

**Challenges of using sign language interpreting to facilitate  
teaching and learning for learners with hearing impairment**

**By**

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## DECLARATION

I declare that the study entitled “Challenges of sign language interpreting in facilitating teaching and learning for learners with hearing impairment” is my own work that has not been submitted for any degree or examination at any other university and that all the sources that have been used or quoted have been indicated and acknowledged by means of complete reference.

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Date: 12th October 2021

## CERTIFICATION

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

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## ACRONYMS

ASL	American Sign Language
CPTD	Continuing Professional Teacher Development
DEAFSA	Deaf Federation of South Africa
DoE	Department of Education
ESP	Education Sector Plan
FPE	Free Primary Education
IDEA	Individual with Disability Education Act
IE	Inclusive Education
IEP	Inclusive Education Policy
LEC	Lesotho College of Education
LCR	Lesotho Census Report
LELP	Lesotho Education Language Policy
LIEP	Lesotho Inclusive Education Policy
LSEN	Learners with Special Education Needs
LSL	Lesotho Sign Language
LWHI	Learners with Hearing Impairment
MCRPD	Malaysian Committee on the Rights of Persons with Disabilities
MFD	Malaysian Federation of the Deaf
MSL	Malaysian Sign Language
MOET	Ministry of Education and Training
NSL	Nigerian Sign Language

NUL	National University of Lesotho
PHC	Population and Housing Census
SASL	South African Sign Language
SEU	Special Education Unit
SL	Sign Language
SLI	Sign Language Interpreter
SP	Special Education
TC	Total Communication
UD	Universal Design
UDL	Universal Design for Teaching
UNCRPD	United Nations Convention of the Rights of Persons with Disability
UNESCO	United Nations Educations Scientific and Cultural Organization
UNICEF	United Nations International Children’s Emergency Fund
WFD	World Federation of Deaf

## APPENDICES

Appendix 1	Letter from NUL to the Ministry of Education
Appendix 2	Researcher' request letter to District Education Manager
Appendix 3	Authorization letter from District Education Manager
Appendix 4	Letter from the researcher to the principal
Appendix 5	Letter from the principal to the researcher
Appendix 6	Letter of information for consent to participants
Appendix 7	Informed Consent form
Appendix 8	Interview Schedule

## ABSTRACT

This study investigated challenges of sign language interpreting in facilitating teaching and learning for learners with hearing impairment. The study was also meant to find out how sign language services are organised in the school. Five sign language interpreters and five subject teachers participated in the study through semi-structured interviews. Data for the study was collected and analysed qualitatively through content analysis and the findings organised in categories of responses namely themes and sub themes. The findings are therefore presented using identified themes and extracts from participants to allow readers to make own interpretations. The study revealed that both sign language interpreters and subject teachers face challenges in facilitating learning for learners with hearing impairment. The major challenges which sign language interpreters and learners with hearing impairment face are low competence in sign language such as limited vocabulary to express key concepts in certain subjects and lack of learning material. Additionally, there are few sign language interpreters and one sign language interpreter has to interpret continuously from 8 am to 4 pm and this is tiring. Sign language interpreters interpret all subjects taught during the course of the day, as such, the idea of their competence in each discipline comes into play. This is because interpreters are at the core of teaching and learning for the learners as some subject teachers do not know how to communicate in sign language. Whenever a sign language interpreter is absent from school, teaching for learners with hearing impairment is compromised. Notwithstanding, the school makes efforts to ensure that subject teachers have workshops to equip them with sign language skills. The study recommends that The Ministry of Education and Training should follow up on the implementation of the Inclusive Education Policy, develop sign language as a subject in schools, offer trainings for sign language interpreters and also have a say into hiring the sign language interpreters.



## Table of Contents

<b>Declaration</b> .....	<b><i>i</i></b>
<b>DECLARATION</b> .....	<b><i>i</i></b>
<b>CERTIFICATION</b> .....	<b><i>ii</i></b>
<b>ACKNOWLEDGEMENTS</b> .....	<b><i>iii</i></b>
<b>ACRONYMS</b> .....	<b><i>iv</i></b>
<b>APPENDICES</b> .....	<b><i>vi</i></b>
<b>ABSTRACT</b> .....	<b><i>vii</i></b>
<b>CHAPTER ONE: BACKGROUND OF THE STUDY</b> .....	<b><i>1</i></b>
<b>1.1 INTRODUCTION</b> .....	<b><i>1</i></b>
<b>1.2 BACKGROUND</b> .....	<b><i>1</i></b>
1.2.1 Sign Language Interpretation in Education .....	<i>2</i>
1.2.2 Inclusive Education for Deaf Learners in Lesotho .....	<i>4</i>
<b>1.3 STATEMENT OF THE PROBLEM</b> .....	<b><i>5</i></b>
<b>1.4 AIM OF THE STUDY</b> .....	<b><i>6</i></b>
1.4.1 RESEARCH OBJECTIVES.....	<i>6</i>
1.4.2 RESEARCH QUESTIONS.....	<i>6</i>
<b>1.5 SIGNIFICANCE OF THE STUDY</b> .....	<b><i>7</i></b>
<b>1.6 THEORETICAL FRAMEWORK</b> .....	<b><i>7</i></b>
<b>1.7 RESEARCH METHODOLOGY</b> .....	<b><i>8</i></b>
1.7.1 Research Paradigm.....	<i>8</i>
1.7.2 Research Approach .....	<i>9</i>
1.7.3 Research Design .....	<i>9</i>
1.7.4 Participants Selection.....	<i>10</i>
1.7.5 Data Collection .....	<i>10</i>
1.7.6 Data Analysis .....	<i>10</i>
1.7.7 Ethical Considerations .....	<i>11</i>
1.7.8 Trustworthiness.....	<i>11</i>
<b>1.8 LAYOUT OF CHAPTERS</b> .....	<b><i>13</i></b>
<b>CHAPTER 2: LITERATURE REVIEW</b> .....	<b><i>14</i></b>
<b>2.1 INTRODUCTION</b> .....	<b><i>14</i></b>
<b>2.2 SOCIOCULTURAL THEORY AND LEARNING</b> .....	<b><i>14</i></b>
2.3.1 Role of social interaction in cognitive development.....	<i>14</i>
2.3.2 Language development.....	<i>16</i>
<b>2.3 SIGN LANGUAGE INTERPRETING</b> .....	<b><i>18</i></b>
<b>2.4 ACCESS TO CURRICULUM</b> .....	<b><i>20</i></b>
2.4.1 Suitability of mainstream school’s support.....	<i>21</i>
<b>2.5 UNDERSTANDING SIGN LANGUAGE USE IN LEARNING</b> .....	<b><i>22</i></b>

<b>2.6 CHALLENGES OF SIGN LANGUAGE INTERPRETATION .....</b>	<b>24</b>
<b>2.7 CONTEXTUAL FACTORS IN EDUCATION OF THE DEAF .....</b>	<b>26</b>
<b>2.8 INTERPRETING STRATEGIES TO ASSIST LEARNERS WITH HEARING IMPAIRMENT .....</b>	<b>28</b>
<b>2.9 INCLUSIVE LEARNERS WITH HEARING IMPAIRMENT IN LESOTHO .....</b>	<b>29</b>
2.9.1 Overview of the legal and policy framework .....	30
2.9.2 Inclusive education in Lesotho .....	30
2.9.3 Sign Language interpretation in Lesotho .....	31
<b>2.10 ORGANISATIONS AND MANAGEMENT OF SIGN LANGUAGE INTERPRETATION SERVICES ...</b>	<b>33</b>
<b>2.11 SUMMARY .....</b>	<b>34</b>
<b>CHAPTER 3: RESEARCH METHODOLOGY .....</b>	<b>35</b>
<b>3.1 INTRODUCTION .....</b>	<b>35</b>
<b>3.2 RESEARCH PARADIGM .....</b>	<b>35</b>
<b>3.3 RESEARCH APPROACH .....</b>	<b>35</b>
<b>3.4 RESEARCH DESIGN .....</b>	<b>36</b>
3.4.1 Case Study Design .....	36
<b>3.5 PARTICIPANT SELECTION.....</b>	<b>37</b>
<b>3.6 DATA COLLECTION .....</b>	<b>37</b>
3.6.1 Semi-Structured Interviews.....	37
<b>3.7. DATA ANALYSIS .....</b>	<b>38</b>
3.7.1 Content analysis .....	38
3.7.1.1 Document analysis .....	39
3.7.2 Data editing .....	39
3.7.3 Data coding.....	39
3.7.4 Assignment of themes .....	40
3.7.5 Data presentation.....	40
<b>3.8 ETHICAL CONSIDERATION .....</b>	<b>40</b>
3.8.1. The principle of do no harm.....	40
3.8.2 Informed consent.....	41
3.8.3 Confidentiality .....	42
<b>3.9 TRUSTWORTHINESS.....</b>	<b>42</b>
3.9.1 Credibility .....	42
3.9.2 Transferability .....	43
3.9.3 Dependability .....	43
3.9.4 Confirmability .....	43
<b>3.10 SUMMARY.....</b>	<b>44</b>
<b>CHAPTER FOUR: PRESENTATION OF RESULTS .....</b>	<b>45</b>
<b>4.1 INTRODUCTION.....</b>	<b>45</b>
<b>4.2 BACKGROUND TO SCHOOL CONTEXT.....</b>	<b>45</b>
<b>4.3 CHALLENGES IN FACILITATING LEARNING .....</b>	<b>46</b>
4.3.1 Language skills barriers .....	46
4.3.2 Inadequate time for collaborative lesson planning .....	48

<b>4.4 CONTEXTUAL BARRIERS TO INTERPRETATION.....</b>	<b>51</b>
4.4.1 Influence of learners’ impairment on learning .....	51
4.4.2 Inadequate human resources and undefined roles for interpreters.....	53
<b>4.5 TEACHERS TRAINING FOR INCLUSION .....</b>	<b>56</b>
<b>4.6 STRATEGIES ADOPTED TO TEACH THE DEAF.....</b>	<b>57</b>
4.6.1 Using repetition and remediation .....	57
4.6.2 Assessment and other teaching strategies .....	59
<b>4.7 SUMMARY.....</b>	<b>62</b>
<b>CHAPTER FIVE: DISCUSSION, CONCLUSION, LIMITATIONS AND RECOMMENDATIONS.....</b>	<b>63</b>
<b>5.1 INTRODUCTION .....</b>	<b>63</b>
<b>5.2 SOCIOCULTURAL THEORY AND LEARNING .....</b>	<b>63</b>
<b>5.3 CHALLENGES OF SIGN LANGUAGE INTERPRETING IN FACILITATING EDUCATION .....</b>	<b>64</b>
<b>5.4 CONTEXTUAL BARRIERS TO INTERPRETATION.....</b>	<b>65</b>
<b>5.5 TEACHER TRAINING FOR INCLUSIVE EDUCATION .....</b>	<b>66</b>
<b>5.6 STRATEGIES ADOPTED TO TEACH THE DEAF.....</b>	<b>67</b>
<b>5.7 CONCLUSION .....</b>	<b>67</b>
<b>5.8 LIMITATIONS .....</b>	<b>68</b>
<b>5.9 RECOMMENDATIONS.....</b>	<b>68</b>
<b>REFERENCES .....</b>	<b>70</b>
<b>Appendices.....</b>	<b>85</b>
Appendix 1: Letter from NUL to conduct a study .....	85
Appendix 2: Request Letter to District Education Manager .....	86
Appendix 3: Authorization Letter from District Education Manager .....	87
Appendix 4: Letter from the researcher to the principal .....	88
Appendix 5: Letter from the principal to the researcher .....	90
Appendix 6: Letter of information for consent to participate in a research .....	91
Appendix 7: Informed Consent.....	93
Appendix 8: Interview Schedule .....	94

# CHAPTER ONE: BACKGROUND OF THE STUDY

## 1.1 INTRODUCTION

This study investigates the challenges of sign language interpreting to facilitate teaching and learning for learners with hearing impairment. To achieve this, the chapter describes the background to the study, reflects the statement of the problem that the current study sets out to investigate and presents the aim of the research, objectives and research questions that were used to explore the statement of the problem. It further explains the significance of the study, the theoretical framework underpinning the study and the research methodology which outlines the research paradigm, approach, design, participant selection, data collection and analysis, ethical considerations and finally, mechanisms used to ensure trustworthiness of the results.

## 1.2 BACKGROUND

Glaser and van Pletzen (2012) indicate that internationally, the single most important contributing factor to poor literacy acquisition in people who are deaf has been identified as the language of teaching and learning. In the World Federation for the Deaf's (WFD) survey, Sign Language (SL) had official recognition in 44 out of 93 countries studied and among these, only a few had given sign language legal and official status as a right enshrined in the constitution (Jokinen, 2010). Wit (2011) indicates that due to the Salamanca Statement in 1994 and the adoption of the United Nations Convention of the Rights of Persons with a Disability (UNCRPD) in 2006, more attention is given to the education of children with disabilities, first through Special Education (SE) and later, Inclusive Education (IE).

World Federation of the Deaf (2020) on the International Day of Sign Language stated that there were over 70 million deaf people in the world with only 2 percent of them having access to sign language education. The limited access to sign language education acts as a barrier to deaf people's access to education as UNESCO (2016) reports that children learn better in their own language. This mandates governments to facilitate education of persons with hearing impairment in their most appropriate languages. UNESCO (2011) states that there has been encouragement of mother tongue instruction in early childhood and primary education since 1953 for the academic success of all children because many children speak a home language that differs from the language of instruction.

Adoption of UNCRPD in 2006 has made education a right for all people and a gateway to gaining independence, citizenship rights, appropriate employment, economic and self-

empowerment. Article 24 of the UNCRPD requires states to go beyond simply mixing learners from different backgrounds within general education and incorporate differences into the education system so that persons with disabilities learn the skills to participate effectively in a free society while enabling learners without disabilities to benefit from the experiences of learners from diverse backgrounds (UN, Article 24 – Education)). UNESCO (2011) states that when children receive formal instruction in their first language throughout primary school and then gradually transition to academic learning in the second language, they learn the second language quickly.

Malaysian Committee on the Rights of Persons with Disabilities (MCRPD) (2016) states that learners with hearing impairment must be educated in their most appropriate languages and in environments which maximize personal, academic and social development within and outside formal school settings. Wit (2011) postulates that to make education accessible to the learners with hearing impairment, a Sign Language Interpreter (SLI) needs to interpret the spoken language into sign language and vice versa but acknowledges that this does not guarantee full or equal access to education. Marschark (2005, as cited in Wit, 2011) suggests that learners with hearing impairment do not comprehend like their hearing peers in the classroom, even when provided with highly qualified sign language interpreters in controlled setting where competing visual information is not an issue.

Generally, Quer and Quadros (2015) argue that first language planners established one national (spoken) language in their respective countries while ignoring sign languages and made spoken languages stronger. As a result, Deaf people usually lack the right to education in their own language (Helsinki, 2017).

### 1.2.1 Sign Language Interpretation in Education

De Wit (2011) postulates that for persons with hearing impairment to successfully engage in inclusive education, they depend on the quality of interpreting services. However, sign language has remained underdeveloped for use as a medium of instruction. Quer and Quadros (2015) highlight that at the 1880 Milan Conference, a very influential language policy based on the oppression of sign languages was established, and education systems determined that only spoken languages should be taught. The decision ignored the cultural and social perspectives of deaf communities (Duke, 2009). It was only in 2010 when the declaration for sign language was signed calling for the right of every sign language user to use their native sign language without restriction and discrimination (European Union, 2011). Although, using sign language as the language of teaching and learning exposes learners with hearing

impairment to a visual language they can easily acquire, given their biological readiness and adequate language stimulation (Glaser & van Pletzen, 2012), the use of sign language for teaching faces several challenges noted below.

It is assumed that sign language interpretation is a costly enterprise for education departments around the world and this deters support for learners with hearing impairment. Governments and educational institutions focus their debate on the financial implications of providing interpreting services in the inclusive classroom than measuring the quality effect of sign language interpretation (Wit, 2011). Similarly, Fodok (2010) notes that higher costs dampen the willingness to subsidize interpreting services when a number of learners with hearing impairment in hearing classrooms increases.

