevant when the focus of a study is on exploring and understanding rather than confirming and quantifying. According to Smith (1995), a case study is an investigation and analysis of a single or collective case aimed at capturing the complexity of the object of the study.

A case study design is considered when (a) the focus of the study is to answer: how and why” questions, (b) when one cannot manipulate the behaviour of people involved in the study, when one wants to cover contextual conditions because he or she believes that they are relevant to the phenomenon under investigation and (d) when the boundaries are not clear between the phenomenon and context (Yin, p.18). The aim of the study is not to confirm but to explore for deep understanding of education of learners with hearing impairment. Therefore, a case study is adopted. The data for this study were collected from a high school that admits and accommodates learners with a hearing impairment.

1.7.4 Selection of the Participants

This study adopted purposive sampling. Patton (2002) defines purposive sampling as a non-probability sampling where a researcher relies on the experiences of the units of analysis in such a manner that the participants identified provided data required to address the problem of the study. Purposive sampling is a technique mostly used in qualitative research for the identification and selection of information-rich cases for the most effective use of limited resources (Palys, 2008). The study identified three teachers, 15 learners with a hearing impairment and three sign language interpreters as participants.

1.7.5 Data Collection

Data for this study were collected through semi-structured interviews with teachers and sign language interpreters which involved an interviewer reading questions to respondents and recording their answers (Kumar, 2011). The data were also collected through a questionnaire with open-ended items for learners with hearing impairment. The latter method, which involves a written list of questions the answers to which are recorded by respondents (Kumar, 2011) was used because the researcher is not competent with sign language and could not communicate with the learners.

1.7.6 Data Analysis

The data were analysed through the use content analysis. According to Elo and Kynga (2007), content analysis can be undertaken with any written material from documents to interview transcriptions, from the media products to personal interviews. It is often used to analyse large quantities of text, facilitated by the systematic, rule-governed nature of content analysis, not least because this enables computer assisted analysis to be undertaken (Elo & Kynga, 2007). In this case, since the study has used questionnaires and interviews as the tools for data collection, content analysis was suitable as it deals with data collected by interviews and questionnaires.

1.7.7 Trustworthiness

Trustworthiness is one principle that this study considered seriously to give it credibility. The trustworthiness principles were checked through crystallization which, according to Polsa (2012), is a means to achieve quality in research. Polsa (2012) further views the qualitative management researcher as allowing multiple voices to be heard. Connelly (2016) explains components of trustworthiness that were checked through crystallisation as follows: conformability as the degree of consistent findings of study and transferability as the extent to which findings can be useful to other people in other settings and for different researchers. Dependability is the stability of the data over time and condition of the study, while credibility is the confidence in the truth of the study.

1.7.8 Ethical Considerations

Orb, Eisenhauer and Wynaden (2001) see ethical issues as present in any kind of research. In this view, harm can be prevented by applying the appropriate ethical principles. This study observed the following ethical considerations informed consent, confidentiality, honesty, beneficence as well as caring and fairness. Cohen (2007, p. 630) states that ethics are said to be a set of moral principles which motivate a researcher to undertake research. Rakotsoane (2012, p. 73) states that when research process and data collection techniques are developed, the researcher should consider whether the research procedures are likely to cause any physical or emotional harm to the participants. The study was done ethically and permission was sought from relevant authorities, and it ensured that those selected participated willingly, were not exposed to any harm, and information gathered has been kept confidentially and shared anonymously in the study.

1.8 THE STRUCTURE OF THE STUDY

The study is presented into five chapters that are organised as follows, chapter one, which covers background, problem statement, the objectives, the research question as well as the rationale behind the conduction of the study. Chapter two, reviews the theoretical frame work under which the study was based, as well as the literature review. Chapter three, presents the research design and methodology which discusses the research design and approach adopted for the study. Next, it explains the sampling process and participant selection, followed by discussion of methods of data collection and analysis, and lastly it discusses the integrity of the study. While chapter four examine analysis and presentation of the collected data, and, lastly discussion, conclusion recommendation and limitation of the study are presented in chapter five.

CHAPTER TWO: PERSPECTIVES ON THE EDUCATION FOR LEARNERS WITH HEARING IMPAIRMENT

2.1 INTRODUCTION

The first section of this chapter discusses the sociocultural theory. The chapter also explains the development of child's cognitive abilities in relation to the use of language. It emphasises the importance of society in the development of a child. Society is viewed as giving children an opportunity to explore their world resulting in better cognitive development. The second section of the chapter discusses literature on access to education for learners with a hearing impairment. It first describes how access to inclusive education should be understood, thus explaining how the education of learners with hearing impairment is facilitated, globally and within Lesotho. Then the section focuses on strategies used by teachers to support learners and reflects on availability of resources for teaching and learning of such learners. Lastly, the chapter looks at challenges facing transition and a career design for learners with a hearing impairment.

2.2 SOCIOCULTURAL THEORY ON HUMAN DEVELOPMENT

While Piaget views development as starting from within manifesting outwardly, Vygotsky views human development as an outside-in process with society and language as its instrument, playing the key role (Donald, Lazarus & Lolwana, 2010). The theory emphasises the importance of both society and culture for promoting cognitive development (Wang, 2009). According to Shabani (1990), the sociocultural theory attempts to account for the process through which learning and development take place; cognitive development is seen not as unfolding in a biologically driven sequence, but as emerging as a result of interactions within a cultural and historical context. The theory examines the role of language in a child's thinking and development of a mental faculty. Central to the theory is the way the specific context influences a child's development. Thus, this study is concerned with how sign language affects access to education for learners with hearing impairment. This study uses Vygotsky's sociocultural theory to describe how lack of external stimulation for learners with a hearing impairment may negatively affect their growth and development.

2.2.1 Social Constructivism and Learning

Society is crucial for the upbringing of children, thus helping children with schooling in a formal setting. Learning is thus made easy by the skills and knowledge a child gathers from the society before going to school. Social constructivism posits that learners' construction of knowledge is the product of social interaction, interpretation and understanding (Vygotsky, 1962). Bevevino, Dengel and Adams (1999) see teachers as making learning meaningful as in activities which call on students to use their prior knowledge and experiences to construct their own frames of thought. From this, it could be stated that society plays an important role in the development of a child as it provides a child with prior knowledge which a child will display in a formal setting. Therefore, in an attempt to make learning meaningful, teachers might fail since learners with a hearing impairment are not fully exposed to social activities which in this case can be considered as their prior knowledge.

Cognitive development happens in a dynamic way and becomes more complex through the assistance of mature members of society. Wayne (2007) states when children receive instruction in a system of knowledge they learn of things that are not before their eyes, nor within their reach or even their immediate experience. From this, it could be argued that socialisation a child gains from the society helps them to develop and construct meaning. Wayne (2007) argues that concepts learned within a scientific system allow people to perceive things, which they cannot necessarily see before in the immediacy of their everyday lives. So, for a hearing impairment learners, the problem normally becomes the mode of teaching. Teaching is done in a language that they access through a sign language interpreter. As a result, they may not acquire the intended message, which might lead to their poor performance.

For a child, who socialises in society, construction of new knowledge is easy because society is the first place for learning. According to Adams (2006), the social constructivist development theory gives the ability to learn new things and see things differently and conceptualises new relationships. Adam (2006) proposes different ways of looking at things so as to gain new potential or understanding. In this view, children's experiences help them to acquire new knowledge relating it to the old knowledge acquired from elders and the peers. Similarly, Nolley (2009) adds that new horizons are opened up in people's conceptual development, and old horizons may be recast to provide new conceptual development as well.

According to Wertsh (1992), the usual arrangement and frequent communication between children adults as well as the peers in the community provide children with many opportunities to not only observe, but also to participate in the skilled activities from their culture. Wertsh (1992) further argues that through repeated and varied experience in supported challenging situations, children become skilled practitioners in the specific cognitive activities in their communities. From this argument, one can conclude that if a child grows in an environment which does not use its language, the child is denied opportunities for growth. A child is also denied a chance to understand concrete things, and, in turn, build abstract ideas in a formal setting, which demands rapid cognitive development. Learners with a hearing impairment are denied a chance of social interaction from which to acquire new skills. Such a situation occurs in a society in which there is a limited exposure to sign language, resulting in a negative impact on the hearing impaired learners.

2.2.2 Contributing Factors for Learners' Development

Development of a child can be understood by scrutinising the society from which a child comes, that is, social and cultural background stimulates mental development in a child. According to Wretch (1992), "Mental development in the individual can be understood by examining the social and cultural processes from which it derives." From this, it could be argued that the society and culture jointly and interactively equip a child's future and assists such a child in developing cognitive skills. A child growing in a society, with things to explore, would help such a child to acquire necessary skills that stimulate the child's mental development. Steiner and Mahn (1996) support the sociocultural factors claiming that the relationships between individuals form a basis for cognitive and linguistic mastery. Steiner and Mahn (1996) continue to argue that this process, whether in the classroom or elsewhere, includes transmission, construction, transaction, and transformation in a continuing, complex interplay. As a child grows in a society it is helped by the adults to acquire knowledge through imitation and communication.

According to Smochula (2012), the connection between children's pretentious play and adult creativity has been noted by many scholars including Vygotsky (1978), who emphasises the primacy of social interaction in human development. Vygotsky (1978) points out that because of the presence of adults in the society, every function in the cultural development of the child comes on the stage twice. Firstly, children learn from interactions with people at an inter-

psychological level; secondly, they learn in the psychological within the child as an intra-psychological category. For learners with hearing impairments, that is not easy as they use language that is different from the language used in their communities. Adults in the society use Sesotho while they use a sign language. This shows that learners with a hearing impairment do not fully have a chance to participate as the language used in society denies them a change of personal involvement, thereby limiting their chances of growth as the society does not consider their mode of communication.

Associating the child's development with socialisation in societal activities in the community, Smochula (2012) states that development between what one can do with the guidance of a more mature person and what one can do alone without being assisted by a mature person is called zone of proximal development. In this view, the zone of proximal development can be described as the difference between what one can do alone unassisted and what one is capable of doing under adult guidance or that of a more capable peer (Smochula, 2012). According to Mahn and steiner (2009), Vygotsky conceptualised development as the transfiguration of socially shared activities into internalised programs. Mahn (1999) states that all higher psychological functions are socially internalised, thus constituting the social structure of personality. Interaction of children and the adults provide children with an opportunity to observe and participate in their cultural activities to become cognitively skilled (Mahn & Steiner, 2009). In this case, the emphasis is that adults in society play important role in the development of children as they guide them towards independence. On the other hand, adults and teachers also play an important role in children's actions at school, without which children's performance, sign language proficiency and cognitive development could be impaired.