Moreover, given the reluctance of education systems globally, to provide for deaf, there is lack of qualified sign language interpreters for the deaf to meet the high demand of sign language interpreting services for deaf students studying at Malaysia universities, polytechnics and community colleges (Maarif, Akmeliawati & Bilal 2012). Although Malaysian Sign Language (MSL) is sanctioned as the official language of Deaf people (Maarif et al., 2012), support for learning MSL is only provided by non-governmental organizations, such as the Malaysian Federation of the Deaf (MFD) and training for interpreters is also limited (Yusoff, 2014).

Similarly, there is limited research on secondary and post-secondary education and training for learners with hearing impairment in African countries (Glaser & Van Pletzen, 2012). Mulondo's (2013) qualitative study postulates that the government of Zambia recognizes the rights of persons with disabilities, the Deaf inclusive, to have access to good and quality education. While primary education seems more accessible, access and participation in secondary education and beyond is low. For example, 65.5 percent of the Deaf and 64.4 percent of the blind attend primary school. Only few (24.1%) deaf and similarly low (22.6%) number of blind attain secondary education with even lower (8% and 11.3%) number of deaf and blind persons respectively, accessing tertiary education (Ministry of Finance - Zambia, 2010).

Treat (2016) notes that Nigerian Sign Language (NSL) has not been given legislative recognition and research attention and deaf education has hardly improved over the years, which has resulted in the underdevelopment of the sign languages in use (Asonye, Emma-Asonye & Edward, 2018). Asonye et al. (2018) note that teachers with sign language skills in Abuja are overworked as they must teach their own subjects and interpret for other non-signing teachers as less than 40 percent of teachers in this state are trained in sign language. Similarly,

many schools for the deaf in South Africa report the adoption of sign language as the language of teaching and learning (Department of Education (DoE), 2004), but most of the teachers have no specialized training in sign language (Glaser & van Pletzen, 2012). DEAFSA (2009) indicates that only 14 percent of South African teachers have well-developed South African Sign Language (SASL) skills.

### 1.2.2 Inclusive Education for Deaf Learners in Lesotho

#### 1.2.2.1 *Legal and Policy Framework on Inclusive Education in Lesotho*

Lesotho has adopted policies which mandate education of learners with disabilities. Section 11(3) of the Children's Protection and Welfare Act indicates children's right to education regardless of the type or severity of the disability (Kingdom of Lesotho, 2011). Equally, section 3(a) and (b) of the Education Act 2010 makes provision for free and compulsory education at primary level and strengthens the necessity for children with disability to be given the special treatment, education and care (Kingdom of Lesotho, 2010).

The Education Sector Plan (ESP) (2016-2026) outlines the development and Inclusive Education Policy (IEP) as a step towards implementation of the statutes (Ministry of Education and Training, 2016). The Lesotho Inclusive Education Policy (LIEP) was adopted in 2018 and launched in 2019. The LIEP (2018) commits the MoET to support all learners, irrespective of their disability, aptitude and/or ability to give them the opportunity to reach their full potentials. Similarly, the Lesotho Education Language Policy (LELP) recognises the role of Lesotho's minority languages in providing for equal access to education (Ministry of Education and Training, 2019).

#### 1.2.2.2 *Education Support Service for learners with hearing impairment in Lesotho*

Despite Lesotho's sound legal and policy framework, not much seems to be known about access to education for learners with hearing impairment. There are studies which highlight challenges to inclusive education in Lesotho. For example, a qualitative study by Mosia (2014) found that there is poor understanding of inclusive education within the sector, policy uncertainty, lack of budgeting for learners' support and teachers' lack of relevant skills to make inclusive education work. Similarly, Khoaeane's (2012) quantitative study found that educators face problems supporting LSEN as most 113 (45.38%) of 249 respondents do not understand inclusive education due to poor Continuing Professional Teacher Development (CPTD), and school buildings do not accommodate learners with physical disabilities. A study by Shelile and Hlalele (2014) also reveals that there is inadequate CPTD and insufficient resources to implement universal access to education policy. With only five people employed by the Special

Education Unit (SEU) to serve the whole country on matters of inclusion, the unit fails to meet its own target in training teachers for inclusion (Shelile & Hlalele, 2014).

Two studies have focused directly on education of learners with visual impairment. A qualitative study by Lehloa (2019) investigated a mismatch between teachers and sign language interpreters' expectation of their work in facilitating education for learners with hearing impairment. The study found that some teachers do not cater for learners with hearing impairment when teaching and there is no prior planning or consultation between teachers and sign language interpreters. Additionally, sign language interpreters are overworked as they interpret for all lessons and their efficiency is affected by interpreting for more than three learners in their classes.

An earlier qualitative study by Matlosa (2009) similarly showed that teachers lack skills suitable to teach deaf children and due to this, deaf learners' education in Lesotho is not satisfactory. The study revealed that Lesotho Sign Language (LSL) was not sufficiently used in the schools for the deaf and that brought about discrepancy between the mother tongue policy and its implementation. Further, teachers were neither competent in using LSL nor familiar with Deaf culture (Matlosa, 2009). However, none of the studies focus on sign language interpretation and do not even indicate if it works or does not as a medium of instruction for Basotho learners with hearing impairment. Therefore, the current study seeks to investigate the challenges of sign language interpreting in facilitating teaching and learning for learners with hearing impairment.

### 1.3 STATEMENT OF THE PROBLEM

Kamaleri and Eide (2011) indicate that literacy rate in Lesotho is estimated at 87.0 percent which is due to the take-off of the Free Primary Education (FPE) introduced in 2000 in lieu of the Millennium Development Goal on Education. Thirteen percent of the population in Lesotho cannot read and write and the extent to which this affects Deaf people needs a close scrutiny (Ministry of Finance and Development Planning, 2018). The 2016 Population and Housing Census' (PHC) results indicate that there are 45,607 people with disabilities, which is 2.27 percent of the population of 2,007,201 in Lesotho. People with hearing impairment constitute 20.3 percent of people with disabilities (45,607). However, the PHC does not disaggregate educational attainment by disability hence reference to the 2006 census. Lesotho Census Report of 2006 indicates that there were 9644 deaf people and 28.2 percent of these deaf had never been to school, 63.4 percent had acquired primary school education, 10.3 percent had undergone secondary school education and 3.4 percent had obtained tertiary qualification while



10.4 percent has other qualifications (Ministry of Finance and Development Planning, 2009). The Medium-Term Survey Report states that 14.9 percent of 8372 persons with hearing impaired have attended preschool, 19.3 percent has primary school, 12.9 percent has secondary school, and 5.1 percent has tertiary education and 6.9 percent has other qualifications (Ministry of Development Planning, 2013). Given the current data, it is observed that many deaf people are not able to progress through their studies. Research globally points that challenges in sign language interpretation leads to high attrition of learners with hearing impairment from the formal education system hence the current study undertakes to investigate the challenges of sign language interpreting in facilitating teaching and learning for learners with hearing impairment.

#### 1.4 AIM OF THE STUDY

The aim of the study is to explore challenges of sign language interpreting in educating learners with hearing impairment in Lesotho.

##### 1.4.1 RESEARCH OBJECTIVES

Following from the aim, the study will address the following objectives:

1. To describe teachers/interpreters' views on challenges learners with hearing impairment face in learning through SL interpretation.
2. To describe how SL interpretation services are organised and managed at one inclusive school.
3. To describe the extent to which interpreters view efficiency of their interpretation across curricula.
4. To investigate strategies that seem to work for the sign language interpreting in assisting learners with hearing impairment.

##### 1.4.2 RESEARCH QUESTIONS

The study therefore focuses on addressing the following question and its subsections:

What are the challenges of sign language interpretation in educating learners with hearing impairment in Lesotho?

Therefore, the following sub-questions guide my study:

1. What are teachers/interpreters' views on the challenges learners with hearing impairment face in learning through sign language interpretation?

2. How are sign language interpretation services organised and managed at inclusive school for the deaf?
3. To what extent do interpreters view efficiency of their interpretation across curricula?
4. What are strategies that seem to work for the sign language interpreting in assisting learners with hearing impairment?

### 1.5 SIGNIFICANCE OF THE STUDY

This study could be used as a source of information to design strategies for improving sign language interpretation in educating learners with hearing impairment in inclusive schools. It would therefore assist education planners/managers to come up with policies and programmes that would mitigate the gaps in education through sign language. This study would further assist curriculum designers in designing curriculum that would help sign language interpreters and subject teachers to efficiently cater for sign language users within the Lesotho's education system. Moreover, this study has identified areas where improvements are needed in the teaching and learning through sign language. The findings and recommendations of this study provides sign language interpreters and subject teachers with strategies in facilitating education for learners with hearing impairment. Finally, future researchers may use the outcomes of this study as a baseline study for their future studies.

### 1.6 THEORETICAL FRAMEWORK

This study adopted Vygotsky's socio-cultural theory as lenses to interpret how sign language use affects access to education for learners with hearing impairment. Schunk (2012) indicates that the theory emphasises the social environment as a facilitator of development and learning through language use which is an instrument of social culture. During teaching and learning process, learners are involved socially with peers and the teacher and as Vygotsky (1978) reflects, social interaction is important for learning. According to Verenikina (2003), social interaction between people and in this case, a teacher and learners, is necessary, but it is the quality of the teacher-learner interaction which is considered vital in that learning. The development of mind originates from interaction of an individual with society (Vygotsky, 1978).

Generally, social interaction is made possible through language. Vygotsky (1962) claims that language is social from the very beginning of life and first appears in communication and for communication (Verenikina, 2003). One important aspect of language learning is that it begins

at home with the interactions between parents and their children and among siblings but the Deaf's experience is limited as their language, in most cases, is different from that of the parents and siblings. This therefore hinders their learning, communication and interaction with others. For deaf people, spoken language "plays almost no part in their development and is not a tool they can use to accumulate cultural experience or to participate in social life" (Vygotsky, 1983, 323). This theory however reflects the importance of society in a child's development as it addresses the role of language and society. It is this role of language in cognitive development that forms the subject matter of this study.

## 1.7 RESEARCH METHODOLOGY

This section sets out principles of research design of the study and procedures followed. According to Creswell and Creswell (2018), research methods involve the forms of data collection, analysis, and interpretation that researchers propose for their studies. A research methodology gives an outline or a plan of action for the study (Wathore, 2012). So, the purpose of this section is to describe the research paradigm, approach, participants selection, data collection methods or techniques, data analysis, ethical considerations, measures of trustworthiness and crystallisation.

### 1.7.1 Research Paradigm

The study adopted an interpretive paradigm which approaches reality as unique to context and expressing individuals' unique experiences (Thanh & Thanh, 2015). Interpretive researchers begin with individuals and set out to understand their interpretations of the world around them by using approaches such as 'verstehen' ('understanding') and hermeneutic (uncovering and interpreting meanings) to try to see the social world through the eyes of the participants, rather than the researcher (Cohen, Manion & Morrison, 2018). People make sense of the world in their own terms, and such interpretation takes place in socio-cultural, socio-temporal and socio-spatial contexts (Marshall & Rossman, 2016). According to Rehman and Alharthi (2016), the target of research with an interpretive orientation is not to discover universal context and value free knowledge and truth but understand individuals' interpretations of social phenomena with which they interact. Realities are socially constructed implying that truth and reality are created, not discovered leading to an inevitable corollary of interpretive ontology (Rehman & Alharthi, 2016).

Interpretivists seek experiences, understandings and perceptions of individuals for their data to uncover reality rather than rely on numbers of statistics (Thanh & Thanh, 2015). Interpretive researchers employ methods that generate qualitative data, and although numerical data could

be involved, they are not relied upon, and data are generated from open-ended interviews with varying degrees of structure, observations, field notes, personal notes, documents etc. (Khalid, 2016).

### 1.7.2 Research Approach

The study adopted a qualitative approach. Creswell (2014) states that qualitative research is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem when the researcher obtains views from participants, then describes and analyses the responses to reach possible themes related to the research query. According to Green and Salkind (2014), a qualitative research examines human behaviour in the social, cultural and political contexts in which they occur. The approach interprets and describes issues or phenomena systematically from the point of view of the individual or participants being studied to generate new concepts and theories (Mohajan, 2018). In qualitative research, there is a relationship between the researcher and what is studied thus explaining the socially constructed nature of reality.

Further, qualitative research is an inquiry where the researcher collects data in face-to-face situations by interacting with selected persons in their setting and in their context (McMillan & Schumacher, 2010). It may use interviews, classroom observations and open-ended questionnaires to obtain, analyse, and interpret the data of visual and textual materials (Zohrabi, 2013). This study used semi-structured interviews to allow participants to express their views, thoughts and perceptions of sign language interpreting in facilitating the teaching and learning of learners with hearing impairment.

### 1.7.3 Research Design

Given that the study is oriented towards fluid views about how sign language interpreters work to impart knowledge, values and skills to the deaf, it adopted a case study design. Wilson (2013) indicates that a case study is a systematic way of evaluating events, collecting data, analysing information and reporting results, with the end goal of fully analysing the case investigated. Kumar (2011) is also of the view that a case study is an essential research design that is used when exploring an area where knowledge is very limited or where people want to have a broad understanding of the situation, phenomenon, episode, site, group or community. The structure of a case study should be the problem, the context, the issues, and the lessons learned (Creswell, 2014). This study focused on an only inclusive high school targeting sign language interpreters and subject teachers in the school for data generation.

#### 1.7.4 Participants Selection

According to Bryman (2016), in purposive sampling, the sample units are chosen because of features or characteristics which would enable detailed exploration and understanding of the central themes and questions the researcher wishes to study. In purposeful sampling, researchers intentionally select information rich individuals and sites to learn or understand the central phenomenon (Creswell, 2012). In this study, the school was selected purposively as it is the only secondary school that practices inclusive education for the Deaf in the district. Five sign language interpreters and five subject teachers were selected purposively as frontline staff that facilitates learning for learners with hearing impairment.

#### 1.7.5 Data Collection

According to Creswell (2012), collecting data means identifying and selecting individuals for a study, obtaining their permission to study them and gathering information by asking them questions or observing their behaviours. Qualitative researchers collect data through examining documents, observing behaviour, or interviewing participants (Creswell, 2014). The study used semi-structured interviews for all the participants and some information was collected through examining related documents. The semi-structured interviews are used to gather information directly from the participants. According to Leedy and Ormrod (2013), semi-structured interviews are more flexible and more likely to yield information that the researcher had not planned to ask for. Semi-structured interviews called for the researcher to ask a predetermined set of questions, using the same wording and order of questions as specified in the interview schedule (Kumar, 2011). This aided the researcher to collect information and observe the facial gestures and feelings from the participants too.

#### 1.7.6 Data Analysis

Data were collected through interviews and the documents and therefore analysed through content analysis. According to Mohajan (2018), qualitative content analysis is a method of analysing written, verbal or visual communication messages in evaluating the data from case studies. Qualitative content analysis helps with reducing the amount of material for it requires the researcher to focus on selected aspects of meaning; those aspects that relate to the overall research question (Schreier, 2014). Therefore, content analysis helped to identify themes and trends that run through the data.

### 1.7.7 Ethical Considerations

Creswell (2014) indicates that the researcher has an obligation to respect the rights, needs, values, and desires of the informant(s). According to Johnson and Christensen (2011), research ethics are a guiding set of principles that assist researchers in conducting ethical studies. Creswell and Creswell (2018) emphasise that researchers need to protect their research participants, develop a trust with them, promote the integrity of research, guard against misconduct and impropriety that might reflect on their organizations or institutions, and cope with new and challenging problems. To adhere to this, I ensured that the identity of the respondents remains anonymous in the research report by using pseudonyms instead of their real names, also that their participation in the study was voluntary and that they were free not to share information which made them uncomfortable.

Before conducting interviews, a requisition letter from the National University of Lesotho to the Ministry of Education and Training was made and permission was granted. The Ministry wrote an introductory letter to the identified school which I used to approach the concerned school's principal to ask for permission to undertake my study. Once clearance was granted, the researcher was allowed to interact with the participants wherein I introduced the purpose of the study to the sign language interpreters and subject teachers. Therefore, they were informed that all the information collected was confidential and were assured that their experiences and perceptions would be treated anonymously.