2.2.3 Significance of Language in Cognitive Development

In every community, language plays an important role. Cole, Vera and Schiber (1997) state that it is both natural and necessary for children to speak as they play; speech not only accompanies practical activities, but it also enhances specific roles in carrying out such activities. It is argued that every society uses language to name actions happening and this helps in building the child's cognitive development and to construct abstract ideas (Cole, Vera & Schiber, 1997). From this, it could be argued that regular interactions of children with their peers and community at large helps them to develop cognitively and enables them to build abstract ideas. Learning takes place

through the use of language, and thus puts learners with a hearing impairment at a disadvantage as their language is different from that used in their community and at school.

In order for people to reach a common goal in relation to discussion, there should be a common language in use. Without a common language there would be some misunderstanding which in return brings about communication breakdown. According to Kramersch (1994), language is something that people use to express, create and interpret meanings and to establish and maintain social and interpersonal relationships in their daily lives. Adding to that, Shohamy (2007) argues that, language encompasses the rich complexities of communication. From this, one could argue that sign language is an important tool in people's communication. As such, it is important to have a common language for better understanding. In this case, recognition of sign language in the community and schools by people in authority puts learners with a hearing impairment in an advantageous position to communicate with adults and peers at school and in their society.

2.2.4 Conclusion

The theory addresses the role of language, interaction and culture as well as society in the cognitive development of children. In a society, a child is exposed to the use of language for communication, for imaginary thoughts and for developing ideas. It highlights the importance of language in a child's development in a society that uses spoken language, thus creating challenges for learners' social and cognitive development. Development for learners with a hearing impairment happens within children's social contexts; it also extends to a formal setting, where a child acquires knowledge and skills. However, learners with hearing impairments experience an exclusive, and of course, limited language used in the society.

2.3 UNDERSTANDING INCLUSIVE EDUCATION AND ACCESS TO EDUCATION

Education is seen as a tool to which all people are entitled; it helps people to view life from different angles. In order to realise this entitlement education should be inclusive of and accessible to everyone with their different learning needs. According to Lewin (2007, p. 1), access to education is seen as a Central Plank to Development Strategies linked to the Millennium Development and Daker Goals associated with Education for all. Tinyiko (2014) argues that access to education is also a factor promoting development and a reminder that the purpose of education is to transform capabilities; if education does not enable its participants to

think, feel and act in different ways than they would otherwise do, then it would seem to have little merit.

2.3.1 Inclusive Education

Tulder and Zwart (2006) argue that, there is an important question that needs to be addressed in order to make education more accessible to the public. One such an initiative involves placing learners with a variety of special learning needs in mainstream classes. Placement alone would not be enough, but the classes should be inclusive. According to Leila and Massoumeh (2012), inclusive education addresses the students' individual differences and needs. Likewise, Macarthur (2005) argues that inclusive education means that barriers to each student's learning are identified, resources given and support provided to overcome them. As Limaye (1999) stated, inclusive education requires that learners with a hearing impairment to be supported to master new skills, encouraged to strive for greater achievements, and be assisted to develop healthy and positive self-concepts.

According to Kigotso (2012), inclusive education refers to efforts of addressing the diversity of needs of all learners by increasing curriculum content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children. Kigotso (2012) continues that it is a process of reforming schools and attitudes, which ensures that every child receives quality and appropriate education within the regular schools. Further, Loreman, Deppler and Harvey (2001) argue that inclusion means fully accommodating students with diverse abilities (both gifted and disabled) in all aspects of schooling that other students are able to access and enjoy. More active participation of all students could any reduce exclusion of others from the culture, curriculum and communities of local schools (Chiyiyo, 2011).

2.3.2 Access to Education

Learners with variety of special learning needs in the main stream classes need to have the same access to education just like the other learners so that the purpose of education for all is accomplished. For example, access for learners with hearing impairment is understood differently from access to other disabilities because the key challenge is the medium of communication. According to Olson, Melinda, Leko and Roberts (2016), there are several explanations to lack of access which among the explanation, is that, the field lacks a clear and

formal definition of access to the general education and curriculum differently. It could be concluded that access to education means being accommodated in the education in such a way that one optimally attains one's educational outcomes by participating and being appropriately supported.

According to Ware, Butler and Gould (2011), curriculum access means the extent to which an individual child is enabled to participate in the same breadth of curriculum as other children of the same age and at a level appropriate to their needs. Ware *et al.* (2011) continue that in order to make curriculum accessible, it should be learner centred; for a learner-centred curriculum focuses more on the notion that there are different kinds of learning and that individual children learn in different ways. As such, they identify the following as the key aim in a learner-centred curriculum: (1) to enable the child to live a full life as a child and to realise his or her potential as a unique individual, (2) to enable the child to develop as a social being through living and co-operating with others and so contribute to the good of society (3) to prepare the child for further education and lifelong learning.

In order for learners with hearing impairment to access suitable education, education should be free and relevant to their contexts. These learners will remain in the periphery of learning due to prevalent barriers at school level. Multiple barriers such as barriers arising from caregivers, physical barriers etc. hamper the fullest provision of education. Therefore, accessibility and inclusion are both critical to learners with hearing impairment are catered for. Learners with hearing impairment in mainstream classes usually need the facilities to help them to cope in an inclusive environment and perform well rather than leaving them to cope by themselves (Stinson & Antia, 1999).

2.3.3 Access to Curriculum for Learners with Hearing Impairments

Learners with hearing impairments are said to have been given an opportunity to access education, but a question still remains, do they really access education? According to Marschark, Convertino and LaRock (2006), access for learners with a hearing impairment actually consists of two related issues. One is external to the learners, which is the question of whether sign language interpreting or any other means of instruction can fully or sufficiently capture and communicate an instructor's content and meta-instructional information. The second issue is internal to the learners, which is the question of whether any particular learners have pre-

knowledge, conceptual structure and learning tools to make effective use of what is being communicated.

Although inclusive policies grant learners with hearing impairment a chance to have access to education like the other learners, such learners still face some challenges. According to the Canadian Hearing Society (2015), accessibility for students who are deaf and hard of hearing is concerned with breaking down barriers to language; it could be with the assistance of technology, as some of these students use spoken language to access the curriculum, while others access language visually. Bell (2013) argues that a growing number of students with hearing loss are being granted access to higher education in South Africa due to the adoption of inclusive educational policies. However, Bell notes that available statistics indicate that participation by students with hearing impairments in higher education remains low.

The study by Chimhenga and Sibanda (2016), investigating the performance of students with hearing impairment in mainstream schools at 'O' level in Zimbabwean secondary schools, found that performance of learners with hearing impairment is low. The results show that students who are hearing impaired seem to experience perpetual failure in most subjects offered at a secondary level. Moreover, gaining access to the full curriculum by the deaf and hard-of-hearing students at mainstream secondary schools seems complicated in the absence of teachers with sign language knowledge.

By the same token, Mildred and Mulondo (2013) indicate that 8.8 per cent of the deaf population had never been exposed to formal school, 65.5 per cent had completed primary school and 24.1 per cent had completed secondary school while 8 per cent had gone through tertiary education. From this it could be said that, learners with hearing impairment achieve less in an academic setting as few make it beyond a primary level.

Nordin, Zaharudin, Yunus and Selehi (2015) communication between the hearing-impaired individuals and the normal-hearing individuals can be difficult. Fluency in sign language is yet another feature that plays a part in curriculum accessibility of learners with a hearing impairment. Felder (1995) also notes that there is a serious mismatch between the learning styles of students in a class and the teaching style of the instructor, with unfortunate potential consequences. Felder continues that the students tend to be bored and inattentive in class, do poorly on tests, get discouraged about the course, and may conclude that they are no good at the

subject of the course and give up. According to Calle (2012), sign language interpreters should pursue quality in their work to ensure the inclusion of deaf students in schools. From this, it could be stated that in order that education accessibility for learners with hearing impairment is effective, there is a need for the facilitators to be familiar with sign language and things around the language so that their communication is made easy for education accessibility.

Learners with hearing impairment delay to access language, as such, that affects their chances for education acquisition. According to Gudyanga (2014), the delayed language development experienced by most children with hearing impairment results in more limited opportunities for effective and satisfying interaction. Chimhega and Mpofu (2013) looked at the challenges faced by learners with hearing impairment and found that they are academically and socially vulnerable, need collaboration between teachers, their families and the specialists in order to adapt programmes and implement alternative forms of communications. For Matthews (2016), the ambiguity of a language modality that is both verbal (linguistic) and visual might pose a challenge on working memory of learners with hearing impairment. This is due to the unique language properties of sign language and multimedia that incorporates sign language may have the potential to enhance learning and reduce cognitive load for deaf students (Emmorey & Wilson, 2004).

2.3.4 Strategies Teachers Use to Support Learning of Hearing Impaired

Ekwama (2003) view classroom communication as one of the most important aspects to consider when discussing the successful teaching and learning strategies for learners with hearing impairments. Marschark, Convertino and LaRock (2006) also note that classroom communication for learners with hearing impairments should comprise a special education teacher, media of communication such as sign language and learners with hearing impairments. As such, Rowsell (2008) calls for varied and effective teaching methods to provide meaningful learning experience for students. Moreover, inclusive settings demand attention to more than a whole-class setting. Teachers should develop pedagogies to accommodate diversity, effectively use learning support and, other human and material resources for full participation of learners (UNESCO, 1998) and adopt, as Kourbetis (2013) notes, “Universal Design” that must foreground educational practices by creating diverse educational environments, tools, educational materials and support services. In the attempt to accommodate learners with special

learning needs, Millett (2009) suggests the use of universal design (UD) as an approach to the environments, products and communications that are usable by all people. Millett continues that universal design addresses the need for classrooms to represent learning environments that work for all students and meet a wide variety of learning needs. The Universal Design to learning (UDL) establishes a framework for curricular reform in education and recognises the need to maintain a balance between curriculum and instructional practice (Hitchcock, 2001).

Another effective teaching approach as reflected in literature is a means of accommodating learners with hearing impairment in schools is Total Communication (TC). Geers, Sedey and Spehar (2002) total communication emphasis early exposure to language through all available modalities so as to provide adequate language foundation for future learning. They continue to see language as delivered through sign language to stimulate communication development through the impaired visual modality. That may result in faster language acquisition in the manual than in the spoken mode. According to Hauland and Alle (2009), Glaser and Lorenazo (2006) TC as a manual approach incorporated many different modes of communication as in sign language, voice, finger spelling, lip-reading, amplification, writing, gesture and visuals. Hauland and Allen (2009), Glaser and Lorenazo (2006) observe that the core idea in total communication is creating a less restrictive learning environment for the learners with a hearing impairment, who are free to develop communication preferences despite being encouraged to use both speech and sign language. In this regard, learners with a hearing impairment are not isolated, but are placed with other learners; it is recommended that their communication should not rely solely on sign language which they normally practise through the help of a sign language interpreter; instead, all modes of communication should be applied in schools to allow students to choose any mode with which they feel comfortable. This helps learners to develop other communication skills beside sign language.

Availability of appropriate resource can also enhance learning of learners with hearing impairment. Mathews (2016) states that multimedia material may not only improve comprehension of a particular text, but also contribute to deaf students' overall development of literacy skills and motivation because they provide access to rich linguistic experiences. Glaser and Lorenazo (2006) state that learners with hearing impairment rely on visual input. As such, the classroom should be arranged for curricula development. According to Kourbetis (2014) and the Hellenic Pedagogical Institute (2004), curricula development for hearing impaired students

raises a number of requirements regarding the content. The use and the accessibility of educational materials by deaf students describes the educational software as an excellent tool for both the student and the teacher, not only for learning purposes but also for teaching sign language and teaching with sign language. Furthermore, video recording can translate a printed text into sign language, into a digital document or a book read on DVD. It could be argued that multimedia material is useful more especially for learners with hearing impairment as it improves comprehension skills, which is one of the components of language skills that a learner needs so as to manipulate any text given in any subject.

2.3.5 Assessment of Learners with Hearing Impairments

Assessment advocates the establishment of a very strong link between curriculum and assessment so that the feedback on the learning progress should be used to formulate strategies to improve the teaching and learning processes. Rose, Barkmeier, Landrud Valerie Mcannaly Larson & Hoekstra (1998). Rose *et al.* (1998) see assessment as having to evaluate the attainment of educational and curriculum aims of educational programmes at all levels. Thus, there is need to broaden the modes of assessment to include the following: formative assessment, which comprises both diagnostic and continuous assessment, classroom based assessment, monitoring of educational progress through national educational, assessment carried out at regular intervals; and summative assessment (which usually tests mostly cognitive domain) for selection and certification purposes. Thus, assessment strategies should improve the learning processes and achievement of the curriculum goals and objectives. Rose *et al.* (1998), continue that, if assessment is correctly done, it should also indicate what the learner knows and is able to do, in addition to the usual paper and pencil examinations. Marschark, Sapere and Convertino (2008) state that accommodations in assessment and instruction is especially important to learners with hearing impairment because, they do not have ready access to Standard English or Sesotho as the medium of instruction as they enter school. As a result, their educational progress is often delayed. On this basis, it could be argued that the assessment of learners with hearing impairments should cohere with their prior knowledge. In other words, the learners with hearing impairment should have acquired sign language to almost the same level as other normal learners so as to cope with the demands of the school curriculum. Otherwise, first language acquisition would remain a challenge for them.

2.3.6 Challenges of Transition in Relation to Access to Education for Learners with Hearing Impairment.

In an attempt to accommodate learners with learning needs to access education, facilitators face some challenges. According to Johnson, Luecking & Stoden (2002), the challenge is to integrate and align these transition requirements with other legislated requirements giving students with disabilities greater access to the general education curriculum and an assessment system. Similarly, Punch, Hyde and Creed (2004) state that the staff need to spend time identifying any emotional, social and behavioural development should pay attention to a child preferred teaching and learning style, abilities and learning needs.

Kelechi, Olalekan and Olufemi (2013) argued that vocational training services prepare persons with disability to achieve a lifestyle of independence and integration therefore, transition should be ordinarily achieved through career guidance training career choice, so career training for learners with hearing impairment is particularly meant to assist them to settle in gainful and skilled employment therefore, the challenges is that lack of training, career guidance and support leads to wrong career choices.

2.3.7 Career Construction of Learners with Hearing Impairment

Learners with hearing impairment lack hearing senses and they differ from hearing people. As such in order to help them to access suitable education they should be guided towards appropriate career choices. Lazarus and Ihuoma (2011) note that career exploration of vocational areas, skills and career, goal setting, decision making skill as well as career maturity should not only be encouraged and practiced but should also be part of career development plan to enhance the overall career adjustment of person with special needs. Kelechi, Olalekan and Olufemi (2013) also note that, in career development, mentors can play vital roles like networking on jobs skills, coaching, encouraging, networking contact, reference, introduction, motivating and broadening perspectives about transferability of skills and interest as well as future career decision and direction.

In the same vein, Kelechi, Olalekan and Olufemi (2013) further point that transition from school to job placement, post primary education or adults life and living independently created major challenges therefore, frame work was based on the following; 1. Career development curriculum 2. A joint collaboration with employers 3. Support to follow up systems so that they can adapt to

working community. In this way, it can be noted that learners with hearing impairment should be guided towards suitable career choices, which will assist them to be part of and serve the society harmoniously.

2.4 EDUCATION OF LEARNERS WITH HEARING IMPAIRMENT IN LESOTHO

Lesotho has made attempts to provide education for all people regardless of their disability. According to Mkandawire, Maphale and Tseeke (2016), Lesotho Special Education can be seen greatly base on the bandura's principle of social learning theory which is on learners with disability be included in the general Education setup unless the level of disability is severe such that it could distract other learners. Mkandawire, Maphale, Tseeke continue that in 1989 the Ministry of Education published a Policy on Special Education which set a goal for Special needs Education. The 1991 establishment of Special Education unit whose purpose was to oversee the integration of children with Special Educational needs into mainstream followed by study by the Ministry of Education which was to provide baseline information to use in implementation of Policy in promoting the integration of children to main stream. However, implementation of Special Education still faces some challenges such as physical barriers, lack of quality teacher education and support, attitudinal barriers and inadequate resources as reported by some studies below.

Despite the establishment of the Special Education Unit in the Ministry and piloting Inclusive Education in the early 1990s, independent research point to several challenges to inclusive Education in Lesotho. Mosia's (2014) study reveals that the Ministry of Education and Training cannot implement inclusive education successfully because even the general education system does not provide quality education for all learners. Moreover, some studies indicate that even qualified teachers in Lesotho find it challenging to address the individual needs of learners as they are poorly trained on learner-centred approaches. Similarly, the study by Shelile and Hlalele (2014) found that the Ministry of Education and Training has failed to conduct continuous professional training of teachers due to inadequate human resources, lack of funds, and work load for available staff among others things.

Inclusive Education does not only need facilities but, it also need people, policies and better understanding of what inclusive education is. Khoaeane (2012) states that teachers are the main players in determining the quality of inclusion, they can play an important role in transforming schools, or even bring about no change at all. Therefore, for inclusive education, there should be

facilities involving key role players such as teachers, especially those, who are trained for the purpose. In addition, Mosia (2014) states that inclusive education in Lesotho faces several threats, such as poor perception of inclusive education; slow development of policies on special education; poor development of education resources to allow inclusive education. It could be argued that people with impairment had not been recognised in education system. As such, their ability had not been noticed, and in order for inclusion to happen, learners who had any form of disability are not just placed in ordinary classrooms, but their learning needs are catered for. However, inclusion faces some challenges for curriculum accessibility of learners with impairment.

Lesotho has language policy that recognises the use of languages that are used in the country as a means for communication. As such, according to Lesotho language policy (2008), the framework recognizes the pluralism of the Basotho nation and the existence of other languages besides, the two official languages, those being of Sesotho and English, in that regard, the framework boldly asserts that mother tongue will be used as a medium of instruction up to class three, while English will be taught as a subject at this and other levels. It goes further to indicate that sign language shall also form part of the new language policy. Matlosa's (2012) language policy and literacy among deaf people in Lesotho reported on lack of access to what was being taught in class, teacher's inability to use LSL as hampering the learners, changes of learning and acquiring literacy skills. Deaf children make a very slow progress in the literary. In this view, it could be said that even though the policy states that sign language will be part of the new language policy, there are still challenges. In this case, sign language users seem left out as their language is not yet used at school where they attend.

Apparently, education of learners with hearing impairment has not met the learning needs of learners with hearing impairment. For Matlosa (2009), education for learners with hearing impairment in Lesotho is not satisfactory for three main reasons. Firstly, Lesotho Sign Language is not sufficiently used at schools for learners with hearing impairments, which brings about a discrepancy between the mother tongue policy and its implementation. Secondly, teachers are neither adequately proficient in LSL nor are they conversant with LSL. Besides, teachers lack skills suitable to teach deaf children. Thirdly, parents are not actively involved in the education of their children. So, all these impact negatively on the education of deaf learners in Lesotho.

2.5 SUMMARY

The chapter has explored the accessibility of curriculum for learner in with hearing impairment. It first discussed the principles of the sociocultural theory which views language very critical for cognitive development. This was important to use as the lens of the study because learners with hearing impairments use a language, which is alternative to conventional languages in their communities. In most cases, parents and teachers are not conversant with sign language. This presents challenges as facilitation or stimulation provided by significant others may be minimal. The chapter has highlighted similarities between the concepts of access to education and inclusive education and the principles of inclusive education. It has further stated some of the basic challenges for learning through sign language or implementing inclusive education for learners with hearing impairment, transition challenges as well as career choices for learners with disability.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter is aimed at describing the methodology that was used in undertaking the study. It first describes the paradigm which influenced the study. The chapter also discusses the research design and approach adopted for the study. Further, it explains the sampling process and participant selection followed by discussion of methods of data collection and analysis. Lastly, the chapter discusses the integrity of the study.

3.2 PARADIGM

This study adopted the interpretivist paradigm. According to Cohen, Morrison and Manion (2007), interpretivism a researcher seeks to understand the world in its natural context. Adding to that, Chowdhury (2014) defines interpretivism as an approach to meaningful nature of people's character and participation in both social and cultural life, stating that people's knowledge of reality is created by them. Creswell (2014) also states that interpretivist researchers address the processes of interaction among people and notes that as their own backgrounds shape their interpretation, they should acknowledge how their interpretation moves from their personal, cultural, and historical experiences. In the current study, teachers, sign language interpreters and learners were allowed to express their views on how the use of sign language interpretation facilitates learning of learners with a hearing impairment and my knowledge of teaching processes helped put into context participants' meaning.

3.3 RESEARCH APPROACH

In line with the interpretive paradigm, a qualitative approach was adopted in which participants can describe their judgments, feelings of comfort, emotions and ideas, beliefs in their own words (Tinyiko, 2014). Kothari (2004) states that a qualitative approach to research is about subjective assessment of attitudes, opinions as well as behaviour of people. Creswell (2014) says it is a way of looking at and understanding the meaning people or groups of people ascribe to a social problem. The approach enabled the study to obtain opinions from teachers, learners with hearing impairment as well as sign language interpreters on how they saw education accessibility for learners with a hearing impairment at their school.

3.4 RESEARCH DESIGN

This study adopted a case study. According to Kumar (2011), a case study is a useful research design that is used to explore an area of limited knowledge, with people striving towards understanding a situation, a phenomenon, an episode, a site, a group or a community. This design was found most relevant for exploring the concept of sign language interpretation rather than confirming and quantifying (Kumar, 2011). Data for this study were collected from the only high school that admits learners with hearing impairment in Lesotho. It was thus found as an appropriate mode of inquiry for generating rich data to give answers to research questions for the current study (McMillan, 2001, p. 396).