### 1.7.8 Trustworthiness

Trustworthiness provides authority and is guidance to develop rigor in a study. According to Yin (2011), the first objective for building trustworthiness and credibility is that qualitative research must be done in a publicly accessible manner. Trustworthiness refers to the extent to which the data obtained in the study is plausible, credible, and trustworthy (McMillan & Schumacher, 2010). It stems from the co-construction and interpersonal contact with participants and the subsequent data (Guercini, Raich, Müller, & Abfalter, 2014). Yin (2011) indicates that trustworthiness is ensured by giving detailed and thick description of accounts completed from the planning stages through to the reassembling of interviews. This enables other people to be able to evaluate authenticity of a study through the evidence used to support its findings and conclusions.

#### 1.7.8.1 Credibility

In quantitative research, credibility is achieved through reliability, replicability, consistency, and accuracy of a study's findings (Tracy & Hinrichs, 2017). As suggested by Cohen and

Creswell (2018), to ensure credibility as one of the most important factors in establishing trustworthiness and accuracy in the findings about the phenomenon under study is honesty. Birt, Scott, Cavers, Campbell and Walter (2016) state that a technique for exploring the credibility of results is member checking. The authors go on to say that data or results are returned to participants to check for accuracy and resonance with their experiences. Moreover, Harper and Cole (2012) add that member checking remains an important quality control process in qualitative research because while the researcher is conducting the study, participants receive the opportunity to review their statements for accuracy. In this regard, once I had transcribed data, I shared the transcripts with the participants so that they are afforded a chance to verify if their interviews have been captured accurately and are a true picture of what transpired.

#### *1.7.8.2 Transferability*

Transferability deals with the concern that the results of the research at hand can be applied to a wider population. Kivunja and Kuyini (2017) explain that transferability represents the researchers' efforts to make sure that they provide enough contextual data about their research so that readers of their findings can relate those findings to their own contexts. The possibility of transferability depends on how adequately the methods applied are explained. In this regard, methods used for data collection and analysis in this study are explained thoroughly to enable other researchers to make their own judgments and evaluate applicability of the methods to their contexts. According to Miles, Huberman and Saldana (2014), the readers need to know whether the conclusions of a study—a case study, in particular—have any larger import.

#### *1.7.8.3 Dependability*

Kivunja and Kuyini (2017) expound that dependability refers to the ability to observe the same outcome or findings under similar circumstances. Miles et al. (2014) demonstrate that the underlying issue here is whether the process of the study is consistent, reasonably stable over time and across researchers and methods. In this study, the researcher's role and status have been delineated clearly. Dependability is done to enable any observer to trace the course of the research step by step through the decisions made and procedures described. Data in this study was collected across appropriate settings, times and respondents in line with the research questions of my study.

#### *1.7.8.4 Confirmability*

Kivunja and Kuyini (2017) state that confirmability refers to the extent to which the findings of one's study can be confirmed by others in the field. They go on to indicate that this is to

ensure that researcher's biases are eliminated from contaminating the results of the study. To comply with this principle, as Miles et al (2014) postulate, I ensured that the study's general methods and procedures are described in detail and that the conclusions are explicitly linked with displayed data.

## 1.8 LAYOUT OF CHAPTERS

The study has been broken down into the following five chapters:

Chapter One – It gives the background to the study, presents the problem statement, research objectives and questions, brief descriptions of the theoretical framework underpinning the study and research methods adopted.

Chapter Two – It describes the theory applied in the study, language development and review of literature on SL, SL interpreting, SL use in learning, curriculum access, interpreting strategies, inclusion of learners with hearing impairment in Lesotho and its overview of legal and policy framework.

Chapter Three – It describes the research methods and methodology applied in undertaking this study.

Chapter Four – It presents the findings and their analysis.

Chapter Five – It presents the discussion of the findings, conclusions drawn, limitations of the study and recommendations outlined.



## CHAPTER 2: LITERATURE REVIEW

### 2.1 INTRODUCTION

The purpose of the study is to investigate the challenges of sign language interpreting in facilitating teaching and learning for learners with hearing impairment. Sign language is the first language for the deaf and the only medium of instruction for them. First, the chapter describes the socio-cultural theory as the chosen lens for this study because it argues for the centrality of language in cognitive development and for acquisition of academic skills. It explains the role of significant others namely peers, teachers etc. in supporting the development of learners. Then, the discussion narrows to challenges that may come from using a minority language such as sign language in teaching and learning at basic education level. In this regard, the literature discussion explores challenges that may arise from using an underdeveloped language to capture the essence of curricula concept and possible exclusion that may arise from loss of communication between the teacher and the interpreter.

### 2.2 SOCIOCULTURAL THEORY AND LEARNING

The Sociocultural theory raises two issues as critical for human development namely social interaction and the role of language in it. People interact, and the medium of their interaction is language hence the importance of looking at the extent to which sign language used in school context enables sufficient social interaction to ease cognitive and educational achievement of learners with hearing impairment.

#### 2.3.1 Role of social interaction in cognitive development

Birinci (2014) indicates that the role of meaningful social interaction is very significant in first language acquisition and that social interactionists think that children acquire languages by interacting with the environment. A child's cognitive development is circled in two planes namely social and psychological (Pathan, Memon, Khoso & Bux, 2018; Vygotsky, 1978). In the social plane, the child develops in the company of parent, mentor or teacher and then becomes independent. Vygotsky (1978) explains that children acquire cultural and social heritages by gaining knowledge through contacts and interactions with people as an interpsychological plane, and then later internalises this knowledge by adding own personal value to it as an intrapsychological plane (Turuk, 2008).

According to Amineh and Asl (2015) and Vygotsky (1978), people master their behaviour through psychological tools and language is the most important psychological tool. Language

influences cognitive development (Liu & Matthews, 2005) in the learners' construction of knowledge. According to Donald, Lazarus and Lolwana (2010), the Zone of Proximal Development (ZPD) explains how cognitive development cannot be separated from its social context in which language plays a central role, especially with the guidance of a teacher. In this study, the language used by learners with hearing impairment is investigated as a potential source of barrier for the learners' access to curriculum. Communication, according to Verenikina (2003), is a way an individual can assess his or her every action by the social standards held in common with other people. Vygotskian perspective emphasizes that dialogue - communication - is central to the process of knowledge construction (Vygotsky, 1986 p.124). According to Pathan et al, (2018), the socio-cultural theory describes a child's cognitive development as enabled by the guidance and assistance of a teacher, parent or any knowledgeable peer. Pathan, et al (2018) further note that a child's cognitive development depends on the child being mentored by knowledgeable others. Vygotsky (1978) presents mediation as a representation of tools that are adopted by the child to resolve a problem or achieve a target. Mediation is the process through which the learner appropriates or takes possession of the cognitive tools that make the construction of knowledge possible (Donald et al, 2010). The development of mind originates from interaction of a person with society and that during mediation of learning, educators should ensure that learning is matched in some manner with a child's developmental level (Vygotsky, 1978). Collaboration and interaction with more capable peers is an effective way of developing skills and strategies (Vygotsky, 1987). However, a language barrier exists between learners with hearing and those without hearing impairment which may affect the mediation process. Muiruri (2015) states that while language and communication are perceived as the main problems encountered by learners with hearing impairment, if teachers and learners can communicate, learning can be promoted.

Basically, constructivism views learning as an active process in which a learner constructs new ideas or concepts (Alzaghoul, 2012). Vygotsky (1978) emphasised that children and adults are both active agents in the process of a child's development. Verenikina (2010) emphasizes that the teacher's intervention in children's learning is necessary, but it is the quality of the teacher-learner interaction which is more important. It may be argued that learners with hearing impairment are denied this opportunity when they do not interact directly with their subject teachers but interact with their teachers through sign language interpreters. This suggests challenges to the co-construction development where both a teacher and a learner are active agents in the learning process (Verenikina, 2010).

### 2.3.2 Language development

According to Marschark and Hauser (2012), basic language skills development happens in the first (2-3) years of life as it is generally recognized as critical period for language learning. Moores (2010) indicates that children with hearing impairment have comparable opportunities to learn sign language as their first language. However, languages present a wide variety of problems that vary from language to language (Goyal, Pandey & Jain, 2018). As Lederberg, Schick and Spencer (2012) postulate, language development has long been recognized as the most important area affected by hearing loss and that childhood hearing loss presents challenges to language development, especially spoken language. Learners with hearing impairment delay to access language, as such, that affects their chances for education acquisition. According to Gudyanga, Wadesango, Hove and Gudyanga (2014), the delayed language development experienced by most children with hearing impairment results in more limited opportunities for effective and satisfying interaction. National Deaf Children (2014) reveals that since 90 percent of children with severe to profound hearing impairment are born to adults with normal hearing, they do not develop adequate understanding of any language modality (oral communication, sign language, lip-reading) to assist in the process of comprehending written language.

Moores (2010) highlights that until the late 1990s, most of the learners with hearing impairment lacked sufficient access to sound to acquire spoken language. A study by Magee (2014) found that deaf children born to deaf parents generally outperform those born to hearing parents in linguistic and academic activities. Additionally, Csizér and Kontra (2020) indicate that the latter group of children only acquire the national sign language in playgroups, kindergarten, or at school through interaction with other signing children, especially those of Deaf parents. Additionally, Roberson and Shaw (2018) states that most deaf children whose families do not use sign language access much of their language through the hands of their educational interpreters. It can therefore be deduced that these children, having missed early opportunities for language learning, find it difficult to improve their language skills and learn content for the target subject simultaneously.

Lederberg et al. (2012) posit that the diversity of learners, as well as the language barriers that affect both learners and their teachers during teaching and learning involves learning the language while they are expected to teach at the same time. Wilbur (2011) therefore indicates that speaking and signing simultaneously is highly challenging; the duration of signs is longer than that of spoken words. There is difficulty representing prosody in both modalities. Magee

(2014) therefore states that the linguistics approach to language development is formed on the notion that children do not need to be taught directly how to speak; language development and its pragmatics are learned from conversations near children indirectly. Lederberg et al (2012) add that some learners who are deaf develop spoken language in bilingual (sign-spoken language) contexts and some develop it when they are in language-rich environment. These learners must be able to use language to communicate with their teachers and hearing peers to be effective members of the class, otherwise any communication gap can result in their academic failures or under achievement (Ugwuanyi, Ubah, Eze, Ijeoma, Out, Adaka & Ezeugwu, 2017).

Therefore, the relevance of deaf learners' developmental background, and opportunities to learn and use sign language early in their lives cannot be overstated. Additionally, the extent to which a schools' curricula provides learning opportunities for the learners to interact with peers and all teachers with ease is important to their development and access to curriculum. Birinci (2014) indicates that listening and speaking skills are almost omitted from the curriculum of learners with hearing impairment because of not hearing and speaking even their native tongue. The author adds that it is difficult for these learners to learn abstract items, and to write and read efficiently.

In countries that are former British colonies like Lesotho, teaching and learning for all subjects, except for the native language, is done through the medium of English and prescribe books are written in English. According to Nicholson (2010), English is a language that has one or more combinations of sounds for one word, so for bilingual learners, this makes learning English a very difficult task. The researcher adds that children who are trying to learn without English being their native language often struggle and become confused. Xu (2018) indicates that students in special education school learn English through reading and writing, and teachers too teach English through reading and writing. Mandyata and Kamukwamba (2018) highlights several studies, such as, those conducted by Cummins (2000) and Drasgow (1998) which show that using the mother tongue in learning facilitated learning of literacy skills in the second language, but this does not seem to agree with the learning of learners with hearing impairment whose mother tongue remains sign language and local signs varies from home to home. Birinci (2014) states that there are some similarities between deaf learners' English learning and learning of English by hearing learners however, deaf learners have more difficulties in learning English.

Bragiel and Kaniok (2016) proposed that learners with hearing impairment need to be taught using sign language as a medium of instruction right from on-set of their academic life beginning with localized signs for them to perform well academically. Mandyata and Kamukwamba (2018) add that according to instructional policy, children are supposed to be taught literacy in their familiar language between grades one and four before an exposure to a new language. This includes even learners with hearing impairment. The authors add that the pupils are expected to use skills acquired through a familiar language to learn the second language, such as, English Language. They go on to say pupils must learn the vocabulary, culture and grammar of their mother tongues before learning a second language. However, this is not the case with learners with hearing impairment.

Morávková (2011) states that a deaf person has to acquire two languages (spoken language of their country and sign language) in the same time, as sign language does not necessarily follow the same grammatical rules as spoken language of that particular country. The author goes on to say it is also important to know that sign language has its own grammar and syntax and has developed, as well as any other spoken language, during the period of time into separate languages. Domagala-Zysk (2013) indicates that sign language does not have a written form, and this leaves learners with hearing impairment with nothing to compare with while hearing learners do. The link between spoken language and sign language can be seen in the finger spelling (Morávková, 2011). It is not in most cases that the interpreters finger-spell, at times they use signs when working on accessibility of curriculum for learners with hearing impairment.

### 2.3 SIGN LANGUAGE INTERPRETING

The World Federation of the Deaf (1993) defines sign language interpreting as a service of translating speech to a community of the deaf and interpreting signs to hearing people. This simply means sign language interpreting is a process of transmitting messages to and from two communities. Interpreters communicate in both speech and sign language. As Roberson and Shaw (2018) state, interpreting allows two or more individuals who do not share a common language to engage in a communicative interaction through a person who is bilingual (interpreter). As a result, sign language interpreting services are typically used to help a learner who is deaf meet access to discourse in the classroom (Lawson, 2012). Contrarily, National Deaf Centre on Postsecondary Outcomes (2017) states that the role of the sign language interpreter in the classroom is to faithfully convey the spirit and content of the communication occurring in the classroom.

National Deaf Centre on Postsecondary Outcomes (2017) further indicates that sign language interpreters are not teachers' aides nor assistants. They are typically hired because deaf students need access to discourse in the classroom and their primary role is to interpret, facilitate communication and to provide access to the auditory features of the school environment (Lawson, 2012). Moreover, Marschark and Hauser (2012) indicate that a sign language interpreter does not have a role in teaching. Signed language interpreters render "a spoken or signed source language message into a spoken or signed target language in real time" (International Organization for Standardization, 2014, p. 1). Heyerick and Vermeerbergen (2012) assert that interpreting services in inclusive education give pupils with hearing impairment better access to the learning environment and that without interpreters, "integrated education" is just a waste of time, total isolation and a lot of self-study.

However, Marschark, Sapere, Convertino, and Seewagen (2005a), suggest that the mode of interpreting has little if any effect on learning, at least at the college level. Their study found that deaf students scored between 60 percent and 75 percent on multiple-choice tests, as compared with scores of 85 percent to 90 percent obtained by their hearing peers even though the former was under the guidance of a sign language interpreter. This shows that even with the assistance of sign language interpreters, learners with hearing impairment fail to access information like their hearing peers. In addition, Marschark and Hauser (2012) state that most interpreters are unqualified, but learners with hearing impairment must depend on them with the result that learners are unable to get full access to classroom instruction and discussion. They are sign language interpreters but may not officially be recognized as teachers of the subject content.

De Freitas, Delou, Amorim, Teixeira, and Castro (2017) analysed perceptions about working with students who are deaf in Brazil and found that sign language interpreters play a vital role in the education of students who are deaf because they mediate the whole teaching and learning process as they are responsible for the communication between teachers and students. They do not teach but deliver concepts uttered by subject teachers. De Freitas et al, (2017) clarify that sign language interpreters are very important as they are part of educational scenario with an important role in it. Moreover, Berge and Ytterhus (2015) indicate that it is important that students with and without hearing loss be able to overcome their language barriers and that the interpreter has a continuum of effective role performance strategies to accommodate their need for bilingual support.

National Deaf Centre on Postsecondary Outcomes (2017) explicates that the interpreter's job does not start and end in the classroom and that the interpreter must become familiar with the course content that would be discussed and the signs needed to convey them. Sign language interpreters also assist learners with hearing impairment even outside classes, this is to help when these learners with hearing impairment socially interact with hearing peers.