3.5 PARTICIPANT SELECTION

Kothari (2004) states that selection of participants in qualitative research is mostly purposive because it has certain criteria, seeking to collect a range of views or experiences. Kumar (2011) considers purposive selection of participants as judgmental about those who can supply the needed information to achieve the objectives of the study. This involves identifying and selecting individuals or groups of individuals, especially knowledgeable about or experienced with a phenomenon of interest. Purposive sampling helps to identify information-rich cases (Patton, 2002). As such, for this study the researcher engaged teachers whose subject areas were likely to give appropriate data for the study.

3.6 DATA COLLECTION METHODS

Only two methods of data collection were used for this study, namely semi-structured interviews and a questionnaire.

3.6.1 Semi-structured Interviews

Williman (2011) sees interviews as suitable for questions that require probing so that adequate information is obtained. Kumar (2011). In a structured interview, the researcher asks a predetermined set of questions, using the same wording and order of questions as specified in the interview schedule. Semi-structured Interviews, which lasted approximately 30 minutes, were conducted with three teachers and three sign language interpreters. Each interview was audio-recorded so as to find all issues expressed by participants.

3.6.2 Use of Questionnaire

The second tool for data collection the study considered was an open-ended questionnaires administered to deaf learners. According to Kumar (2011), a questionnaire is a written list of questions from which the answers to are recorded by respondents, and there is no one to explain the meaning of questions to respondents. The data were collected through questionnaires from learners with a hearing impairment. Questionnaires were the only method of getting direct access to learners without an interpreter; as a researcher, I am not competent in sign language and was doubtful if interpretation would not distort meaning.

3.7 DATA ANALYSIS

Data analysis is an important stage of the research process as Marshall and Rossman (1989) state it is a simultaneous process in qualitative research as it is done as data are collected and can influence refinement of instruments. Data analysis involves making meaning out of text and image data, and “representing the data, and making an interpretation of the larger meaning of the data” (Creswell, 2003, p.190). This study adopted content analysis as the best data analysis approach for this study. Content analysis consists of analysing the contents of all verbal or printed data and is mostly qualitative analysis involving deriving message from existing documents (Kothari, 2012). Several steps are involved in content analysis and the following were observed in analysing data for this study.

3.7.1 Data Editing

In the analysis of data, condensation was applied according to prescript of Erlingsson and Brysiewicz (2017) it is a process of shortening the text, but still maintaining the meaning. From the data collected from the participants, the responses were shortened; in doing so, the researcher made sure not to distort the main message from the participants. In that case, any extra information was left out.

3.7.2 Coding

The second step that I took in the analysis of data was to code the condensed information. According to Erlingsson, and Brysiewicz, (2017), coding is a label that mostly describes a condensed meaning. Williman (2011) adds that, coding is necessary for an efficient analysis and through it the several replies may be reduced to a small number of classes which contain the critical information required for analysis. I did assign answers which carried similar meanings so

as to reduce the size of the data. The responses from sign language interpreters, teachers and learners that carried the similar message were grouped together.

3.7.3 Assignment of Themes

The third step that I engaged in was categorisation of codes, which according to Erlingsson, Brysiewicz, (2017), is grouping together codes that are related to each other through their context. Kumar (2012) identifies the main themes, one needs to go carefully through descriptive responses given by the respondents to each question in order to understand the meaning they communicate. In this step, I grouped together codes that made up the theme of the study, that is, I grouped perceptions together, challenges as well as strategies from all the participants.

3.7.4 Data Presentation

After the researcher has identified themes then data was analysed and presented. Kothari (2012) argues that, the term analysis refers to the computation of certain measures along with searching for patterns of relationship that exist among data-groups. Thus, in the process of analysis, relationships or differences supporting or conflicting with original or new hypotheses should be subjected to statistical tests of significance to determine with what validity data can be said to indicate any conclusions. Kumar (2011) took the point further in that the way the collected data were analysed depends largely on two things, namely the type of information as well as the way one wants to communicate the findings. As the study had three themes, being perception, challenges and strategies, the responses which addressed perceptions from all the three groups of participants were presented together; responses which addressed challenges from the three groups were also presented together; and lastly, the responses that addressed strategies were grouped and presented together.

3.8 ETHICAL CONSIDERATIONS

Working with people has some things to consider so that at the end the participants are not negatively affected by the research. According to Walliman (2011), working with human participants in a research always raises ethical issues about how participants are treated as they should be treated with respect before, during and after the research. Orb, Eisenhauer and Wynaden (2001) argue that ethical issues are present in any kind of research, and sometimes the research process can display tension. Therefore, in order to prevent the tension, ethics pertains to

doing well and avoiding harm that can be prevented or reduced through the application of appropriate ethical procedures.

3.8.1 Informed Consent

In a research, there is a need for a researcher to explain to the participants all about a study to be conducted so as to put them in the position where they decide whether they take part or not. According to Rose (2009), an informed consent is a voluntary agreement to participation in research, and it is not a merely a form that is signed but a process in which the subject has an understanding of the research and its risks. Similarly, Mcmillan (2001) states that in gaining permission, most researchers give participants assurance of confidentiality and anonymity and describe the intended use of data. In conducting this study, I asked for the permission to conduct the study and made the participants aware of the objective of the study and any potential risks involved which were viewed as limited.

3.8.2 Confidentiality

McMillan (2001) states confidentiality means that no one can have access to individual's data or the name of the participants except for the researcher. Kumair (2011) observes that sharing information about a respondent with others for purposes other than research is unethical, and in research the researcher should make sure that at least the information provided by respondents is kept anonymous as it is unethical to identify an individual respondent and the information provided by him/her. In this study, confidentiality was kept by using codes such as Mathematics and Science Teacher abbreviated (MST) to refer to one of the teacher participants instead of names. I avoided mentioning the classes taught by the participants so as to not reveal their identities.

3.8.3 Beneficence

The Australian Council for International Development (2017) defines beneficence as the action that is done for the benefit of others. This principle implies that the expected benefit to participants or a wider community justifies any risks of harm or discomfort to participants. Moreover, in order to fulfil this principle, research should be of value to participants, their community and the country or development practices more broadly. From this study, sign language interpreters, learners with a hearing impairment as well as their teacher could benefit as

the study wishes to raise awareness about potential challenges that learners with hearing impairment have in accessing school curriculum.

3.9 TRUSTWORTHINESS

According to Reed and Brandon (2009), in an interpretive research, trustworthiness has developed as an important alternative for meaning the value of research and its effects as well as leading the way of providing for rigour in any research process.

3.9.1 Credibility

Shenton (2004) says a study must measure what was actually intended by the researcher. In this case, member check should be considered in detecting whether the study measured the intention of the researcher. For Koelech (2013), member check can be described as a research phase during which the provisional report is taken back to the site and subjected to the security of the person who provided information with the aim of ensuring that the researcher has accurately reported participant's stories. The researcher validates meanings presented by the participants through taking transcribed data to the participants to check if the researcher has noted the true essence of their responses. I engage with recordings, notes and transcription so as to demonstrate a clear link of collected data and its interpretations.

3.9.2 Dependability

This principle is about reliability of the results which researcher employs to show that if the study was to be repeated similar results would be obtained (Shenton, 2004). For dependability, I let data and their context speak for themselves as quotes of the participants were used verbatim so as to express participants views. That highly allows the reader to have the essence of the participants' views unlike when they are expressed or shared by the researcher.

3.9.3 Conformability

According to Shenton (2004), in order to archive conformability, researchers demonstrate that the results are clearly linked to the conclusion in a way that can be followed and as a process. In order to address this principle, the transcriptions as well as the recording were kept so as to verify the final results with. This was also applied to the questionnaires that were administered to learners with hearing impairment.

3.9.4 Transferability

This principle refers to the extent to which the findings of the study can be applied in another concept or theory and still give the same results (Shenton, 2004). This study has given details of the study specifically from collection of data up to the presentation of findings so that any future researcher may adopt the same procedure to conduct a comparable study.

3.10 SUMMARY

This research adopted the interpretivist paradigm. On this basis, I used a qualitative case study for an in-depth study of how sign language interpretation facilitates access to education at one school in Lesotho. A purposive sampling technique was used to select one secondary school for the study and to identify teachers, interpreters and learners to participate in the study. Once the data were collected and verified through member-checking, they were analysed using member-checking and the findings presented.

CHAPTER FOUR: PRESENTATION AND ANALYSIS OF RESULTS

4.1 INTRODUCTION

This chapter presents the findings of the study. The purpose of the study was to investigate access to education for learners with a hearing impairment at secondary schools. The findings reflect the views of twenty-one participants, namely three teachers, three sign language interpreters and 15 learners in an attempt to respond to the following four questions which guided the study:

1. *How do teachers and sign language interpreters perceive their efficiency in using Lesotho Sign Language as medium of instruction enabling education for the deaf?*
2. *What challenges do teachers and sign language interpreters encounter in teaching learners with hearing impairment?*
3. *How do deaf students perceive their access to education in their schools?*
4. *How could teachers better make the education accessible for learners with hearing impairment?*

Data presentation is organised according to themes generated from individual interview with teachers and sign language interpreters as well as data from open-ended questionnaires administered to learners with a hearing impairment. The study is divided into themes and sub-themes generated from data analysis. Words were quoted verbatim to give readers an opportunity to give their own interpretations.

In conforming to anonymity, the study used the following descriptors in the analysis for participants: the three teachers are referred to as (MST) for Mathematics and Science teacher, (CT) for commercial teacher, and lastly (LT) for a language teacher. On the other hand, sign language interpreters are referred to as SLI1 for the first sign language interpreter participant, SLI 2 for the second sign language interpreter participant and SLI 3 for the third sign language interpreter participant, and learners with a hearing impairment are referred to according to their grades as follows: 9A learner and 9B learner.

4.2 PERCEPTIONS ON CURRICULUM ACCESS FOR LEARNERS WITH HEARING IMPAIRMENT

In responding to how they work with learners with hearing impairment, both teachers and sign language interpreters held various views of the efficiency of their work. The findings also highlighted a mismatch between teachers and sign language interpreters' expectation of their work. In the same argument, learners with hearing impairment point out their learning experience alongside non-deaf as well. It is therefore upon all these perceptions that some issues of consideration come about as indicated below.

4.2.1 Accommodating Learners with Hearing Impairments in Teaching

Teachers feel that they accommodate learners with hearing impairments, with the following views:

Learners are accommodated through an interpreter, if I want to teach, I just teach. Learners look at the interpreter who delivers through their language (sign language). Furthermore, for some words I write them on the board for spelling and the interpreter interprets them, I also make the learners to be active, that is, they go and write on the board. CT

I try as much as possible to come up with activities that call upon learners to be active in class. They learn by doing, so Mathematics is a practical subject, I call them to the board and let them work out numbers. MST

The presence of interpreter is very important in my work, I just teach and the interpreter interprets, and, if something is not clear I get it through interpreter who will notify me so that I explain and, it gets back to learners via interpreter, I also try to use the teaching aids with pictures so that their learning is made easy. LT

Despite the fact that they believe to be accommodating learners, they also highlighted the following problem in accommodating learners with a hearing impairment.

Despite the fact that they all do well as the presence of a sign language interpreter makes it easier to teach in such a class, I cannot meet all their learning needs. For instance, they need time for taking part in class and in allocating that time it affects my lesson as I cannot achieve the objective for that lesson. MST

Their culture is not known. For example, they get annoyed by small things such as a colourful lip gloss, and unshaved bears, Furthermore, they have negative attitude towards languages so it's not easy even if a concept is easy but, the fact that they seem to have told themselves that languages are difficult. LT

Apparently, sign language interpreters' views highlighted some problems relating to how they work with learners and teachers.

The work is just like any other work, it has some short falls, ours is to get the message and pass it in a language that a learner would understand. However, the only thing that makes this work difficult is that we do not often plan a lesson together so in that case as the sign language interpreter I sometimes happen to lack some vocabulary. SLI1

The number of learners with hearing impairment is a challenge since they are many and I have to act in front of them. So, since some are seated at the back that sometimes poses a challenge when I change the position in order to get to the other learners. SLI2

Some teachers do not understand what inclusion entails so in their teaching they do not cater for learners with hearing impairment, theirs is just to teach as if their classes consist of non-deaf learners only. However, what helps most are the teaching aids teacher bring to class which are charts with bigger drawing. SLI3

Despite, the problems sign language interpreters encounter, they also indicated their successes in interpreting for learners with hearing Impairment.

Learners with hearing impairment learn better if a class is active. So if they do not raise hands and respond, they do not go to board to do the working then, I easily notice that there is something that they did not get. But all in all, if they are concentrating in class, if they happen not to get a message they just raise a hand and asks for clarification. SLI1

Non-deaf learners can sign as a result, just like any other learners when they did not get the concept they ask a learner next to them, this is the same with learners with hearing impairment they tent to sign to a learner next to them. SLI2.

In practical subjects they are very active, and their participation is satisfactory and if they did not get the message they immediately show. However, in language classes, I hardly realize if they do not understand, because they are not active. SLI.

In the same vein, learners with hearing impairments point out that they feel accommodated, and they expressed their views on learning alongside non-deaf as follows. It should be noted that it was not easy reading or getting the message from the learners as most of their sentences did not make sense and in their answers, one could notice that they did not even understand instructions of the questions.

They help me with Sesotho whereby I don't understand. 12B

We learn together and ask teachers. 12A

It is good because it helps to make me understand through reading with others.10C

It is good because that helps me understand many words that I did not understand.10B

However, one learner pointed out that they sometimes feel uncomfortable among non-deaf learners.

When I am with deaf learners, I feel like am a student but with non-deaf learners sometimes I feel uncomfortable.10A

The exposition above clarifies that, teachers feel that theirs is to teach as if the class is an ordinary class. The task of delivering the message to the learners with hearing impairment is on sign language interpreters. Sign language interpreters on the other side, feel that it is not easy working with learners with hearing impairment as they do not normally get a chance to plan a lesson with teachers and, some teachers do not understand what inclusion entails. However, they are able to accommodate learners and in the same case learners feel accommodated by the other learners despite the fact that some non-deaf learners sometimes make them feel uncomfortable. Therefore, it could be pointed out that although the school tries to be inclusive, there are still some misunderstandings about inclusion.

4.2.2 Accommodating Learners' Diversity

The findings of the study reveal that teachers and sign language interpreters have problems addressing learners' diversity in classes. On the same point, learners with hearing impairments gave out their views on their education. The following are their responses:

It is so hectic working with learners with different learning needs and different learning styles. What makes it even harder is that, learners with hearing impairment are forced to fit

into non deaf learners and is not easy. On the other hand, if learners with hearing impairment are given more time, non-deaf who happen to have got the concept quicker lose interest, as a result, this negatively impacts the brighter students. CT

It is so stressful working with two groups of learners at the same time because both groups have their different learning style (their learning style differ) as such I find that teaching methods I used are not always suitable for all of them. MST.

Hearing impairment learners need attention, so accommodating them in teaching is very hectic as I communicate to them via the interpreter. Personally, as a teacher I cannot be sure whether they are on the right track or not. LT

Moreover, teachers and sign language interpreter seem to share the same view on lack of planning for the lesson together

I seldomly do, because sign language interpreters stay in class for the whole day to interpret for every lesson of the day, so we do not really plan the lesson. It is by lucky if a class is in the morning as the first, or immediately after break or immediately after lunch, as I can then have even few minutes to plan on the way to the class. CT.

It is in rare cases that I plan a lesson with the interpreter and, that makes my work not easy because some words or concepts are not familiar to the sign language interpreter so, that makes their work ineffective which in return affect my content. LT

I normally come to school earlier and arrange that with the interpreter so that we can sit and plan the lessons for the day. Classes are many and that does not allow me sitting with every interpreter for each and every class I attend but I do that with interpreter when I plan to introduce a topic, or the content is little bit difficult in vocabulary. MST

One sign language interpreter says:

We are few in number at school such that each class which has a learner or learners with hearing impairment has one sign language interpreter. As such, that does not allow pre-lesson planning with the teacher since we stay in classes to interpret for different subjects. SLII

Another sign language interpreter states:

Pre-lesson planning happens only for teachers who go to the first lessons in the morning, after break and after lunch as we can plan on our own for classes. SLI3

Pre lesson planning happens in rare cases. For example, if a teacher arranges that I come to school early so that we can plan for the lesson of the day and that is normally when he is going to introduce a topic. SLI2

On the same point learners with hearing impairment gave out their views on what makes their learning different:

By using sign language to answer the question that teachers have asked.10B

It is easy, I have my own learning skills.11A

I learn through the interpreter who interprets different words.11B

In using sign language.12B

From the above findings, it could be concluded that participants reinstated that although a school is inclusive, teachers complain about having limited time to complete the syllabus when they try to accommodate all learners and their different learning styles, thus affecting the learning pace of bright learners. Despite the use of different learning styles, learners feel that they cope as the presence of sign language interpreters makes learning possible.

4.2.3 Views on Support for Learners with Hearing Impairments

This study revealed that the support provided by an interpreter is just that of passing information in sign language. There is no additional effort to extend support to learners with hearing impairments. Teachers expected these learners to consult if they have problems. On the same point, learners came up with a variety of activities aimed at supporting their learning. Therefore, it was found reasonable to conclude that there is a need for a clear policy on support for learners with hearing impairments beyond a classroom setting.

Teachers gave out their views as follows:

If learners with hearing impairment do not understand, they immediately raise a hand and ask a question that seeks clarification and, in that case, I stop and explain. Besides, all the learners around school campus can use sign language so if they lack behind they catch up in group discussion with the other non-deaf learners. CT

Learners with hearing impairment are free to consult anytime they feel like they need to. However, as teachers, it is not that easy to have make up lessons for learners as the interpreter gets tired, so we hardly do. MST

The whole school community can sign, as such learners are free to consult anytime, it being study or lunch, and that, they can do alone or with the other learners, however consultation is more effective if an interpreter is there as they are trained to help learners to understand better. LT

Sign language interpreters also pointed out the following:

During study time or when teachers did not make it to the class, I take that time and help learners, so I normally invite non-deaf learners, then sit and help learners with hearing impairment to catch up. SLI1

Learners with hearing impairment are free to consult teachers, so, they normally consult in groups as the presence of non-deaf learners is very vital because they can communicate with them. Moreover, as the school uses sign language after the consultation they can sit in their groups and discuss. SLI2

Learners with hearing impairment also gave their views on how they overcame their challenges as follows:

I talk to others and ask for help.12A

Practice spelling Sesotho words.12B

I learn every day.11A

I take time to learn any subject myself.11B

I go to my teachers to ask for help where I do not understand.10C

I practice words that I find difficult in spelling.10A

Although, school as a community offers support for learners with hearing impairment, there seems no external support for learners.

Collaboration with learners with hearing impairment parents is not effectively happening as matter of fact that imposes a great challenge to me. For instance some learners are partially

deaf as such they use hearing aids devices but their parents cannot buy such devices for them, This in return force me to go beyond what they can do. SLI1

The findings of the study seem to suggest that sign language interpreters and sign language play a major role in the education of learners with a hearing impairment. So it can be concluded that the language gains recognition so that even beyond the school premises, learners still do feel supported. Moreover, training for sign language interpreters should be integrated for supporting learners accordingly.

4.3 CHALLENGES FACING EDUCATION FOR LEARNERS WITH HEARING IMPAIRMENTS

Teachers, sign language interpreters and learners with hearing impairment seem to face some challenges in their effort for better access to education for learners with hearing impairment and their challenges include insufficient time, inflexibility of curriculum, language related, communication breakdown, ratio for interpreters to learners, transition challenges Their views are stated below:

4.3.1 Insufficient Time Allocated for Covering the Content

The findings of the study reveal that teacher claim that time allocated for the lesson is too limited such that teachers are not able achieve the objectives of the lesson. As a result, they are frequently behind the syllabus. Teachers gave their views as follows:

Time allocated for a lesson is too limited to accommodate all the learners. It is time allocated for non-deaf learners in normal school lesson, as such, in a special classroom it does not work for me since I cannot cover what has to be covered.... I am frequently behind the syllabus such that sometimes the last topics to be taught, I just pass them without making sure that learners understanding since time is not on my side CT

...even for hearing learners time allocated is not enough still as during the course of the lesson I attend learners with hearing impairment whom their communication has to go via an interpreter as a matter of fact consumes time.... I have to cheat the syllabus so that I can push. For example, in writing compositions, summaries and letters, I just say that learners with hearing impairment should write only the points because if we write continuously it takes us forever. LT

Learners with hearing impairment need to be active in order to understand so, if I employ teaching methods which call for participation then I frequently run out of time in my lessons.... I cannot finish all the topics in the syllabus because learners with hearing impairment do not only need time to understand but they also need to be given opportunity to do things for themselves like, giving a solution to a certain mathematics problem on the board MST

From the findings above, it could be said that teachers really seem to complain about time allocated, they seem to believe that, it is not suitable for an inclusive setting hence affecting knowledge acquisition of their learners as well as their participation. On the other hand their content is also affected as they cannot finish all the topics. It was found reasonable to conclude that the ministry to reconsider time allocation for an inclusive class for efficiency and effectiveness.