## 2.4 ACCESS TO CURRICULUM

Curriculum delivery is the mandate for the whole school and for it to be implemented effectively, it must be flexible and accessible to all learners including those who are deaf (Mapepa & Magano, 2018). Humphrey (2008) and United Nations Educational, Scientific and Cultural Organization UNESCO (2005) identify four values namely, presence, participation, acceptance and achievement as key to evaluate access to curriculum. UNESCO (2005) explains presence to mean a school's attempts to set realistic standards for attendance and punctuality and to enable the learning environment for such. Participation in the context of learners with hearing impairment would mean creating an environment where the learners can learn with and from peers without disabilities (Booth, 2005). The concept participation means ensuring that the learners with hearing impairment access quality education in the same manner as their hearing counterparts (UNESCO 2005). Learners with hearing impairment must be accepted by peers and teachers to facilitate their cognitive, social and emotional development of every student (Humphrey, 2008) and in this context, it would mean that hearing learners must learn sign language to ease communication with peers who are deaf. When cognitive, social and emotional development of learners with hearing impairment are assured, they can achieve their maximum potential. Ware, Butler, Robertson, O'Donnell and Gould (2011) conclude that '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.

Research on the extent to which curriculum is accessible for learners with hearing impairment globally indicate that barriers persist. Ware (1994) identifies three aspects of classroom organisation: time, people (staff and pupils) and environment, all of which can contribute to curriculum access. The physical environment of the classroom is an important factor in facilitating access to education for children who are deaf and hard of hearing and lack of acoustically treated classrooms in most mainstream secondary schools could be a factor that makes it difficult for students with hearing impairment from accessing the curriculum (Chimhenga & Sibanda, 2016). According to Chimhenga and Sibanda (2016), at secondary

level in Zimbabwe, curriculum includes the coverage of more than eight subjects that are assessed at the end of the fourth-year programme. They go on to suggest that curriculum in its entirety should be adapted in order to satisfy the needs of all and that the school ethos should be inclusive and allow for mutual interaction among the deaf and their speaking peers. Additionally, Cooper-Matthews (2016) observes that Deaf learners are expected to learn grade-level curriculum at the same pace as their hearing peers, yet they face learning challenges as a result of delays in language acquisition and reading comprehension skills. As such, Chimhenga and Sibanda (2016) argue that the curriculum in the mainstream secondary schools has to be streamlined to meet the needs of students who are Deaf or hard of hearing

#### 2.4.1 Suitability of mainstream school's support

According to International Bureau of Education, a curriculum is the central means through which the principle of inclusion is put into action within an education system (UNESCO, 2016). The curriculum essentially sets out what is to be taught, how it is to be taught and how learning is to be assessed (O'Mara, Akre, Munton, Marrero-Guillamon, Martin, Gibson, Llewellyn, Clift-Matthews, Conway & Cooper, 2012). Rose and Vue (2010) maintain that there should be a flexible and effective curriculum for every learner whether average or slow. In addition, Ralabate (2011) states that a curriculum that is responsive to learners' diversity reduces barriers to instruction. Thus, several considerations must be made to support learners with hearing impairment.

Storbeck (2011) indicates that teachers in most developing countries are unable to differentiate, adapt material and use sign language. For example, Chimhenga and Sibanda's (2016) study investigating curriculum accessibility by deaf learners at secondary schools in Bulawayo, Zimbabwe, indicates that gaining full access to curriculum seems complicated by the absence of teachers competent in sign language knowledge. Most teachers in the Zimbabwean secondary schools seem to have little or no knowledge of sign language (Chimhenga & Sibanda, 2016). Chimhenga and Sibanda (2016) further state that accessibility of secondary school curriculum seems complicated for learners with hearing impairments as they find it difficult to adjust to the oral communication demands. The authors maintain that once the language of the school is accessible to them, the opportunity for achieving academic success becomes accessible to them. In a study conducted in Zambia, Mildred and Mulondo (2013) indicate that graduates from the training institutions join the teaching service with very limited skills in sign language to effectively teach learners with hearing impairment. So, for these



learners, inaccessibility to curriculum can be a result of lack of sign language interpreters or teachers trained in sign language.

In order that learners with hearing impairment access curriculum, there is a need for subject teachers to be familiar with sign language so that communication becomes easy for curriculum accessibility. According to Gudyanga, et al (2014), the delayed language development experienced by most children with hearing impairment results in limited opportunities for effective and satisfying interaction. Chimhenga and Sibanda (2016) postulates that the oral methods of communication followed in the regular secondary settings make it difficult for students with hearing impairment to access the curriculum. On the other hand, Glaser and Van Pletzen (2012) reflect that in the past, educational practice in schools for children who are deaf focused on developing speech and lip-reading skills rather than a language system appropriate to their sensory abilities even though this widely restricted them access to content areas in the curriculum.

Learners who are deaf are mostly disadvantaged in terms of curriculum access. For example, a qualitative study conducted by Dissake and Atindogbe (2019) in Cameroon, states that the deaf and hearing students follow a common language-based curriculum, which aims at developing speaking, listening, reading, and writing skills of young Cameroonians in both official languages, English and French. Class lessons are therefore given orally as if all pupils in the classrooms are all hearing learners; the language-based curriculum of Cameroon gives no place to sign language as the tool of communication of learners who are deaf.

Chimhenga and Sibanda (2016) again state that deaf and hard of hearing learners fail to directly communicate with their non-disabled peers in the mainstream schools. They go on to argue that lack of additional support in mainstream schools like sign language interpreters and hearing aids make it difficult for the Deaf and hard of hearing learners to access the curriculum. So mainstream schools must transform in ways suitable to accommodate and support learners with hearing impairment, and this says they must consider how sign language is used in their teaching and learning.

## 2.5 UNDERSTANDING SIGN LANGUAGE USE IN LEARNING

Mandyata and Kamukwamba (2018) state that people with severe hearing impairments are naturally unable to hear and this is one of the reasons they prefer to use sign language in their everyday communication over spoken language. Gupta, Agrawal and Shahnaz (2014) define sign language as a language which uses manual communication and body language to convey

meaning by providing replacement for speech among deaf and mute people. Moreover, sign languages express meaning through manual signs (finger spelling), body movements (hands movement and gestures) and postures, and linguistically-specific facial expressions that are as attuned to the characteristics of visual and gestural processing as spoken languages are to the demands of auditory and oral-motor processing (Wilbur, 2011). It involves simultaneous combination of hand shapes, orientation and movement of the hands, arms or body, and facial expressions to fluidly express a speaker's views (Muiruri, 2015). On the other hand, Marschark and Hauser (2012) claim that a natural sign language consists of a large vocabulary of signs and rules that govern how sentences are constructed and combined (grammar) just like spoken language, as deaf communities use it for communication (Ngobeni, 2017).

Marschark and Hauser (2012) affirm that sign languages vary according to countries and some countries have more than one sign language, corresponding to their multiple spoken languages, they too have their own accents and dialects like spoken languages. In addition, WASLI (2015) indicates that sign languages are languages of most deaf people and that sign language is not universal. For example, the United Kingdom and United States of America both use English language as medium of communication, but sign languages in these two countries differ (Unit for Language Facilitation, 2004; Hiddinga & Crasborn, 2011). Hauser, Hearn, McKee, Steider, and Thew (2010) add that there is no single situation in the world in which sign language forms the dominant language for a discussion on the global situation of sign languages.

Over 95 percent of deaf children are born to hearing (non-signing) families and that sign languages are therefore not usually transmitted within the family (De Meulder, 2016). Similarly, Akach (2010) notes that almost 90 percent of children who are deaf in South Africa are born to hearing parents. This indicates that a typical way of acquiring language informally from family and peers is restricted when a child is born deaf (Hiddinga & Crasborn, 2011). When hearing parents and siblings have no signing skills and no knowledge of sign languages, deaf children become isolated even within their own families (Finnish Association of the Deaf, 2015).

In school situations, Glaser and Van Pletzen (2012) indicate that Deaf learners cannot access spoken language, and therefore are excluded from important teaching and learning processes in the hearing classroom. These researchers explain how Deaf learners can fully access education through a signed language, which leads them to conclude that “the educational needs of Deaf learners can be most efficiently, equitably and cost-effectively met in South African Sign Language (SASL) centres” (Aarons & Akach, 2002, p. 153), where schooling in all

subjects (including additional languages and text literacy) would be provided through the medium of a signed language. This suggests that social interaction, viewed by socio-cultural theory as critical for human development, is limited by knowledgeable others speaking a different language. As such, learners with hearing impairment have difficulties in succeeding in an educational system that relies on spoken and written languages to transmit knowledge. As noted below, they depend on sign language interpreting which presents its own challenges.

## 2.6 CHALLENGES OF SIGN LANGUAGE INTERPRETATION

According to Ngobeni (2017), sign language becomes a challenge to deaf learners to use as their first language in all subjects at schools. Deaf learners are visually-oriented people, they use their eyes as their ears, and their hands as their mouths, as a result, they cannot 'listen' while performing a task (Chataika, 2010). Moreover, Ngobeni (2017) indicates that deaf people cannot perform two duties at once such as listening and writing, so if an explanation of a concept needs to be made, they must stop writing and look at the sign language interpreter or else they are unable to hear anything uttered by the subject teacher. Helsinki (2017) makes it clear that language plays a crucial role in whether children succeed in school or not, and multiple studies have shown that children learn best through their mother tongue.

In the classroom situation, unskilled teachers (those not skilled in sign language) fail to effectively explain concepts to learners who are deaf and to ensure that they understand the course material, due to a communication breakdown (Akach, 2010). Glaser and Van Pletzen (2012) argue that interpreters and teachers need to be trained in forms of language and pedagogy that would benefit all learners in class, including those who are deaf. Akach (2010) points out that some learners who are deaf encounter difficulties to start learning sign language while being under pressure to master curriculum. Once the language of the school is accessible to them, the opportunity for achieving academic success will also be accessible to them (Canadian Hearing Society, 2020).

Ngobeni (2017) reflects that the single most important contributing factor to poor literacy acquisition in Deaf people, globally, has been identified as the language of teaching and learning as in many schools for deaf children, this language was, historically, a spoken language. According to Glaser and Van Pletzen (2012), there are many difficulties and challenges around providing inclusive education fully for Deaf students. It is evident that sign language interpreting has not been given much attention and so has sign language. Roberson, Russell and Shaw (2011) reveal that there has been little research about sign language

interpreting that would describe the demographics of interpreters or the training and practices for interpreters.

Not all persons with hearing impairment use sign language as their mode of communication (Rietveld-Van Wingerden & Tijsseling, 2010), some use oral communication especially those with cochlear implant, but they should all be taught a sign language (Mellon, Niparko, Rathmann, Mathur, Humphries, Napoli, Handley, Scambler & Lantos, 2015) for some cannot utter words. Cooper Matthews (2016) suggests that when deaf students learn using sign language, they become cognitively engaged in the learning process.

Teaching and learning together for the hearing and hearing-impaired learners give many challenges even for the hearing learners. Mildred and Mulonda (2013) emphasize that sign language (like all other languages) has some shortcomings that hinder the learning progress of all learners including learners with hearing impairment in the learning environment. Most learners with hearing impairment are formally introduced to sign language at schools, as most of them acquire their sign language from signing deaf family members or deaf people in their communities. All learners have problems due to learning delay, so it becomes worse for learners with hearing impairment. It has been indicated by Swanwick and Marschark (2010) that most learners with hearing impairment come to school without the language fluencies necessary to benefit optimally from instruction, so in cases where they do not understand, communication breakdown occurs (Bank, 2015) which hinder their learning process.

Wakumelo and Miti, (2010), suggests that learners with hearing impairment need to be taught sign language for them to use it effectively in the learning process. According to Mandyata and Kamukwamba (2018), learners with hearing impairment find themselves exposed to a mixture of modes of communication which often leave them confused and unable to make sense of the communication. This is a challenge in that, sign language is not taught in a school as a subject like other mother-tongue languages but is used to deliver concepts uttered by subject teachers. Mandyata and Kamukwamba (2018) study reports that sign language needs to be learnt as a language and not necessarily depending on general usage of common signs used in the community.

It is very difficult for some Deaf learners to start learning sign language while being under tremendous pressure to cope with mastering the rest of the curriculum (Ngobeni, 2017). Mandyata and Kamukwamba (2018) indicate that sign language itself contains structures and processes that spoken languages do not seem to have. The authors add that it has grammatical

structures which are suitable as visual medium, but not necessarily for use in oral language communication. As a result, teachers fail to effectively explain concepts to Deaf learners and to ensure that they understand the course material, due to a communication breakdown (Akach, 2010). Thus, deaf learners cannot access spoken language, and therefore are excluded from important learning and teaching processes in the hearing classroom (Glaser and Van Pletzen, 2012). Mandyata and Kamukwamba (2018) state that it is critical that the factors that seem to have effects on the use of sign language and achievement of learners with hearing impaired, are not fully investigated.

Lawson's quantitative study (2012), observed that during classroom observation, in the 41.41 percent of the intervals analysed, 35.68 percent of the intervals were interpreted while 39.78 percent of the teacher's discourse was not interpreted. During the author's observation, the interpreter in this study spent more time tutoring rather than interpreting the classroom discourse even though she was not required to do any tutoring. The author indicates that in this study, the interpreter played many roles by spending more time tutoring than interpreting the classroom discourse and functioning as an adult caretaker, while traditionally, teachers demonstrate and explain course material using spoken language to ensure that learners understand and can learn and retain information (Ngobeni, 2017). National Deaf Center on Postsecondary Outcomes (2017) indicates that sign language interpreters do not serve as tutors and do not take responsibility for student's attendance and classroom effort, unless specifically arranged. It further states that some sign language interpreters try very much to make sure that all learners with hearing impairment do not lose concentration and in this way, they fail to grasp all concepts to interpret, so learning environment itself plays a vital role in learning.

## 2.7 CONTEXTUAL FACTORS IN EDUCATION OF THE DEAF

Even though there has been an increase in the number of students with hearing impairment in inclusive settings, not all educational environments are properly equipped to meet these learners' educational needs (Berndsen & Luckner, 2012). Understanding the importance of the environment can minimise the effects of a learning difficulty and enhance performance and self-esteem (Gudyanga, et al., 2014). According to Guardino and Antia (2012), students with hearing impairment may be prone to visual distractions which may cause a reduced ability to attend to relevant aspects of the classroom and negatively affect their focus on academic tasks. Colclasure, Thoron, and LaRose (2016) argue that teachers must understand the severity of a student's hearing impairment and arrange for necessary accommodations to ensure that such a student has equal access to instruction like all other students. Further, Marschark and Hauser

(2012) suggest that classroom seating must be organized to allow all learners face the teacher (and preferably not looking out on the playground).

Colclasure et al (2016) suggest that learners who rely on an interpreter must be positioned closely to see the interpreter and subject teacher and likewise, the interpreter must clearly see the learners and subject teacher. The authors specify that this enables the learners with hearing impairment to lip-read and see hands movements and facial expressions of the interpreter and therefore catch the communicated information without any disruptions. Some learners may require lip-reading to reach a normal level of comprehension, and this needs preferential seating arrangements (Gudyanga et al., 2014). Bell (2013) asserts that lip-reading is useful as a communication strategy during teaching as it enables the student to ‘fill in the gaps’ of missed information when using amplified residual hearing. Colclasure et al (2016) therefore suggest that over-exaggeration of lip shape when talking and over-exaggeration of gestures should not be used as they can cause confusion to the students with hearing impairment.

Environments with too much noise make listening and learning difficult for learners with hearing impairment who are attempting to access spoken language and focus on the lesson presented by the teacher or on peer discussion (Guardino & Antia, 2012). According to Bell (2013), this can be rectified by various amplification devices that can be used to raise the educator’s voice above the background noise. Colclasure, et al (2016) assert that learners with hearing impairments often rely on sight to obtain classroom information, so teachers must provide them with written information whenever possible; notes, hand-outs or notes written on the board.