4.3.2 Evidence of Curriculum Inflexibility

The results show that there is general feeling that curriculum requirements are too rigid. Challenges of learners with hearing impairment are not accommodated. Teachers gave out their views as shown below:

Assessment is not up to standard for learners with hearing impairment because the standard is set for hearing world and they are supposed to perform at the pace of the hearing. Moreover, in setting the assessment I need to meet the national standard and that leaves them out as their language lacks vocabulary. So, some words that are used in the standard question papers seem to bring some problems to them.... Their major problem is when question appears in a form of a paragraph. CT

Learners with hearing impairment are supposed to master the rules of language yet their language does not follow those rules. I assess on topics such as (lire) in Sesotho which consists of sounds which do not exist in their world. Besides, with the continuous assessment I encounter problems as learners with hearing impairment cannot read or write any continuous piece of work.... Curriculum is not flexible it does not allow me to teach the content which is within learners with hearing impairments reach, that is, I am expected to go even beyond what learners can understand. For example, teaching of lire (Sesotho) and some sound in English language like animals and their sounds as an example. (LT)

Timeframe for assessment is the same as of the other learners but with them, they need to communicate some questions that they find tricky with the interpreter so that they can give answers, so the time they spending communicating with the interpreter is not catered for in setting time for a paperin science I am forced to teach five senses when learners with hearing impairment sense of hearing is dysfunctional as a result no learning takes place.
MST

A Mathematics and Science Teacher adds:

The laboratory is not well equipped, it does not allow learners to make experiments and discover for themselves. Learners learn better with learner centred approaches which enhance participation. However, the school does not have facilities that allow them to discover for themselves. Learners who do the experiments themselves stand a better chance than those who have been exposed to lecture method. Experiments such as (distillation, decantation osmosis) to name a few need to be done by the learners because learners need to do those experiments so that they know which is which.

Based on the findings of the study, it could be concluded that Sesotho language expects learners with hearing impairment to learn the words which are based on sounds, yet they are hearing-impaired, and cannot relate the words to sounds or make words based on their sounds. Additionally, much content which learners are expected to have presupposes that learners would either be competent in spoken or written language or have audio perceptions. Lack of teaching and learning resources add further challenges to teaching learners with a hearing impairment as this makes them dependent on teacher-centred methods.

4.3.3 Language Related Challenges

The findings of the study indicate that teachers, sign language interpreters and learners with hearing impairment encounter some challenges in relation to language and their various views are expressed below.

Languages teacher notes:

Prose writings are challenging, for example, if I am to read (Chaka, or the rainy season) I give interpreter the theme of the chapter to read so that even if the message is lost but they

have theme. However, that does not help since when they are asked questions, they just give what they remember not really what the question needs.

A languages teacher continues as follows:

Learners with hearing impairment cannot contextualize the language, to them kick is the action as in kicking the ball and nothing else. Kick the bucket literally means the action of kicking not dying, and if I try and explain what it could mean in another context, they totally get confused even the original meaning get lost. With learners with hearing impairment. “O eapotake o eapota”; “She is crazy, or you are crazy.” There is no way they put it in a light way. They do not choose participant and proper language. What they would say to their age-mate they can say to adults, and if I try to explain that, it also becomes a problem. LT

The findings indicate that learners with hearing impairments struggle a lot in languages especially the understanding of symbolic language. This makes it even harder to learn literary material, first because their reading ability is poor and secondly, because they fail to understand figures of speech which dominate literature work.

One teacher says,

I deliver the content using English language while the learners with hearing impairment receive it using sign language and the structure of the two languages are totally different as a matter of fact, I notice the impact in their writing as the way in which they sign differs from the way they write. That makes it difficult to mark. LT

The following examples were stated as demonstrating key distinctions to the structure of the two languages:

Sign language	English language
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You how?	How are you?
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Me fine	I am fine
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It was observed that Sign language does not follow English grammar rules as further noted in examples below:

Sign language	English language
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We speaking	we are speaking.
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She speak

she speaks.

Another teacher adds,

I deliver content using spoken words they receive using sign language and when I evaluate, I need them to write, the structure of English language differs from sign language structure.

CT

From the above finding, it can be concluded that although learners are said to be accommodated they still face a major challenge in relation to language used at school versus their language. They are allowed to access education using sign language, but they are not allowed to write in their own language as the standard used for assessment is conventional.

Additionally, Sign language interpreters also state their view in relation to challenges they face concerning language and their views are as follows,

... Sign language lacks vocabulary to express certain issues that makes my work ineffective, furthermore, the problem is to contextualize. SLI1

... if I sign (look) it is the same as in signing (see) so, I really face a challenge of explaining the difference between the two verbs the context in which they are using a particular word.

SLI2

I encounter problems signing some words as other words are ambiguous, they should be understood first by me so that I can sign them to learners in a way that is used. For example, words like photosynthesis, potassium permanganate, I really face a challenge try to sign them because these are not commonly used, and as such they are unfamiliar to me. SLI1

I end up finger spelling some words however that does not help as the learners themselves too do not know their meanings. (SLI3)

From the above findings, it can be said that sign language itself has many short falls; so this affects delivery of content to learners with hearing impairments because spoken and written languages use words not signs yet learners with hearing impairment use sign. So, sufficiently developed in Sign Language seem to impose a challenge to their learning.

Essentially, learners with hearing impairment experiences point to the fact that they face challenges relating to languages. They gave out their views as follows:

My challenge is on spelling and on difficult Sesotho words. 12B

I forget some words. 12A

I have a challenging in the spelling of words. 10A

Interpreters do not know sign language well however, they try to make us understand. 10E

It is challenging to learn through sign language. 9A

Generally, the findings above show that sign language is a unique language, and it is certainly distinct from Sesotho taught as a subject at a secondary level in Lesotho. English which is not also taught as a subject is used as a medium of instruction. It appears that the curriculum expects learners with hearing impairments to attain competence in these languages, especially English so as to use it to access content and understand content through written communication. However, given an illustration of the grammatical structures of both English language and Lesotho Sign Language, a certain level of understanding of the two languages as distinct and incompatible should be maintained. This would bring about a change in curriculum and assessment delivery by teachers.

4.3.4 Ration of Learners versus Sign Language Interpreters

The study also found that there many learners per class to one sign language interpreter, something which affects efficiency. Sign language interpreters' views are stated below:

One of the rules of a sign language interpreters is that, I should attend at least three students in a class, so if they are more than three there is a challenge in trying to communicate to all of them. SLI2

...some of our classes have more than three learners such that some are seated at the back which in turn makes it difficult for me to efficiently communicate to all of them. Any movement I make is a communication to the learners, so sometimes when I change position so as to attend to other learners other learners get lost. (SLI3)

The rules of the interpreters which state that they have to interpret for an hour and take a break. (SLI1)

Interpreters' views above show that they are expected to attend to more than three learners per class, which negatively affects efficiency of their work. Additionally, interpreters are deployed

the entire day except for morning and afternoon short breaks and lunch. This also renders them tired and inefficient. These challenges are most likely to affect quality of learner support.

4.3.5 Unintended Communication Breakdown

The results indicated that teachers and sign language interpreters face challenges of communication breakdown; the teachers claimed that they cannot communicate directly to learners with a hearing impairment; similarly, sign language interpreter who happen to miss the message along the chain of communication. Teachers gave their views as follows: The target commercial subject teacher opines:

I teach learners with hearing impairment using spoken language and the learners acquire the content via signed language, when I assess them, I require that they use the written language. As a matter of fact, this exchange of languages brings about confusion such that in their writing I noticed that some of my message got lost along the chain.

A languages teacher states,

In teaching learners with hearing impairment, there are three languages involved and there are three people involved which makes the content get lost along the chain.

One sign language interpreter also states,

Although teaching is carried out in English but lip reading is done in Sesotho, this impose a huge challenge to me because, I first have to switch the English content to Sesotho then say it silently to the learners so that the learners can lip read. SLI2

On the similar point, one of the learners with hard- of-hearing indicates:

I got confused by what a teacher says and what a sign language interpreter signs. IIC

In teaching learners with hearing impairments, there are three people involved, three languages involved, and along the chain the intended message by the teacher seemed missing as learners could not write what was initially said by the teacher. Further, sign language interpreters should be competent in all the languages used for their learning, be they English, Sesotho and sign language. Excerpts above illustrate a class of language contexts. A child who is hard of hearing, learning a bit of Sesotho from parents and friends and learning to lip-read with anticipation of

Sesotho words gets confused when English must be used. It seems learners could not switch into the right language at the right time, thus creating confusion.

4.3.6 Challenges Brought by Transition

The results of the study indicates that teachers and sign language interpreters claim that they face some challenges in their transitional effort of accommodating learners with hearing impairments to access education. They both claimed that learners with hearing impairment need special attention and an enabling environment, without which their performance would be affected. Participants gave out their views as follows:

They are considered as disabled learners as such, their knowledge acquisition is affected by things such as un allowing environment, and teaching methods so I first have to make learning environment conducive for their learning. CT.

They are so sensitive therefore, in my classroom or my teaching I have to ensure that they are not hurt, as they can be hurt by small things such as topics on senses, and duties they cannot be assigned for in class.LT.

Teaching a class with learners with hearing impairment is not easy because is something goes by and they did not get it they thing it is deliberately done maybe you consider them abnormal so their knowledge acquisition does not reallymatter.MST.

They are naturally emotional and if they happened to feel uncomfortable around, u they so develop a serious attitude hence no learning takes place.SL1

They need attention and if they feel they are not given it hits back at them and affect their way of accessing education.SL2.

The evidence from the results indicate that learners with hearing impairment need attention in relation to teaching aids, environment and special treatment at schools.

4.4 STRATEGIES FOR BETTER ACCESS TO EDUCATION FOR THE HEARING IMPAIRED

When asked how education can be made accessible for learners with hearing impairment participants had various views. These were the training of interpreters, having liberty not to choose certain subjects, encouraging much exposure with communal activities, an opportunity

for learners with hearing impairment to be briefed before lessons, using more teaching aids and a suitable choice of their career.

4.4.1 Training for Sign Language Interpreters

The findings of the study reveal that there is a need to enhance training of sign language interpreters to be more effective. Participants gave out their views as follows:

Just like teachers, there should be a training college for sign language interpreters. MST

It is so stressful interpreting for every subject the school offers. What can work for us is to train for specialization. SLI1

We should be trained for specialization so that we can be enriched with the content which we are specifically interpreting for. SLI3

Sign language interpreter should specialize like teachers, for instance, a sign language interpreter specialized in mathematics and science, specialize sign language interpreter in languages department and the other one in commercial department. CT

The findings above reveal that participants believe that sign language interpreters cannot be competent in all teaching subjects. Their interpretation is not limited to just passing messages through a language, but competence in the subject matter is required as well, with a perception that they should specialise like any other subject teachers.

4.4.2 Liberty in the Selection of Subjects

Participants, especially sign language interpreters, felt that Sesotho should be an optional subject for learners with hearing impairments. Their views include:

Indians in our Lesotho schools do not learn Sesotho I think that should be the same with learners with hearing impairment...Sesotho, should be excluded in their learning area.SLI1

Learners with hearing impairment should focus on English and other subjects which they master (practical subjects) and be excused from Sesotho.SLI2

These learners are loaded with many languages in their study which they do not really need so it's wise that languages become optional to them. SLI3

Cultural part is also a problem to them because it is like we are second world to them; they are not at anyhow exposed to cultural activities therefore when we do that in class they seem not getting anything. LT

Some Sesotho content do not really need a learner to learn them at school but from the society as such they should take part in the things that happens at their villages so that they come to school with an idea. SLI1

The findings show that sign language interpreters believe that there should be flexibility in curriculum choice for learners with hearing impairments. For example, one suggested that Sesotho should be excluded, with a focus having to be on English, which is the medium of instruction and other core subjects. One of the main reasons is that learners are not able to learn Sesotho well because they are usually excluded from day-to-day social activities in their communities.

4.4.3 Briefing of Learners Prior to a Lesson

The findings reveal that learners with hearing impairments should be briefed on the content or concept they are going to learn before a lesson could resume. Sign language interpreters thus gave their views as follows:

Teachers should give a hint a day prior to a coming lesson to make learners with hearing impairment on what the coming lesson is about, so that they know what to expect in that lesson. If there are some tricky words teachers should make the learners aware of them so that he comes to the class with an idea. SLI1

Focusing on the teacher, the sign language interpreter and take notes at the same time, is so stressful so they need to be well informed prior lesson so that they attend a lesson with a picture of what to expect. SLI2

Learners should be given a list of new terms they will meet in a topic they are to learn before so that they get prepared and be aware of what to meet in the content they are to learn more especially in the science department these people have difficult terms so it is not wise that learners first meet them as they are taught in the class. SLI3

The findings suggest that teachers must practice productive teaching practices, that is, preparing learners ahead of the lesson about the content they should cover, and resources they need in order to understand the content. Therefore, learner-centred approaches can be highly useful.

4.4.5 Provision of Accommodative Teaching Aids

The results of the study indicate that the school should have teaching aids, which accommodate learners with hearing impairment.

Teachers point out the following in relation to teaching aids,

The school should have as many teaching aids as possible and those teaching aids should be resourceful material which are also suitable and allowing learning to happen. MST

The school should have books with pictures and explanation just below the picture like the primary text books. CT

There should be a better access to books with pictures, and projectors in classes. Some subjects need overhead projectors so that learning is made easy, and sign language interpreters are helped where they cannot reach learners. LT

On the same point, sign language interpreters gave their views below:

Learners with hearing impairment do not perform well in the continuous writing (compositions), literature and religious studied as such there should be an overhead projector to play the chapters and stories. For example, the projectors can show a process, or events of a certain chapter. SLI1

A projector can play a literature book so that they can see the content of the book themselves. This can also be useful even in science as some of the experiment can be played in the projector not necessarily that the learners have to make the experiments themselves. For example, the experiment can be played in the projector and they see. SLI2

There should also be a video recording so that learners with hearing impairment can record the lesson and latter play it as their means for revision. The video can also be a sort of notes to them such that they can be played and it's a means of reading. SLI3

Participants are of the view that learners with hearing impairment have low literacy skills; they cannot read any continuous piece of work such that suggestions are made towards teaching aids

which exclude them from reading but stimulate them on relevant curriculum activities. So, it can be concluded that the use of visual devices should be considered to make learning accommodative, as using only spoken and written words seems to be challenging to them.

4.4.6 Proper Choice of Career

The findings of the study reveal that, learners with hearing impairment should be helped in making career choices so that they chose career which does not concern regular communication instate they are channelled to vocations. Participants state their views as follows.

Since their language is not official they cannot work everywhere especially where interaction is needed or highly used.LT.

They can suit best in vocational institution so that they are channel to career which request that they use hands and mind instate of commutation. CT.

They can exercise their skills and serve the community if they are trained in vocational area.SL1

Automatically, in classes they do better in practical subjects as such, that is where their career should be based. For example they can do well in Home Economics, Agriculture, Wool Work and Computer.SL2.

The evidence from the findings restated that learners with a hearing impairment do better in practical subjects than languages. As such, in choosing a career, it could be recommended that they go for vocational careers as they can do well on practical learning areas than languages.

4.5 SUMMARY

In this chapter it can be summarised that the all the member of the school seem to be working together in the effort for inclusive practice as they can all sign, however the school seem to lack resources that can make inclusive education a success as a matter of fact learners with hearing impairment are not effectively accessing the curriculum. On the other hand, teachers rely on teacher-centred-methods which seem ineffective in their setting. Sign language interpreters should train so that they can also be effective in their work.

CHAPTER FIVE: DISCUSSION, CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

5.1 INTRODUCTION

The current study sought to explain access to education for learners with hearing impairment at secondary schools in Lesotho. To achieve the overall aim of the study, a qualitative approach was adopted to generate data from teachers, sign language interpreters and learners with hearing impairments at one secondary school in Lesotho. This chapter discusses the findings and draws conclusions from the study and ultimately makes some recommendations for further improvement of the performance for the learners with hearing impairment at secondary schools. Access to education for learners with hearing impairments is conceptualised as an interaction of two related activities, those being teaching and learning. The main focus of the discussion lies on teaching and learning as the first theme of the results. The study further discusses challenges facing access to education for the learners. Lastly, the study discusses the strategies suggested towards access to curriculum for the learners.

5.2 THEORETICAL LENSES

The study adopted the sociocultural theory to guide interpretation of data based on the importance of society, social interaction, especially through language in a child's development (Donald, Lazarus & Lolwana, 2010). The theory emphasises the importance of both society and culture for promoting cognitive development (Wang, 2009). According to Shabani (1990), the sociocultural theory attempts to account for the process through which learning and development take place; cognitive development is seen not only as unfolding in a biologically driven sequence, but as emerging as a result of interactions within a cultural and historical context. The theory looks at the role of language in a child's thinking and development of a mental faculty.

5.3 PERCEPTION ON ACCESS TO EDUCATION

Leila and Massoumeh (2012) see inclusive education as an effort at addressing students' individual differences and needs. Referring to efforts of accommodating learners' diversity, Kigotso (2012), teachers should ensure that learners with hearing impairments access the curriculum in their classes. As Tulder and Zwart (2006) note placement only in the mainstream is not enough but the classes should be inclusive education. The findings of the current study seem to contradict the literature as teachers feel that theirs is to teach everyone but no one in particular.

They seem to ignore the individual diversity in their classes. Apparently, teachers have ignored natural and unique individual diversity of learners in their classes. The task of delivering the message to the learners with hearing impairment is left to sign language interpreters. However, challenges noted in the findings of the study show that it is most unlikely that the learners access curricula efficiently as noted below.

In explaining access to education Ware *et al.* (2011) see teaching as having to be learner-centred, providing different kinds of learning. It was revealed that although teachers leave the imparting of the lesson content to sign language interpreters, there is no co-planning of the lessons between the two. Interpreters also lack relevant vocabulary resonating with Matlosa's (2009, 2012) findings that interpreters should be trained more efficiently to support the learning of those with hearing impairments. Teachers seem indifferent to learners' diversity, showing deficiencies in how the school organises itself for diversity. This means that teachers are unable to engage learners and follow their lead in their teaching which is contrary to Ware *et al.*'s description of access to education above. Thus, it would not be easy for interpreters to be efficient when they are exposed to the content at the same time with learners to whom they would be passing the message while also trying to keep up with pace of the teacher. It is also noted that the interpreters are overworked, they stay in class the entire day, having breaks similar to those of learners; this can render them exhausted and inefficient. Ware *et al.* (2011) also view curriculum access as the extent to which an individual child is enabled to participate in the same breadth of curriculum as other children of the same age and at a level appropriate to their needs. Rather than engaging learners with the breadth of the curricula, it is noted that teachers are despondent as they claim that they do not have enough time to complete the syllabus when they try to accommodate all learners and their different learning styles. They claim that providing support affects the learning pace of bright learners, which indicates they may not accept diversity and plan to include it in their teaching.

5.4 CHALLENGES IN ACCOMMODATING LEARNERS WITH HEARING IMPAIRMENT

Rowesell (2008) suggests varied and effective teaching methods to provide a meaningful learning experience for students. In this regard, Kourbetis (2013) views a "Universal Design" that should foreground educational practices by creating diverse educational environments, tools,

educational materials and support services. In the attempt to accommodate learners with special learning needs, Millett (2009) suggests the use of universal design (UD) as an approach of making environments, products, and communications that are usable by all people. On the other hand, Rose *et al.* (1998) argue that assessment advocates the establishment of a very strong link between curriculum and assessment so that the feedback on the learning progress should be used to formulate strategies to improve the teaching and learning processes.

The findings indicate that, teachers use the same teaching method and expect more or less the same progress irrespective of diversity of learners in their class rooms. One of the reasons is that, teachers feel, they cannot finish all the syllabus. Additionally, learners are subjected to rigid curricula such that they are expected to learn content in Sesotho language relating to words based on sounds yet they are hearing-impaired. The content of the curricula has been designed for making learners to either be competent in spoken or written language, with audio perceptions not eliminated. Lack of teaching and learning resources add further challenges to teaching learners with hearing impairment as this makes them dependent on teacher-centred methods. The findings contradict the expectation from an inclusive education perspective that Rose *et al.* (1998) argue that assessment if correctly done should also indicate what the learner knows and is able to do in addition to the usual paper and pencil examinations. This would have influenced adaptation of the curricula for these learners.

Loreman, Deppler and Harvey (2001) argue that inclusion means fully accommodating students with diverse abilities in all aspects of schooling. It increases participation of all students in and reducing exclusion from the culture, curriculum and communities of local schools (Chiyiyo, 2011). The findings indicate that this is highly unlikely if interpreters are expected to attend to more than three learners per class without breaks as previously noted. The efficiency of interpreters' work is greatly compromised.

Punch, Hyde and Creed (2004) state that the staff should spend time identifying any emotional, social and behavioural development as well as paying attention to a child preferred teaching and learning style, abilities and learning needs and requirement for equipment. This seems to confirm literature as the participants state that teaching methods and conducive environment should be considered so that learning can take place without which learners can be emotionally disturbed, with no access to education.