Another factor that can affect teaching and learning for deaf is light as they rely on visual information. Guardino and Antia (2012) postulate that learners’ behaviours can be affected by too much or too little environmental lighting because most of them primarily use their vision to communicate. Bell (2013) finds that poor lighting when watching audio-visual materials result in learners not able to lip-read. In this regard, Guardino and Antia (2012) emphasise that classroom physical environments can influence the way students behave and affect their learning. Dye and Bavelier (2010) add that visual or auditory distractions, poor lighting, obstruction of line of sight, and seating near doors or windows with high traffic are among the classroom features that can influence academic engagement for learners with hearing impairment. So, environment has to be considered for learners with hearing impairment as it is a factor that may hinder their learning process. In line with these, several strategies should be employed.

## 2.8 INTERPRETING STRATEGIES TO ASSIST LEARNERS WITH HEARING IMPAIRMENT

For classroom interaction to be conducive for all learners, there should be strategies employed. Erbas (2017) states that incorporating strategies into the learning environment results in an increase in the occurrence of engagement and involvement, both academically and socially. Research outlines a number of strategies deemed effective for enabling curriculum accessibility of deaf learners. They include group work, scaffolding, Universal Design for Learning (UDL) and Total Communication (TC).

According to Mapepa and Magano (2018), a teacher has a responsibility to motivate learners by using appropriate teaching strategies and active learning techniques. Learner-centred approaches play a major role in effective teaching and learning at schools, so learners with hearing impairment can be urged to work together. Winter and O’Raw (2010) encourage group work for it is peer-assessed and improves peer interactions and cooperative learning. Again, one aspect of learning for learners who are deaf is that they should be developed to be responsible and independent in unfolding new ideas, so scaffolding strategy should be implemented. Bornman and Rose (2010) describe ‘scaffolding’ as a teaching strategy that can be employed in classrooms where learners experiencing barriers to learning are involved, so the teacher helps to arrange the classroom context so that learners can participate and socially interact with each other. In this way, learners develop new skills and approaches towards their learning.

In trying to cater for learners with hearing impairment, O’Mara, et al. (2012) found Universal Design for Learning (UDL) to lead to better social skills and more enjoyable learning. UDL refers to the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people, regardless of age, size or disability (Disability Act 2005). O’Mara, et al. (2012) further state that UDL is based on the theory that the curriculum should be designed from the beginning to incorporate the diverse needs of all learners by providing flexibility. Dalton (2017) indicates that every educator needs to consider the UDL principles in the context of their instructional environment and of the objectives, methods, materials, and assessments that are pertinent to learning environment. The author goes on to say UDL strategies and methods encourage development of expert learners through personal engagement and motivation. Kourbetis (2014) notes that Universal Design (UD) must foreground educational practices by creating diverse educational environments, tools, educational materials and support services. When universal design is applied to learning, curricular materials are flexible enough to suit all learners, and the activities provided are

accessible to students across a diverse range of abilities (Winter & O’Raw, 2010). O’Mara, et al. (2012) again indicate that the aim is that UDL reduce barriers to the curriculum while ensuring that it is appropriately challenging for all learners.

Swanwick and Marschark (2010) indicate that learners with hearing impairment learn less than hearing classmates and no more (and often less) from what they see signed than what they read. The authors clarify it by saying they cannot assume that the only barriers to learners with hearing impairment’s learning in the classroom are communication related. In addition, Hannah (2013) observes that other communication strategies include gesturing and sign language and has reflected oral language, lip-reading, written communication, drawing, finger-spelling, and baby signs.

Total Communication (TC) is another strategy employed. Hyjánková (2010) describes TC as a combination of fingerspelling, signs, speech or lip reading, speech and auditory amplification by providing several opportunities for children with hearing impairment to learn to communicate and use speech for social interaction. TC helps majority of general education teachers to solve their communication and teaching problems with students with hearing impairment (Ugwuanyi et al, 2017). The main benefit of TC is that it can open all avenues and modes of communication to enhance the learning experiences for learners with hearing impairment and reduces the pressure on teachers to choose one mode over another (Muiruri, 2015). Ugwuanyi et al (2017) emphasize that to achieve the goal of an appropriate communication, general education teachers should be able to acquire and use total communication technique during teaching or interaction. Blake et al (2017) emphasize that teachers should utilize effective strategies to ensure that students who are hearing impaired or deaf have access to course instruction. Morávková (2011) postulates that while using TC, learners might feel more secure during communication as it is connected with breaking the communication barrier.

## 2.9 INCLUSIVE LEARNERS WITH HEARING IMPAIRMENT IN LESOTHO

Inclusive education in Lesotho has been put under scrutiny recently but there is limited research which focuses on access to education for learners with sensory impairments particularly those with hearing impairments. The Lesotho education system is anchored on sound legal and policy framework, but a lot needs to be established as to how this benefits learners with hearing impairments.



### 2.9.1 Overview of the legal and policy framework

Lesotho has recently adopted and launched the Lesotho Inclusive Education Policy (Ministry of Education and Training (MOET), 2018) and Education Language Policy (Ministry of Education and Training, 2019) in an effort to address barriers, injustices, discrimination, marginalisation and inequalities through which deaf community is the socially excluded. Through the Education Language Policy, the MOET makes calls for support from all Basotho in learning Nguni languages and Sign Language through formal and non-formal education channels (Ministry of Education and Training, 2019). It is further indicated that the goal of the Lesotho Education Language Policy is to accelerate inclusive and equitable quality education that responds to the local and international needs of all Basotho learners from different ethnic backgrounds and disability statuses (Ministry of Education and Training, 2019).

Curriculum and Assessment Policy (MOET, 2009) adopted Sign Language as the third official language in Lesotho. In comparison to recognition given other official languages, it may be expected that Sign Language is made a medium of instruction for the Deaf from Grades 1 to 3 in compliance with the mother tongue principle of the policy, and then be used as a language of instruction and a subject from Grade 4 onwards. On the contrary, sign language does not have this priority of being taught as a subject. Lehloa (2019) recommended that MoET must develop a language in education policy which must make Lesotho Sign Language one of the subjects to be taught at schools. This is because it is only used by interpreters to pass the message uttered by subject teachers. Lehloa (2019) goes on to say Lesotho Sign Language (LSL) is underdeveloped, and interpreters find challenges imparting some of the content which denies learners with hearing impairment a change to have the same access to the curriculum like other learners. It is not sufficiently used in schools for learners with hearing impairment hence the need for the current study to establish efficiency of sign language interpreting when used.

### 2.9.2 Inclusive education in Lesotho

Matlosa and Matobo (2007) noted limited research on education of learners with hearing impairment in Lesotho. The study recommended that sign language interpreters should be recruited to assist during lectures for the deaf at higher institutions and deaf learners too be allowed to take tape-recorders to classes that could later be interpreted in the same way that the blind do. The study also recommended that parents be trained in the socialisation of their children and to take a leading role in the socialisation and training of their children with special needs.

Generally, research on inclusive education in Lesotho highlights gaps in teacher training for inclusion. Shelile and Hlalele's (2014) qualitative study found that the MOET fails to conduct continuous professional training of teachers due to inadequate human resources, lack of funds, and work load for available staff among other things. The study strongly recommends that the MOET should develop a schedule for continuous professional staff development. In addition, Mosia's (2014) qualitative study indicates that inclusive education in Lesotho faces several threats, such as poor perception of what inclusive education entails, slow development of policy on special education, poor development of education resources to allow inclusive education. Efficient use of sign language interpreting can align well with the country's commitment to include learners with disabilities in the general education (Mkandawire, Maphale, and Tseeke, 2016).

### 2.9.3 Sign Language interpretation in Lesotho

As a teacher, the researcher has observed that sign language is not taught in schools as a subject like Sesotho and English and this poses a potential challenge for learners with hearing impairment as their language is not developed incrementally with content they learn in schools. Matlosa (2009) postulates that education of learners with hearing impairment in Lesotho is not satisfactory due to reasons among which are Lesotho Sign Language is not sufficiently used in the schools for learners with hearing impairment which brings about discrepancy between the mother tongue policy and its implementation. Additionally, due to teachers who are not proficient in Lesotho Sign Language, learners fail to understand some topics taught to them. Matlosa and Matobo (2007) indicate that in Lesotho, the conditions are such that learners with disabilities and their non-disabled peers are treated the same and yet the former have special needs that require specialized equipment. This is due to the fact that in Lesotho, none of the teachers at secondary levels had been trained for the integration of learners with disabilities (Matlosa & Matobo, 2007).

Again, Mosia (2014) postulates that the implementation of some goals of the Policy Statement was delayed due to lack of resources. He continues to say the MOET cannot implement inclusive education successfully if the general education system fails to provide quality education for all learners. Education in Lesotho fails to meet its goal of providing quality education to every Mosotho child; hearing and deaf Basotho children.

Mosia (2014) highlights that in January 2009, the Lesotho College of Education (LCE) started a diploma programme while in August the same year, the Faculty of Education at the National University of Lesotho (NUL) started a degree programme on Special Education. On the

contrary, these Special Education courses are not majors and they are taken voluntarily. Moreover, teachers in Lesotho secondary schools do not have a formal training in inclusive education because programmes focusing on inclusive education have been introduced very recently in Lesotho teachers' training institutions (Johnstone and Chapman, 2009). This does not look good because the process seems delayed.

In her qualitative study, Lehloa (2019) states that the task of delivering message to the learners with hearing impairment is on sign language interpreters. They play an important role in closing the gap between peers who are deaf and hearing peers; sign language interpreters make sure that learners who are deaf receive the same information that the hearing receive. The findings of Lehloa's (2019) study also highlights a mismatch between teachers and sign language interpreters' expectation of their work. The author therefore recommends that the MOET must develop a language in education policy which must make Lesotho Sign Language one of the subjects taught at schools and ensure that the inclusive policy, which was launched in August 2019, is implemented for efficient support of learners with disabilities. Moreover, Lehloa (2019) further suggests that Lesotho education system must accommodate learners' diversity including considering the subject Sesotho an optional subject to learners with hearing impairment and also training sign language interpreters in content of the various specialization areas.

Furthermore, Lehloa (2019), found out that a single interpreter serves all subjects without being substituted by another and thus leading to interpreter's fatigue and inadequate time to prepare lesson with subject teachers. The results further indicate that teachers and sign language interpreters face a challenge of communication breakdown; teachers claim that they cannot communicate directly to learners with hearing impairment, similarly sign language interpreter happen to loss the message along the chain of communication. Again, Lehloa's research (2019) finds that some challenges are due to lack of cooperation between the subject teachers and sign language interpreters for they, at times, fail to plan together, which results in sign language interpreters' lacking some vocabulary during interpreting. The gap in knowledge and skills could result from inadequate continuous professional development for teaching and support staff (Shelile & Hlalele, 2014).

Lack of teaching and learning resources add further challenges to teaching learners with hearing impairment as this makes them dependent on teacher-centred methods (Lehloa, 2019). The material resources include books, computers and charts for learners with hearing impairment. In Lesotho, learners who are deaf use same textbooks as those of the hearing

learners and as Lehloa (2019) observes learners with hearing impairment are allowed to access education using sign language but are not allowed to write in their own language as the standard used for assessment is conventional. In her study, she highlights structures in Sign Language and English Language - Sign language, 'We speaking' and English, 'We are speaking'.

Education for learners who are deaf depends much on the resources that assist the teaching and learning process to be successful, so human resource is one of the resources needed. Eriamiatoe (2013) also highlights a shortage of human and material resources for inclusive education in Lesotho. Eriamiatoe (2013) states that Lesotho is lagging behind when it comes to appropriate resources for the support of inclusive education and states that lack of sign language interpreters brings about a great challenge. The learners with hearing impairment are not exceptions to these situations, they also suffer like all other learners who are disabled.

## 2.10 ORGANISATIONS AND MANAGEMENT OF SIGN LANGUAGE INTERPRETATION SERVICES

Lesotho Language Policy states that the framework recognizes the pluralism of the Basotho nation and the existence of other languages besides, the two official languages; Sesotho and English, so the framework asserts that mother tongue will be used as a medium of instruction from class 1 to 3, while English will be taught as a subject at this - and other levels (Ministry of Education, 2008). It therefore indicates that sign language shall form part of the new language policy. Ministry of Education (2009) also asserts that the child's mother tongue will be the medium of instruction from Grade 1 – 3. However, that does not cater for learners from Nguni and sign language backgrounds as Sesotho is the only language used at lower grades; Grade 1 – 3. Lesotho Education Language Policy's goal is to accelerate inclusive and equitable quality education that responds to the local and international needs of all Basotho learners from different ethnic backgrounds and disability statuses (Ministry of Education and Training, 2019). This will enable access to acquisition and maintenance of Lesotho's minority languages including sign language as official languages, but it does not state that it must be taught as a subject.

Moreover, the Constitution of Lesotho recognises Sesotho and English as the two official languages and the latter being the language of business and administration and a language of instruction from Grade 4 to tertiary level and again as a subject. The Lesotho Education Language Policy document indicates that a child should be taught in his/her mother tongue from Grade 1 to 3 (MOET, 2009), but it is not a situation in Lesotho because only Sesotho is used in lower grades for all Basotho learners even those from non-Sesotho speaking

backgrounds like IsiXhosa, Sephuthi and IsiNdebele ethnic languages and sign language. The policy states that sign language will be part of the new language policy but still, sign language users are not catered for as sign language is not yet used in schools as medium of instruction, but SLIs are there to interpret the concepts uttered by subject teachers.

## 2.11 SUMMARY

This chapter has given a picture of the role of sign language interpreting in learning. It has looked at socio-cultural theory which explained the role played by peers, teachers and sign language interpreters in supporting cognitive development of learners with hearing impairment. It has highlighted how language can be a barrier in education of learners with hearing impairment, their access to curriculum, and the support they get in mainstream schools. Language of learning and teaching has also been identified as a global problem in their learning. Moreover, the chapter has also focused on contextual factors in education of the deaf and strategies that assist in learning.

It provides an overview of how subject teachers and sign language interpreters are positioned to work together to facilitate teaching and learning for learners with hearing impairment. It has also outlined some sign language interpreting challenges in educating learners with hearing impairment like subject teachers who are not skilled in sign language. It has reflected some studies that have made comparison of the academic performance for both the hearing and learners with hearing impairment. Finally, the study looked at legal and policy framework on inclusive education for the deaf in Lesotho, some studies conducted by different scholars about education of the deaf and organisation of sign language in Lesotho.

## CHAPTER 3: RESEARCH METHODOLOGY

### 3.1 INTRODUCTION

This chapter describes interpretivism as the research paradigm adopted for this study and permeating through the research approach and design selected. A qualitative case study design was selected because the study intended to capture the lived experiences of teachers and sign language interpreters about challenges of teaching through the sign language medium. The study also justifies why the selection of study participants was mainly purposive and then discusses the techniques of data collection and analysis. Finally, the chapter discusses ethical considerations adopted in conducting the study.

### 3.2 RESEARCH PARADIGM

According to Kivunja and Kuyini, (2017), a very important relationship exists between paradigm and methodology because the methodological implications of paradigm choice permeate, the research question(s), participants' selection, data collection instruments and collection procedures, as well as data analysis. The study adopted interpretive paradigm which according to Hammersley (2013, p.26), allows "the diverse ways of seeing and experiencing the world through different contexts and cultures". Cohen et al, (2018) state that interpretivist strive to understand and interpret the world in terms of its actors, thus reality is what research participants perceive it to be and not preconceived notions from researchers. This approach makes an effort to 'get into the head of the subjects being studied' so to speak, and to understand and interpret what the subject is thinking or the meaning she or he is making of the context (Kivunja & Kuyini, 2017, p.33). Interpretivism resonated with the current study which explored the challenges of sign language interpreting in facilitating learning for deaf children. The study sought to explain the lived experiences of teachers and sign language interpreters as frontline staff delivering education for the deaf in Lesotho.

### 3.3 RESEARCH APPROACH

The current study adopted a qualitative research approach in its attempt to describe, understand and interpret how staff at one school understands efficiency of sign language as a medium of instruction for deaf learners. Creswell (2014) indicates that a qualitative research approach begins with assumptions and the use of interpretive theoretical frameworks that inform the study of research problems addressing the meaning individuals or groups ascribe to a social or human problem. Roller (2018) states that the use of qualitative research is often supported with the claim that qualitative methods enable the researcher to reach beyond quantitative numerical

data to grasp the meaning and motivations – that is, the why – associated with particular attitudes and behaviour.