5.5 PROBLEMS RELATED TO UNDERDEVELOPED LANGUAGE

The sociocultural theory places more weight on social interaction and the value of language used in the interaction for cognitive development. Nordin *et al.* (2015) state that communication between the hearing-impaired and the normal-hearing individuals can be very difficult, and fluency in sign language is yet another feature that plays part in curriculum accessibility of learners with hearing impairment. Felder (1995) also notes that there is a serious mismatch between the learning styles of students in a class and the teaching style of the instructor, with unfortunate potential consequences. Cole *et al.* (1997) state that it is both natural and necessary for children to speak as they play as speech not only accompanies practical activity but also a specific role in carrying out activities. They contend that every society uses language to name actions happening which helps in building a child's cognitive development and to construct abstract ideas (Cole *et al.*, 1997). It is generally agreed that the total hearing impaired and persons with hard of hearing have delayed language development which results in limited opportunities for effective and satisfying interaction (Gudyanga, 2014). Equally, Chimhega and Mpofo (2013) found that deaf learners are academically and socially vulnerable, need collaboration between teachers, their families and the specialists in order to adapt programmes and implement alternative forms of communications. The findings reveal that learners with hearing impairment first struggle due to the differences between the structure of their language and the spoken or written languages. Sign language is not Sesotho nor English, but the learners at secondary schools in Lesotho are expected to learn through English as a medium of instruction and subject as well as learn Sesotho as a subject. They were found to struggle more in these two subjects than any other. With the teacher not doing any effort to accommodate them except in practical subjects where they solve problems on the board, facilitation of the learning interaction was found to be non-existent as lessons were not organised to be learner-centred.

According to Matthews (2016), the ambiguity of a language modality, that is both verbal (linguistic) and visual, might pose a challenge on the working memory of learners with hearing impairments. This is due to the unique language properties of sign language and multimedia that incorporate sign language may have the potential to enhance learning and reduce cognitive load for learners with hearing impairment (Emmorey & Wilson, 2004). A child who is hard--of-hearing and learns a bit of Sesotho from parents and friends, learning to lip-read with anticipation of Sesotho words becomes confused when English should be used. It seems learners

find it difficult to switch to the relevant language at the right time, and this creates confusion. Languages, particularly Sesotho, seemed to impose a great challenge to learners with hearing impairments. The current findings seem to confirm previous literature which argues that sign language is a unique language that is distinct from any spoken language. Additionally, the fact that both Sesotho and English languages are taught as subjects beside their use as media of instruction, meaning that a language should be developed to enable its use in various contexts. This is not the case with Lesotho Sign Language; it is underdeveloped and interpreters find challenges imparting some of the content which denies learners with hearing impairments a chance to have the same access to the curriculum like other learners. Academic studies require a certain level of language competence in the medium of instruction. However, sign language is just a mode of communication, that is viewed as ambiguous and lacking in vocabulary. These challenges put its users at a disadvantage in accessing education.

5.6 STRATEGIES FOR BETTER EDUCATION ACCESSIBILITY

According to Calle (2012), sign language interpreters' training should be improved to enhance the quality in their work so that learners with hearing impairments are effectively included at their schools. Marschark *et al.* (2006) note that access for hearing-impaired students actually consists of two related issues, one being external to the learners, which is the question of whether sign language interpreting or any other means of instruction can fully or sufficiently communicate an instructor's content and the one internal to the learners, which is the question of whether any particular learners have the pre-knowledge, conceptual structure and learning tools to make effective use of what is being communicated. The findings show that learners are not assessed for their needs so that intervention is matched with these needs. So both the training of interpreters and assessment of learners' needs are mandatory to effective teaching of learning with a hearing impairment. These should go together with flexibility in curriculum which gives a choice to the learners to study subjects like Sesotho which seem to have structures depending on being able to perceive sounds.

Participants in the study also felt that learners-centred approaches can be highly useful though they need better planning of time. That can also be enhanced by advocating sign language to be made official and recognised for being used even at home. As Mathews (2016) states that multimedia material may not only improve comprehension of a particular text, but it may also

contribute to hearing impaired learners' overall development of literacy skills and motivation. As such, visual devices should be considered to accommodate spoken and written words in learning and offset any challenges facing the learners.

Kelechi, Olalekan & Olufemi (2013) argued that vocational training services prepare persons with disability to achieve a life style of independence and integration. Therefore, transition should be ordinarily achieved through guidance training for a career choice. Career training for learners with hearing impairments is particularly meant to assist them to settle in gainful and skilled employment. However, the challenge is that lack of training, career guidance and support leads to wrong career choices. The evidence from the findings restate that learners with hearing do better on practical subjects than on languages. As such, it could be recommended that they should choose vocational careers, as they can do better on practical learning areas than languages.

5.7 CONCLUSIONS

Conclusions for this study are drawn in line with the objectives it set out to achieve. With regard to the first objective which reads, "To describe how teachers and sign language interpreters perceive their efficiency in using Lesotho Sign Language as a medium of instruction to educate the deaf", this study concludes that though teachers and interpreters think they are doing the best to include learners with hearing impairment, the support is insufficient and does not enhance access. With regard to the second objective which reads, "To explore the challenges facing teachers and sign language interpreters in teaching learners with hearing impairment", this study concludes that these challenges facing both teachers and interpreters render their services more of integrative than inclusive of learners with hearing impairment. With regard to the third objective, "To explore how learners with hearing impairment, perceive their access to curricula in their schools" the study concludes that the learners feel vulnerable and unsupported.

5.8 LIMITATIONS

It should be noted that due to the fact that the researcher does not know how to sign, direct communication with learners with hearing impairment was impossible and rich data which could be accessed through interviews were missed out; it was also impossible to read and analyse their written scripts.

5.9 RECOMMENDATIONS

Recommendations for this study are drawn for implementing three areas of focus, namely research, practice and policy.

5.9.1 Recommendations for Further Research

Based on the results of the current study it is recommended that a research be conducted which aim to assess the literacy skills on learners with hearing impairment at secondary school level and the influences on them.

5.9.2 Recommendations for Improving Practice

The school should have teachers trained on how to accommodate learners' diversity with the following issues:

- Assessing individual needs of learners
- Developing individual education plans
- Organising available resources for efficiency
- Making certain adaptation such as making Sesotho an optional subject to learners with hearing impairment
- Using teaching aids that can stimulate the learning needs of all the learners
- Using teaching method accommodate diversity
- Training sign language interpreters in content of the various specialization areas.

5.9.3 Recommendations for Policy Development

It is recommended that the Ministry of Education and Training should develop a language-in-education policy to make Lesotho Sign Language one of the subjects to be taught at schools. The Ministry should also implement an inclusive policy which was launched in August 2019 for efficient support of learners with disabilities.

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APPENDICES

Appendix 1 Letter from the NUL to conduct a study

National University of Lesotho
Educational Foundations Department
P.O. Roma 180

21st January 2019

Senior Education officer

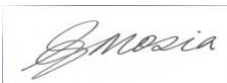
Ministry of Education and Training

RE: HopolangLehloa (200301446)

This letter introduces Hopolang Lehloa as a student registered in the Faculty of Education for M.Ed. in Inclusive Education. She is in the final stages of her study and has to collect data. Her topic is: “Investigating Barriers to education for Learners with Hearing Impairment at Secondary Schools”, and wishes to interview teachers and learners in Leribe Schools.

I will be glad if she gets the support she needs to complete her study.

Yours Sincerely



Paseka A. Mosia (D.Ed.)
Senior Lecturer & HOD
Educational Foundations Department
National University of Lesotho
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Lesotho
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Email: pa.mosia@nul.ls / mosia296@gmail.com

Appendix 2 Authorization letter from District Education Manager



LERIBE EDUCATION AND TRAINING OFFICE.
P.O.BOX 12, LERIBE 300

11 February 2019

The Principal
Mount Royal H.s
Leribe 30

Dear Principal

Subject: Request to collect data in your school

Hopolang Lehloa wishes to collect data in your school for her research study

The study is on the accessibility of curriculum to learners with hearing impairment at your school. She wishes to interview teachers sign language interpreters and learners with hearing impairment.

I kindly request that you give her the assistance she needs.

NOTE: Classes should not be disturbed.

Sincerely

A handwritten signature in black ink, appearing to be 'M. Mosoang'.

Motlatsi Mosoang (Mr)
District Education Manager-Leribe

TELEPHONE: 22400210/22401360

FAX: 22400022



Appendix 3 Informed Consent
CONSENT TO PARTICIPATE IN THE STUDY

I.....confirm that the person asking my consent to take part in this research has made me aware of the nature, procedure, potential benefits as well as anticipated inconvenience of participation.

Therefore, I have read and understand the study as explained in the information sheet. I have had enough opportunity to ask questions and I am ready to participate.

I understand that my participation is voluntary and that I am free to withdraw my participation in the research any time.

I am also aware that, the findings from the study will be anonymously proceeding into a research report.

I agree to the recording of the interview

I have been assured that I will receive a signed copy of the informed consent agreement.

Name surname participant name surname researcher

.....

Signatures

.....

Date.....

Appendix 4 Interview Schedule

1) Research Question - How do teachers and sign language interpreters perceive their efficiency in using Lesotho sign language as a medium of instruction for the deaf enabling deaf education?

Interview Question For teachers

- a) How do you accommodate learners with hearing impairment in you teaching?
- b) To what extend do you plan together with a sign language interpreter?
- c) How do you make up for learners with hearing impairment if they are behind?

Interview Question For the interpreter

- a) To what extend do you plan together with the teacher?
- b) How do you notice if the message has not pass as intended?
- c) What do you do to make your learners to catch up with other learners?

2) Research Question - What challenges do teachers and sign language interpreters' encounter in teaching learners with hearing impairment?

Interview Question For teachers

- a) What challenges to you encounter in your teaching?
- b) How do you overcome those challenges?
- c) Which teaching methods do you use?
- d) Beside the teaching methods what other means do you use in teaching you learners?

Interview Question For interpreters

- a) What challenges do you encounter in interpreting to learners with hearing impairment?
- b) How do you overcome those challenges?

3) Research Question - How could teachers and sign language interpreters' better make the curriculum accessible to learners with hearing impairment?

Interview Question - For both the teachers and sign language interpreters

a) What can be done to make learning of learners with hearing impairment more accessible?

4) Research question- What are the challenges on transition where teaching learners with hearing impairment?

a) What transitional challenges to you face in teaching learners with hearing impairment?

5) Research question- What career construction can work for learners with hearing impairment?

a) What career choice can best suit learners with hearing impairment?

FOR LEARNERS WITH HEARING IMPAIRMENT

6) Research Question - How do learners with hearing impairment perceive their access to curriculum in their schools?

Open-ended Questionnaire Questions for learners

a) How easy is it to learn as a learner with hearing impairment?

b) What are the challenges of learning through sign language?

c) How do you manage to overcome those challenges?

d) What changes do you want to be made to make your education successful?