Qualitative research is a holistic research strategy as it seeks to understand events in their natural context rather than in isolation in order to gain trust and understanding, and to get close to the subjects who form the focus of the subject under investigation (Cohen, Manion and Morrison 2011). This research approach is appropriate for the present study as it gathered data and captured views from sign language interpreters and subject teachers on the challenges of sign language interpreting in facilitating learning for children with hearing impairment. As a result, it looked at how sign language interpreters and subject teachers work together to facilitate teaching and learning for learners with hearing impairment.

Green and Salkind (2014) assert that the general purpose of qualitative research is to examine human behaviour in the social, cultural and political contexts in which they occur. The exploratory research that depends on the qualitative methods of analysis solicits explanation of deeper meanings and understandings through the subjective views of the respondents (Akinyode, 2017). This is to say qualitative approach gives a detailed analysis of the views and explanations of the respondents. For this reason, this study is qualitative because it attempts to obtain detailed insiders' views on efficiency of sign language interpretation from a selected school. The study explored views and explanations from both sign language interpreters and subject teachers on the use of sign language in educating learners with hearing impairment.

### 3.4 RESEARCH DESIGN

According to Cohen et al (2018), a research design is a plan or strategy that is drawn up for organizing the research and making it practicable, so that research questions can be answered based on evidence and justifications. McMillan and Schumacher (2010) define research design as the procedure for conducting research including, when, from whom, and under what conditions the data are to be obtained. I chose to use a qualitative case study design to get answers to the research questions for the current study.

#### 3.4.1 Case Study Design

The researcher carried out a case study, which as Cohen et al (2018) assert, involves looking at a case or phenomenon at its real-life context by employing many types of data generation methods. Kumar (2011) postulates that a case study is a useful research design that is adopted 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, site, group or community. The

school chose as the case for the study is the only high school in the district that offers inclusive education for learners with hearing impairment who are supported through sign language interpretation. The design sought to explain views and first-hand information from the participants themselves. This study fits into a case study design because the school is an entity from which detailed exploration of the challenges of sign language interpretation in facilitating education for learners with hearing impairment could be studied.

### 3.5 PARTICIPANT SELECTION

This study adopted a purposive approach in selecting participants (McMillan & Schumacher, 2010) because participants selected this way are those who are knowledgeable and informative about the phenomena under investigation. Purposive sampling was used to select participants who had the right information for the study (Cohen et al, 2011). Kumar (2011) postulates that the major consideration in purposive selection of participants is the judgment as to who can supply the needed information, so that the objectives of the study are achieved. This involves identifying and selecting individuals or groups of individuals that were especially knowledgeable about or were experienced with a phenomenon of interest. Neuman (2014) states that purposive sampling selects cases with a specific purpose and unique cases that are especially informative. Five (5) sign language interpreters and five (5) subject teachers teaching learners with hearing impairment this academic year were selected for this study. Gender was not an important element in selecting participants, but their hands-on experiences and recency of the teaching and interpretation experience at Junior Certificate (JC) and Lesotho General Certificate of Secondary Certificate (LGCSE) levels.

### 3.6 DATA COLLECTION

Green and Salkind (2014) postulates that qualitative researchers collect data using different methods and techniques which include in-depth interviews and analysis of documents and materials. This study employed semi-structured interviews for data collection. Permission to collect data from the school was sought and obtained from the government through the Ministry of Education and Training in the district the school is located, the principal of the school of study then different subject teachers and sign language interpreters.

#### 3.6.1 Semi-Structured Interviews

Creswell (2012) states that a qualitative interview occurs when researchers ask one or more participants general, open-ended questions and record their answers. Semi-structured interviews adopt open-ended questions and aim to relate theoretical perspectives with real life



circumstances by encouraging participants to reflect on and discuss their interpretations of interview (Palaiologou et al, 2016). Kumar (2011) postulates that open-ended questions allow respondents to express themselves freely as they (open-ended questions) virtually eliminate the possibility of researcher bias. Semi-structured interviews allow the researcher to probe for clarification of responses in the case where the respondent did not give a clear response (Maree, 2011). In addition, Kumar (2011) maintains that the researcher may formulate questions and raise issues on the spur of the moment, depending upon what occurs in the context of the discussion. Leedy and Ormrod (2013) indicate that semi-structured interviews are more flexible and more likely to yield information that the researcher had not planned to ask for. Semi-structured interviews were conducted with all the participants; five sign language interpreters and five subject teachers and lasted for approximately 30 minutes each.

The interview was conducted mainly in English language, but the participants were allowed to codeswitch where a Sesotho language expression came easier. Each interview was audio-recorded to capture all issues expressed by the participants. Creswell (2012) define transcription as a process of converting audiotape recordings into text data, so the responses were transcribed word for word and where Sesotho was used the answers were translated to English. Transcribed data were presented to each participant in person to validate.

### 3.7. DATA ANALYSIS

De Vos et al (2011) postulate that data analysis is a method of categorising, ordering, manipulating and summarising data to attain answers to specific research questions. The researcher aimed to gain new understanding of the situations and processes that were being investigated. According to Cohen et al (2018), data analysis involves organizing, accounting for and explaining the data, that is making sense of data in terms of participants' views of the situation, noting patterns, themes, categories and regularities. Data was thus analysed through content analysis. Kothari (2012) states that content analysis consists of analysing the contents of all verbal or printed data and is mostly qualitative analysis involving deriving message from existing documents.

#### 3.7.1 Content analysis

Kumar (2011) states that analysis of open-ended questions requires the researcher to go through content analysis process to classify data. Qualitative content analysis is a method for systematically describing the meaning of qualitative data through assigning successive parts of the material to the categories of a coding frame (Schreier, 2012) and helps with reducing the amount of material. Content analysis requires the researcher to focus on selected aspects of

meaning that relate to the overall research question (Schreier, 2014). Flick (2014) asserts that the analysis is done by assigning successive parts of the material to the categories of a coding frame which is at the heart of the method, and this coding frame contains all those aspects that feature in the description and interpretation of the material. Kumar (2011) states that in content analysis, the researcher identifies the main themes that emerge from the descriptions given by respondents in answer to questions. The author goes on to say having identified the main themes, the researcher can examine verbatim responses and integrate them with the text of the report to either support or contradict the argument and can also assign a code to each theme and count how frequently each theme has occurred and finally combine both methods to communicate the findings. There are several steps involved in content analysis and the following were observed in analysing data for this study.

#### 3.7.1.1 Document analysis

Document analysis was conducted as an additional method to study the issue of training of teachers and issues pertaining to staffing related to sign language interpreters. Documents on the school's history of admitting deaf learners and credentials of those employed as sign language interpreters were analysed. Programme documents for both The National University of Lesotho (NUL) and The Lesotho College of Education (LCE) on teacher training for inclusion, were analysed.

#### 3.7.2 Data editing

Kumar (2011) asserts the first step in processing the data is ensuring that it is 'clean' – free from inconsistencies and incompleteness. I tried very much to briefly present findings still maintaining the actual presentations and meanings. The data collected from the participants were shortened without the researcher distorting the main messages communicated by the participants. Kumar (2011) adds that editing consists of scrutinising the completed research instruments to identify and minimise errors, incompleteness, misclassification and gaps in the information obtained from the respondents.

#### 3.7.3 Data coding

Kumar (2011) maintains that having 'cleaned' the data, it should be coded. According to Creswell (2012), coding is the process of segmenting and labelling text to form descriptions and broad themes in the data. Walliman (2011) emphasizes that coding is necessary for efficient analysis and through data coding, several replies may be reduced to a small number of classes which contain the critical information required for analysis. Kumar (2011) concludes that coding of open-ended questions requires the response categories to be developed. The

responses from sign language interpreters and teachers that portrayed similar message are grouped together to narrow data into few themes. Creswell (2012) asserts that themes (also called categories) are similar codes aggregated together to form a major idea in the database.

#### 3.7.4 Assignment of themes

Kumar (2011) states that in identifying the main themes, the researcher needs to carefully go through descriptive responses given by the respondents to each question in order to understand the 'meaning' they communicate so as to develop broad themes that reflect these meanings. The codes that make up the themes of the study are grouped together. Kumar (2011) suggests that the researcher needs to integrate themes and responses within different themes into the text of the researcher's report. In accordance to Creswell (2012), the reason for a small number of themes is that it is best to write a qualitative report providing detailed information about a few themes rather than general information about many themes. I grouped together codes that are related to each other through their context.

#### 3.7.5 Data presentation

Kumar (2011) designates that the way the collected data is analysed depends largely on two things: the type of information and the way one wants to communicate the finding. Having identified themes, data were therefore presented and analysed in chapter four, and the data are presented through three themes each having sub-themes expressing nuances of the participants' views on the subject matter.

### 3.8 ETHICAL CONSIDERATION

The following ethical issues were considered in this study: the principle of do no harm, informed consent, confidentiality and anonymity. According to Neuman (2011), ethical issues are the concerns, dilemmas and conflicts that arise over the proper way to conduct research. Johnson and Christensen (2011) add that research ethics are a guiding set of principles that assist researchers in conducting ethical studies. As the researcher undertaking a qualitative study, I am responsible to consider the ethical issues to protect the participants from any kind of harm. Cohen, et al (2018) suggest that educational researchers must take into account the effects of the research on participants; they have a responsibility to participants to act in such a way as to preserve their dignity as human beings.

#### 3.8.1. The principle of do no harm

According to Miles et al (2014, p. 66), all researchers must be guided by the classic principle of humane conduct: first, do no harm. Australian Council for International Development (2017)

emphasizes that to fulfil this principle, research must be of value to participants, their community, country or development practice more broadly. It must be designed to minimise risks and participants must be duly informed of potential benefits and risks of the research. Sign language interpreters, subject teachers, learners (hearing and hearing impaired) as well as parents could benefit from this study as the study wishes to raise awareness about the challenges of sign language interpreting in facilitating learning for learners with hearing impairment. Harm to participants can come in various ways: from blows to self-esteem or “looking bad” to others, to threats to one’s interests or to loss of funding for a programme, up to being sued or arrested (Miles et al, 2014). This research should be viewed as an ‘intervention’ to support empowerment and participation of learners with hearing impairment in education. I ensured participants had no discomfort or embarrassment during the interviews by asking open-ended questions which required reflections of the school practice than to make them feel subjected to interrogations about personal practices and their efficiency. Before starting the data collection exercise, interview questions were discussed extensively with the supervisor and there was no potential harm identified them.

### 3.8.2 Informed consent

Cohen et al (2018) clarify that consent protects and respects the right of self-determination and places some of the responsibilities on the participant should anything go wrong in the research. Informed consent often concerns access (Hammersley and Traianou, 2012), for example, to people, documents, institutions, settings and information. Kumar (2011) states that informed consent implies that subjects are made adequately aware of the type of information the researcher wants from them, why the information is being sought, what purpose the information will be put to, how they are expected to participate in the study, and how the study will directly or indirectly affect them. Firstly, a requisition letter from The National University of Lesotho to the Ministry of Education and Training was offered and the researcher too wrote the letter to the ministry seeking permission to undertake the study. Then the ministry wrote an introductory letter to the identified school to ask the principal to grant the researcher permission to collect data from the staff. The researcher then approached the concerned school’s principal to seek permission to collect data. The researcher introduced the importance of the study to the respondents; the sign language interpreters and subject teachers. A letter of consent was given to all participants who volunteered to take part in the study and they all signed it. I therefore asked for their permission to audio-record them and assured them that their experiences and perceptions would be treated anonymously.

### 3.8.3 Confidentiality

Cohen et al (2018) outline the need for confidentiality of participants' identities, holding that any violations of this should be made with the agreement of the participants. Kumar (2011) observes that sharing information about a respondent with others for purposes other than research is unethical, and in research, the researcher needs to make sure that at least the information provided by participants is kept confidential as it is unethical to identify an individual respondent and the information provided. It is important to make a distinction between confidentiality and anonymity.

While Cohen et al. (2018) stress that one way of addressing privacy and protection from harm is by anonymity, the essence of anonymity is that the information from the participants should in no way reveal their identity even to the researcher. In qualitative research this is not achievable because the researcher would have spent a reason amount of time with participants and can relate the voice in the interview transcript to the face. Hammersley and Traianou (2012) note that if anonymity cannot be guaranteed, then it should not be promised. Given that I needed to interact with participants more than once to do member check, confidentiality was a desirable principle to uphold.

Confidentiality meant that I could not discuss the identity of the participants with anybody else including the supervisor. Confidentiality involves the right of the participants to control information about them (Pieterse, 2010). To ensure confidentiality, participants are identified as English Language Teacher 1 (ELT1) or Sign Language Interpreter 1 (SLI1) and this suffices because the school has many sign language interpreters and subject teachers.

## 3.9 TRUSTWORTHINESS

According to Guercini, Raich, Müller and Abfalter (2014), trustworthiness stems from the co-construction and interpersonal contact with participants and the subsequent data. The qualitative researcher uses sensitivity, insight, awareness, instinct and intuition to guide the direction and decision making to develop trustworthiness and credibility (Stewart, et al, 2017). Moreover, Mqulwana (2010) postulate that qualitative research must have transferability, dependability, credibility, and confirmability as critical aspects of trustworthiness. The study thus followed the aforementioned strategies which are discussed in detail below:

### 3.9.1 Credibility

Stewart, Gapp and Harwood (2017) indicate that in credibility, the trustworthiness of findings is reflected in the crystallization with many feasible perceptions reconstructed from the data.

The participants had an opportunity to validate the data generated through their interviews (Creswell, 2014). According to Harper and Cole (2012), member checking continues to be an important quality control process in qualitative research as during the course of conducting a study, participants receive the opportunity to review their statements for accuracy and, in so doing; they may acquire a therapeutic benefit. To ensure credibility, all the interviews were audio-recorded, then transcribed word for word and the transcribed data was sent to each participant for member check to verify if their views were captured accurately. The participants either agree or disagree that the summaries reflect their views, feelings, and experiences, and if accuracy and completeness are affirmed, then the study is said to have credibility (Creswell, 2007). In this case, all participants in the study agreed that the interview transcripts were presented adequately.

### 3.9.2 Transferability

According to Korstjensa and Moserb (2018), transferability concerns the aspect of applicability and the degree to which the results of qualitative research can be transferred to other contexts or settings with other respondents. The authors go on to say it is the responsibility of a researcher to provide a ‘thick description’ of the participants and the research process, to enable the reader to assess whether the findings are transferable to their own setting. To establish transferability, I took detailed field notes and referred to the audio recordings to ensure accuracy in the data collected and the results remained the same.

### 3.9.3 Dependability

Dependability refers to the consistency and reliability of the research findings and the degree to which research procedures are documented, allowing someone outside the research to follow, audit, and critique the research process (Moon, Brewer, Januchowski-Hartley, Adams & Blackman, 2016). Moreover, Korstjensa and Moserb (2018) indicate that dependability involves participants’ evaluation of the findings, interpretation and recommendations of the study such that all are supported by the data as received from participants of the study. I have quoted the participants verbatim to reflect their views, so that the reader can have an insight into what the participants said and compare that with interpretation of the views I made as the researcher.

### 3.9.4 Confirmability

Moon, et al. (2016) indicate that to achieve confirmability, researchers must demonstrate that the results are clearly linked to the conclusions in a way that can be followed and, as a process,

replicated. In addition, Korstjensa and Moserb (2018) define confirmability as the degree to which the findings of the research study could be confirmed by other researchers. So, the transcriptions and recordings are kept for verification of the final results.

### 3.10 SUMMARY

This chapter has outlined the research paradigm, research approach and design used in the study, including, participants selection, data collection tools, analysis methods, and ethical consideration. It further described several stages involved in the design and development processes of the research in this study. I have described the qualitative research approach and its methodologies for participant selection, data generation and analysis. The use of interviews was thus seen as appropriate for this study as it allows for the generation of data through conversations. Finally, the relevant ethical considerations and trustworthiness of the research were discussed.

## CHAPTER FOUR: PRESENTATION OF RESULTS

### 4.1 INTRODUCTION

This chapter presents results of the study which explored challenges of sign language interpreting in facilitating the teaching and learning process for learners with hearing impairment. Data generation was guided by the main research question namely, “What are the challenges of sign language interpretation in educating learners with hearing impairment in Lesotho?” Presentation of results brought about four themes and a number of sub-themes under each theme. The themes and sub-themes are the following 1). Challenges in facilitating learning, which has the following sub-themes: i) Language skills barriers, ii) Inadequate time for collaborative lesson planning, and iii) Subject specific challenges. 2). Contextual barriers to interpretation, which has 2 sub-themes: i) Influence of learners’ impairment on learning, and ii) Inadequate human resources and undefined roles for interpreters. 3). Teachers training for inclusion, and 4). Strategies adopted to teach the deaf with 2 sub-themes: i) Using repetition and remediation, ii) Assessment and other teaching strategies.

To ensure trustworthiness in the results, participants’ words are quoted verbatim to give readers opportunity to make their own interpretations of the data generated. Additionally, neutral descriptors, other than names, are used in sharing excerpts to ensure confidentiality of research participants. These are, SLI 1, SLI 2, SLI 3, SLI 4 and SLI 5 are used for the 5 sign language interpreters, while subject specialisations (Religious Knowledge teacher (RKT), Sesotho teacher (ST), Mathematics and Science teacher (MST) and English Language teacher (ELT)) are used to identify teacher participants.

### 4.2 BACKGROUND TO SCHOOL CONTEXT

A brief history of the selected secondary school reveals that it has been admitting learners with hearing impairment for the past 29 years. Since 1992 when it first admitted deaf learners to date, only six (6) deaf learners have passed through to tertiary level; three were born deaf while the other three were hard of hearing. Additionally, documented data from the school, provided by the principal, reveal that at the beginning of 2021, the school had a roll of 307 learners, excluding the Form Ds who had not yet been admitted. There were 46 Grade 8 learners, 76 in Grade 9, 113 in Grade 10 and lastly, 72 learners in Grade 12. Of the total 307 learners, 81 learners were deaf and were spread as follows 15 in Grade 8, 27 in Grade 9, 34 in Grade 10 and 5 in Grade 12. As such one interpreter serves at least five learners in a class. This has implications to how an interpreter is positioned for all learners to read signs and facial



expressions. But most critically, when many learners are served together, individual learners' competence in sign language and their learning pace, as affected by other learners with or without hearing impairment, affect the learning process.

School records on staff complement of the sign language interpreters indicates that there are eight sign language interpreters in the school. Two interpreters have the highest qualifications as B.Ed. Honours Degree in Inclusive Education with undergraduate qualifications in arts subjects; three interpreters hold Bachelor of Education Degree in Special Education majoring in Sesotho, English Language and Literature in English respectively; One interpreter has two Bachelor's Degrees of Theology and Philosophy and interpreting certificate, and finally two interpreters each holds a Diploma in Primary Education. Besides having each done an unaccredited sign language training for approximately three months, the interpreters have no other training in sign interpreting as a speciality. Thus, efficiency of their interpretation may be questioned given inadequate training in sign language interpretation and the fact that most of the subjects they interpret may not be their area of competence or prior training.

### 4.3 CHALLENGES IN FACILITATING LEARNING

Each participant in the study seemed to be aware of challenges of sign language interpreting in educating learners with hearing impairment. Both teachers and interpreters agreed that there were different challenges in facilitating learning for deaf learners. The challenges they face include, a) Language skills barriers, b) Inadequate time for collaborative lesson planning, and c) Subject specific challenges.

#### 4.3.1 Language skills barriers

The study found that access to education was denied by language barriers either from learners or teachers' low competence in sign language as a medium of teaching and learning, including having to deal with dynamics brought by regional dialects which slow learning progress. The following are their responses:

*"Deaf learners do not know sign language as much as we expect them to know it,"* notes SLI 2.

*"...these kids come from different parts of the country, so just like any other language, there are regional dialects; items named differently. Learners from some regions are not familiar with certain signs I use. So, in that situation I create signs for the class, but it becomes a problem when one joins the class late as it delays their learning. In some*

*situations, we go to an extent of going back to teachers for remedial lessons”*, states SLI 4.

*“For unfamiliar terms, we create our own signs for different terms. For example, when I come across “inheritance”, I finger-spell it, then after that I create a sign (IN). When the teacher repeats the word, I no longer finger-spell but sign “IN”. The learners will then remember that sign as “Inheritance”*, clarifies SLI 5.

*“At times sign language interpreters use new signs that are unfamiliar to some learners, or sign language interpreters fail to get messages from learners due to new signs”*, specifies ETL 1.

*“We bring them to the world of our own, whereas they were born in the silent world where there is not much vocabulary because they do not hear words, they get to know them when they get here at school”*, postulates SLI 3.

*“... the vocabulary for sign language is very limited despite hearing content or hearing some of the words for the first time”*, clarifies SLI 5.

Even though the findings have indicated that learners face challenges with sign language, some interpreters see it from a different angle, they don't find the language a problem, but other factors stated below:

*“Deaf learners are not able to look at the interpreter and at the same time look at the teacher when writing on the board. This is really challenging to them”* opines SLI 2.

*“Learning through sign language is not challenging to these learners at all for it is their language, but the problem they face is that they receive second-hand message. I give the message from the teacher, so the problem begins there, as the message is not directly from the teacher”*, indicates SLI 3

*“In Mathematics, they access content equally even in the absence of the sign language interpreter, but in Science, that only applies in experiments because they see and can understand”*, highlights MST

Sign language is the medium of instruction for the deaf but is depicted as the core barrier in the teaching and learning due to teachers and learners' low competence in the language. The findings reveal that key messages may be lost between the subject teacher and interpreter depending on the interpreter's subject matter competence. It is also noted that some teaching

subjects such as science may pose additional challenges to the limited sign language vocabulary from both teachers and learners. A Mathematics and Science teacher's view that learners afford to learn Mathematics without much need for interpretation is debatable because teachers verbally articulate what they demonstrate on the board and the verbal explanation would be inaccessible to the deaf.

#### 4.3.2 Inadequate time for collaborative lesson planning

Sign language interpreters and subject teachers are core in facilitating learning for deaf learners. However, the findings highlight lack of time for planning between the two parties which creates problems during the teaching and learning process. The following are their views:

*"...the subject teacher and I as a sign language interpreter have to sit prior the lesson and look at the lesson plan, so that I can prepare signs for the lesson or even look for help when necessary, but in my school, it does not happen because I am the only interpreter for my class. For example, I have a Sesotho lesson, immediately after Sesotho maybe there is Mathematics, and I have not met the teacher at all and did not have a chance to talk to him",* explains SLI 4.

*"By right, we have to plan with teachers, to know which content or topics we are going to deal with, but it does not happen as there is a shortage of interpreters... we are in classes from 8 a.m. to 4 p.m.... after school, we are tired and just need to go home and rest after a hectic day, so, there is no planning together..."* emphasises SLI 5.

*"I do not get to know what each teacher is going to teach, I can be lucky if ever there was a slot or an absent teacher, I can go to the staffroom and ask the next teacher what s/he is going to teach..."*, clarifies SLI 3.

*"Sometimes when I finger-spell, I get these words wrong as I have not planned. Teachers do not like using the board and that is very challenging..."*, adds SLI 3.

The interpreters also feel that they are overworked as noted below:

*"In Lesotho, there is no specified time. We must work at least 1 hour and in the second hour, we rest because interpreting consumes much energy but here, we interpret from morning to late after lunch. We are human beings, after break every interpreter is worn-out",* states SLI 2

*“Teachers have time to rest yet I have none. I interpret for my class from 8 a.m. to 4 p.m..... After 40 minutes by right I have to be changed. If you have seen sign language interpreters on television, they cannot interpret there for more than 30 minutes. It is exhausting because I have to change a spoken language to language that has to be understood by someone in a silent world”* clarifies SLI 3

*“...it is said that a sign language interpreter has to interpret for a period of at least 40 minutes and then rest... I am in class the whole day.... I am no longer effective at all more especially after lunch. If there was a chance to exchange, it was going to be better”,* SLI 4 argues.

The lack of collaborative planning leaves the interpreters without enough sign language vocabulary and have to create impromptu signs to pass messages. The planning is undermined by understaffing as the number of interpreters is too low for them to rotate or relieve each other. Interpreters feel exploited and incapacitated by their work schedules.

#### 4.3.3 Subject specific challenges

Each language is unique and has different terminology. It is the task of both the sign language interpreters and/or subject teachers to familiarize the deaf learners with these terms while also learning the content. The following are some of their views:

*“English Language, Literature in English, Bible, Sesotho Language and Literature give challenges because they have essays and stories, so they (deaf learners) are unable to express themselves in words”* reflects SLI 1.

*“Firstly, they don’t have enough vocabulary. In a situation I say “Bona (See)”, they would understand, but when I then talk about “Sheba (See)” they get confused, one would think it is a simple word...”,* postulates ST

*“Sesotho is more difficult to interpret to deaf learners because they don’t know Sesotho words as much as English Literature is also a problem”,* states SLI 2

*“We have a problem with comprehension in both English and Sesotho. They lack vocabulary and cannot read. For instance, when they read, they sign word by word, so they cannot evaluate what the passage means. They do not access the information like hearing learners. Even with the assistance of the sign language interpreter, when they*

*read questions, they do not relate them with what they have read in the passage”, adds ST*

*“...they may not know a television, so the sign language interpreter must describe it for them. Again, they may not know that baby is “ngoana” as they only know a signed language, so as the sign language interpreter, I bring them into a spoken language”, notes SLI 3.*

*“Science, particularly Chemistry and Physics are challenging when interpreting. I, the interpreter, do not know concepts like “molecule” and “atom”, I don’t know what they are, so how am I going to interpret? One subject that was challenging at the beginning was Accounting.... They do not know what profit is and how comes there is profit... so I have to explain how profit is generated. To them it is like one is cheating.... It takes time and energy for them to understand,”*, continues SLI 3

*“When I teach the topic sound, they always become aggressive, they hate the topic because they don’t hear and don’t understand. The topic is not fair at all to them,”* notes a MST.

*“I don’t know what to say, I really can’t say we overcome this challenge of Sesotho. There is a problem, we still plea that they shouldn’t do Sesotho at all. Sesotho is too challenging. Sesotho has topics like ‘Sere’ which deals with sounds. For example, the sentence might say, “Lejoe la re qomu! Ka metsing” (reflecting on the sound a stone makes when falling into water). These kids have not heard sounds ever since they were born”, suggested SLI 4*

*“Sesotho is more difficult to interpret to deaf learners because they don’t know Sesotho words...”* informs SLI 2

Sign language interpretation faces challenges such as a reality that subject specific content poses a variety of demands that are far removed from sign language grammar. The demand to write essay is contrary to the shortened form of communication in sign language grammar and demands compliance with rules for the conventional (spoken and written) languages. These subjects rely on skills which are key weaknesses for learners with hearing impairment namely reading and writing ability. Additionally, terminology for hard sciences has no equivalent and comprehensible signed terms thus creating problems signing the content and explaining the concepts.

## 4.4 CONTEXTUAL BARRIERS TO INTERPRETATION

Participants identified two issues they must effectively overcome to support learners with hearing impairment; the influence of learners' impairment on learning, and inadequate human resources coupled with undefined role for interpreters.

### 4.4.1 Influence of learners' impairment on learning

Sign language interpreting at classroom level is dynamic and is affected by a variety of barriers which result from the learners' impairments, individuality and how these must be accommodated within a single classroom and lesson. The following are the views of participants:

*"...the deaf don't access information similarly as the hearing.... some learners were born deaf while others acquired deafness when growing up. So, one finds that their level of understanding differs as the degree of their disability differs. There are naturally intelligent learners, who can beat the hearing, while some find it hard to cope and access content", declares ELT 1.*

Another teacher notes:

*"There are some who are slow-learners, their problems began in primary schools where they were not well equipped, so when they come to high school, it becomes so difficult for them to grasp concepts. We discovered that they were not able to cover enough curricula content at primary school, so we have to start afresh", postulates RKT*

Language, whether sign language or the medium of instruction (English Language), lies at the centre of the interpretation exercise and seems a key barrier as noted below:

*"...each learner has his/her attention span... even their understanding ability is different. There are those who can grasp a concept quickly and there are those who are slow.... The fact that a written language is not their mother-tongue, (assessment is written in English) gives a challenge", stipulates SLI 3.*

A similar idea is echoed:

*"I think the main challenge is that most of them, when they first come here, struggle with sign language. This is because in our country, sign language is only used as a medium of instruction in one or two schools, so most of them come from schools for the so-called normal where sign language is not at all accessible and when they come here, it is hard*

*for them to learn professional sign language and the subjects at the same time,” indicates ETL 2.*

The differences between learners with hearing impairment bring the dilemma on what grammar is to be used between spoken (English) or sign language, as one interpreter notes:

*“...we get challenges because we have hard of hearing learners and those born deaf. Those born deaf basically rely on sign language grammar and hard of hearing rely on English Language grammar, so when all of them have to be catered for at the same time and also when the sign language interpreter has to get along with the pace of the subject teacher, it somehow poses problems.... It may be easy if the deaf are the same; if they are all hard of hearing or born deaf.... I would use the same grammar, they would access content easily at the same time, but now that they are different, it is difficult”, describes SLI 1*

She continues:

*“...changing sign language grammar into English Language grammar is a problem because those born deaf tend to use sign language grammar when they write. Their content basically relies on sign language grammar not English Language grammar, so subject teachers do not understand that grammar (sign language grammar). Most of them award them wrong even when they are right.... For Example – I cannot say ‘I am going to the toilet’ I just say, ‘me toilet go’. Since the interpreters hired here at my school are qualified teachers, I sometimes help when the teacher is busy attending hearing learners as they separate them at times ....”, postulates SLI 1.*

Three participants noted the effects of COVID-19 pandemic on interpreting services:

*“Another challenge nowadays is the usage of nose-bags because the partially deaf lip-read but now that we are forced to use nose-bags, they fail to get information. Even facial expression where they read emotions, they don’t see the face.... For the nose-bags, we suggested the usage of transparent nose-bags so that they can be able to lip-read’, emphasized MST.*

*“Each teacher and sign language interpreter buys their transparent nose-bags, but we are not using them as they become misty when it is a bit chilly and the partially deaf learners cannot lip read. In this situation, the sign language interpreters remove the masks when interpreting,” states ELT 2.*

*“It is my responsibility as the sign language interpreter to buy a transparent nose-bag for the deaf to be able to see my face and lip-read, but I learned that we (sign language interpreters) do not use them as they get covered by vapour and as a result deny the deaf access to lip-read,”* postulates SLI 3.

The findings reveal that learners with hearing impairment are a heterogeneous group; they differ in the severity of impairment, intellectual ability etc. Thus, interpreters and teachers must consider these individualities and accommodate the differences in their facilitation of teaching and learning. Additionally, the interpreting exercise also involves deciding on what grammar is good to be used with a given group of learners, including considerations for barriers on lip-reading brought by the COVID-19 protocols.

#### 4.4.2 Inadequate human resources and undefined roles for interpreters

As indicated previously that sign language interpreting is affected by a variety of barriers. Human resource accessibility is one of the factors that hinders the learning process because sign language interpreters are overloaded and end up not effective. The sign language interpreters and subject teachers have outlined the following views:

*“Each class has one sign language interpreter who interprets all subjects from 8am to 4pm. There is one overseer who moves from one stream to another and at times assists when one gets tired. This is not effective at all because in the afternoon, the sign language interpreter is worn out, but in the morning, it is better”*, expresses SLI 1

*“Only one interpreter is allocated a class. As the attention and focus of deaf learners is on the interpreter, the interpreter sits in front of them. The work is made easier when deaf learners are in the front row as the sign language interpreter and the deaf face one another”*, postulates SLI 2

*“The work is not organized at all. A sign language interpreter has to interpret for a period of at least 40 minutes and then rests, but it does not happen.... At times if you try to refresh and rest when the subject teacher gives notes, one teacher might come in and ask you to help interpret for the other class. We are not at all organized because we are few and have to fill all the gaps”*, complains SLI 4

*“We have 5 streams and each class with deaf learners has one interpreter despite the number of deaf learners. In Form E, there is only one deaf and one interpreter. Other classes have even more than 20 deaf learners. If I interpret for one learner I would have*



*a chance to interpret sitting, but when I do it for 30 deaf learners, I am forced to stand”, explains SLI 5*

*“There is one sign language interpreter for one class for all subjects the whole day. That sign language interpreter gets tired and end up just gesturing for the sake of doing it” clarifies ETL 1*

*“For one class, there is one interpreter and if s/he is not there, we struggle. It would be better if they were many. The sign language interpreters and subject teachers are always advised to be in front of the kids”, states MST*

*“One interpreter stays in a class from morning until school out, it is too much for that interpreter to interpret all subjects”, adds ELT 2*

Moreover, sign language interpreters’ roles were not clear-cut. Their core mandate is not clearly understood as noted below:

*“An interpreter is an intermediary; the class is for the teacher who has to manage it. I am only helping to interpret the statements and questions. Most of them (teachers) here understand, they don’t give us problems, but it depends on characters of different individuals”, postulates SLI 1*

*“...when a certain teacher realizes that s/he was fast, and I could not interpret faster, s/he starts afresh and checks on me to find if I am still on the same track. They consider interpreting very important” states SLI 2*

*“Sign language interpreting is important for teaching and learning process. If the sign language interpreter passes what I have taught appropriately, learners benefit. The school also wishes to have sign language interpreters specialized in different subjects” clarifies ELT 1*

*“When I am teaching, I look at the learners and also the sign language interpreter. I know sign language myself as I took initiative to learn it. I can even tell the sign language interpreter if s/he misinterpreted me in a professional way”, states MST.*

*“Sign language interpreting is very important because these kids too need education. Their only problem is that they are disabled, but that does not mean they are not able” reflects ELT 2*

*“I don’t know sign language myself, but when I give deaf learners some work and they do well, I know that the sign language interpreter has done his/her work. Interpretation is very important because without it, teaching cannot be effective and profitable for the deaf”* emphasises RKT

*“Sign language interpreting is very important because even the hearing learners learn from the sign language interpreter in a situation they failed to understand from me”,* reveals ST

Other findings reflect that it is not all teachers who understand the importance of sign language as some teachers seem to forget about deaf learners during classroom interactions. The following are the views of sign language interpreters:

*“Not all teachers understand our importance, people are different. We are not all skilled in special education because if we were aware of learners’ special needs, everyone would understand the importance of an interpreter. We get in each other’s way and go to the extent of having verbal exchange. Other teachers go to the extent of choosing who they want as their interpreters. Even deaf learners themselves have attitude towards different interpreters.... We still don’t understand this interpreting fully as we are not fully competent in sign language, we only studied it for just a semester”,* delineates SLI 3

*“Some teachers understand, others do not because some come in and dictate classwork or notes for learners to jot down in their books. As a sign language interpreter, I have to interpret that, which is very much difficult. At times, I end up grabbing a pen and book from one deaf learner and start writing for this learner. Now I am doing the work for that learner and I have many learners, ... I then tell them to copy from the one I have written for”* stresses SLI 4

*“This is very challenging. Some teachers understand, some tend to forget, but with time they refer to me and ask if we are still on the same page. If I need to emphasize something, I am given a chalk by the teacher to clarify”,* states SLI 5

The findings reveal that the number of sign language interpreters is inadequate resulting in deficiencies in interpretation during lessons due to fatigue. The understaffing hinders learning process for the deaf. The roles and relationship between teachers and sign language interpreters seems undefined and it undermines the interpretation process.

#### 4.5 TEACHERS TRAINING FOR INCLUSION

Teachers are expected to know sign language in order to be able to communicate with deaf learners. The findings show that the school expects subject teachers to learn sign language and it has made effort to see it happens. The following are the views of the subject teachers:

*“We are all expected to know sign language... in order to communicate with these kids even when the sign language interpreter is not around. Again, so that they can know that sign language is a language like any other language as we still learn English. There were people already teaching us sign language before closure of schools due to covid-19”*, notes MST.

*“We are expected as subject teachers to know sign language because these are my kids not sign language interpreter’s. Even when the sign language interpreter is not around, teaching has to go on, so it means I have to teach and interpret at the same time”*, explains ELT 2.

*“We first began work without the knowledge of sign language, the school takes measures to see to it that we acquire sign language skills. There are workshops organized by the school. There are also voluntary classes, but teachers fail to attend them after school, then there are compulsory classes. This is to help in a situation the sign language interpreter is not present”*, postulates ST.

*“We have to learn basics of sign language because sometimes when the deaf learners have problems, they come to us for help”*, maintains RKT.

*“Sometimes, there are mini-workshops organized and held in the school for both subject teachers and sign language interpreters to tip one another and share ideas. We had a workshop with one primary school teachers of the primary that gives us learners last year. Before this corona pandemic this academic year, there were classes for sign language organized for subject teachers”*, asserts ETL 1.

*“We had workshops where we were taught sign language so that everybody knows sign language and one teacher from a local primary came to assist us with sign language freely. We come to school at 8am and finish school at 4pm, so at 4pm, it is when classes end, and we are tired and have no time for those sign language classes”* stipulates ELT 2.

*“Sign language interpreters are given opportunities to go for workshops and take their students for field trips to get more knowledge from other schools. For example, in 2019, they were given a chance to go to South Africa to get more information about sign language. The Heads of Departments also joined”,* clarifies RKT.

*“There were workshops and compulsory (sign language) classes for 6 months”,* states ST.

*“Remember we are not even qualified interpreters... I studied sign language which only incorporates basics. Then I attended a fly-by night school which also addresses basics only. We are not taught this content we find at schools, so it is very difficult, this is why we create our own signs”,* notes SLI 5.

Document analysis of Bachelor of Education in Special Education programme offered by the National University of Lesotho reveals that teachers do only one sign language course. Lesotho College of Education likewise offers one special education course which is a core subject for every student enrolled in higher diploma at the LCE. Although the school requires teachers to know sign language, the findings reveal that none of teachers and interpreters is competent. Teachers and interpreters alike agree that continuous professional development in interpretation is required for teachers to have signing skills and for interpreters to improve their skills. Interpreters admit that their training was basic and they have challenges with content knowledge of respective subjects too. While the school management takes measures to equip subject teachers with appropriate skills, scheduling workshop after school has failed. Thus, the timing of the workshops is a huge contributing factor to their failure despite staff acknowledgement of their importance.

#### 4.6 STRATEGIES ADOPTED TO TEACH THE DEAF

The findings of the study reflect a few strategies adopted by both sign language interpreters and subject teachers in accommodating deaf learners.

##### 4.6.1 Using repetition and remediation

Both teachers and interpreters felt that repetition works. The following are their views:

*“Most of the times, we repeat lessons and... prepare short content, so that they can all understand. Too much content gives them problem. I give them short content so that if time permits I even give them an exercise which I make sure I finish marking during the lesson. At times I ask learners questions more especially the deaf to assess if they*

*understand. If they don't answer, it gives me a chance to see that the message was not passed as expected. So, I then talk to the sign language interpreter and organize to have a remedial lesson after school, so that the following day they are all on the same page"* indicates ETL 1.

*"I used to note a lesson (that did not go well) in my diary so that during my free time I could go back to that teacher and look at her plans and get back to deaf learners alone and give them those plans. Again, we used to put them in one row or column nearer to the interpreter, so that they could be on one side",* emphasises SLI 2

*"Repetition is the strategy we use because deaf learners are not similar. There are deaf and hard of hearing. Their language is different, so the way I interpret for them is different too. Hard of hearing are flexible as for those born deaf, it is too challenging and requires repeating concepts. The subject teacher at times do not repeat like we do, but those who do are helping a lot,"* states SLI 3

*"At times, I have to repeat the content several times, but this gives a challenge with the hearing because they end up bored and losing concentration... repetitions help the deaf learners a lot",* clarifies MST.

*"I overcome some challenges by trying to create time because if I don't, I leave them blank.... Repetition also helps a lot. In a situation that I as an interpreter do not know what a molecule is, I always tell them to raise their hands and ask the teacher to explain, then I interpret",* elucidates SLI 3

*"I just do my best as much as I can. I sometimes call them one after the other after classes in order to meet and talk, then I call the sign language interpreter to help" expresses RKT.*

*"We resort to after school slots. We organize with learners who did not understand to meet teachers. At times, the learners might go to the subject teacher alone, then as a sign language interpreter I am called to help interpret to avoid misunderstandings",* indicates SLI 4

*"Most of the times if they did not understand in class, they are given the allowance to consult outside the classes and that indeed works. Again, if they are given more work to write, they perform and understand better",* clarifies ELT 2

*“Creating time for more clarity; I always tell them to consult after school and when they do consult the teacher, I avail myself to explain to them. There is no other support than this,”* adds SLI 3

Even though repetition is said to be beneficial, it is a strategy that some teachers fail to assist with. The Sign Language Interpreter 3 added that:

*“In this repetition, if there are 8 concepts, one could find that when the teacher is at concept 8, I am on concept 4. So, at the end, one could find that the teacher is done, and I am not, so I in my interpretation, also have to do it paying attention to what the teacher is still saying. After school, I ask such a teacher to stay behind and take it from where I ended”.*

One participant spoke of a different strategy in which learners are sensitised about the content before the normal lesson with others.

*“It depends on each sign language interpreter and his/her own students because they have different learning abilities, so if I am aware that my students are somehow very weak, before that lesson, I ensure that we talk about it so that when the lesson begins, I easily refer back to what we have earlier on discussed. They are able to cope,”* indicates SLI 2.

Key teaching strategies highlighted include repetition and remedial lessons before and/or after class, giving frequent exercises, ensuring that deaf learners participate in class discussions.

#### 4.6.2 Assessment and other teaching strategies

It was noted that ensuring participation of deaf learners in class discussion, answering questions and taking frequent tests was helpful. The following are some of the views:

*“It is like they can be given tests often for they can answer effectively in class, but writing is a problem. They should be familiarized with questions by being tested frequently”*, postulates SLI 5

*“The tests help a lot. If I may give an example, there was one year when a hearing-impaired student in LGCSE final exams got a credit in English, that was indeed a miracle. We learned that the said strategy really worked”*, notes ELT 2

*“When I ask questions and I see them participating, it tells me that the sign language interpreter has done the job perfectly. I haven’t doubted the interpretation of my sign language interpreter as I am not that perfect in sign language”, declares ELT 2.*

*“When I give them work, I can see where the gap is, I call the interpreter to try help the kids, but if when I give them work and they have performed well, I know the sign language interpreter has done her work”, emphasizes RKT.*

*“...sometimes, I also ask a teacher, when asking questions, to balance by choosing both hearing and deaf interchangeably; they should not make the deaf feel that they are left out”, suggests SLI 1*

*“Letting kids to use their phones to get some of the things from the internet can be an effective strategy, but it is not easy to do here at school because most of the deaf do not have access to phones. So, the charts are available and group discussions are helpful”, suggests SLI 1*

*“Experiments should always be performed, and teaching aids should always be available...”, states MST*

*“The groups discussions of mixed learners are effective as deaf learners learn from the hearing” reflects SLI 1*

*“I believe things that help a lot are the teaching aids even though teachers do not use them frequently, deaf learners learn better when they see”, emphasises SLI 5*

*“The strategies should also be deaf-friendly. I am not aware of interpreting strategies as I am a qualified teacher not qualified interpreter.”.*

*“Using the charts when teaching helps a lot for they learn better with things they see”, states SLI 1*

*“If concerned teachers use teaching-aids especially charts, it can be very easy because what the chart contained together with what the teacher is teaching, we (interpreters) only point at the chart and the leaners imagines what they see”, clarifies SLI 2*

*“I think... video and slides can help a lot”, indicates SLI 4*

*“If we can have projectors, DVDs, drawings, and videos with subtitles. These can help a lot”, suggests SLI 5*

*“They learn more by seeing. Projectors and slights can help a lot because writing on the board consumes much time and we fail to even finish the syllabus”,* postulates ELT 1

*“I suggest videos and power points be used”,* indicates MST

*“I use charts a lot. In parts of speech, they draw them on charts. We can also use projector even though it belongs to Religions Knowledge Department”,* highlights ST

Teachers and sign language interpreters try their best to assist these learners, but it seems there are inadequate resources to help them fulfil their wishes.

*“We can use charts and in Science, teachers can bring concrete objects. If one talks about fruits, s/he should come with them. In a situation where there are experiments, teachers should perform them not only teach about them”,* suggests SLI 3.

*“We need a lot like charts, drawings and presentations. It is true they cannot talk, but they can see and communicate with hands, so we need to allow them to present themselves in classes because many of them are shy thinking that people reject them because of their conditions. We need to let them come out”,* adds RKT.

*“The materials such as videos can help in the challenges. They learn by seeing not hearing and when they see, they don’t forget, they understand. Even dramatization helps in English Set-books; dramatizing some stories, we have read about”,* points ELT 2.

*“We encourage them to communicate with their colleagues so that they could give them things we are unable to give them during the lessons.... It will be easy for them to understand if other learners help them...”,* outlines SLI 2.

The use of a variety of teaching aids, such as videos, phones and charts, is also highlighted. When sign language interpreters make efforts to see to it that their learners are briefed prior the lesson and give remedial lessons after classes, a few problems are noticeable from the intervention. The exercise stretches the interpreters beyond their tolerance threshold as they work the whole day without breaks, so interpreters may not have enough commitment for after-hours classes as the trainings at these times have failed. One interpreter says she takes it on herself to orient the learners to the content before the class. However, it was noted earlier that there is no co-planning of lessons and it may be argued that efficiency may be low when the subject for remedial classes may one outside the interpreter’s competence.



## 4.7 SUMMARY

Although the school has admitted deaf learners for the past 29 years, very few make it through to tertiary level. This could point to possible challenges in the support of the learners. The training of interpreters may need attention; while some interpreters are qualified teachers holding B.Ed. Honours and B.Ed. degrees, only one has a certificate of interpreting. Two interpreters hold primary teachers' diploma while another holds degrees in arts subject but is not trained as a teacher.

The findings revealed many challenges including learners and interpreters' low competence in sign language, hindrance of regional sign language dialects, subject related challenges, lack of planning time between teachers and interpreters and the long working hours of interpreters without breaks. It was also noted that COVID-19 negatively affected interpreting services. Principally, participants stated that some subjects are not easy to interpret especially subjects that deal with essays and stories. Comprehension passages are a problem too as sign language interpreters have to interpret word for word which makes it difficult for the deaf to comprehend the passage.

Sign language interpreters and teachers fail to understand each other at times. Some sign language interpreters are of the view that some teachers do not consider them important. On the other hand, the school expects teachers to know sign language for communication with the deaf, but the subject teachers still lack skills to assist these learners with hearing impairment in the absence of sign language interpreters. The trainings are in the evenings and these seem not suitable for teachers.

There are strategies employed in accommodating deaf learners. The most used strategy by both teachers and interpreters is repetition as they understand and have observed that it works wonders. They have realized that repetition of concepts makes it better for deaf learners to understand, but some teachers still fail to repeat concepts even though it seems beneficial to deaf learners. In assessing the deaf, frequent tests and classroom discussions are deemed helpful. This is to make them familiar with questions in tests and it prepares them for external final examinations. The teachers can also tell if interpretation went well.

## CHAPTER FIVE: DISCUSSION, CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

### 5.1 INTRODUCTION

This chapter discusses the findings, draws conclusions from the study, describes limitations of the study and makes some recommendations. The discussion is guided by the main aim of the study which is to investigate the challenges of sign language interpreting in facilitating teaching and learning for learners with hearing impairment. In discussing the findings, the chapter first highlights how the findings are significant for the adopted theory and then discusses the challenges in facilitating learning, contextual barriers to interpretation, teachers training for inclusion and strategies adopted to teach the deaf.

### 5.2 SOCIOCULTURAL THEORY AND LEARNING

The Sociocultural theory was adopted as the lenses for the study and it highlights the two important issues for human development as social interaction and the role language plays in human development. The findings reveal that sign language competence is critical for enabling better teaching and learning of the deaf.

Marschark and Hauser (2012) highlight the period when basic language skills development occurs which is said to be the most crucial time for language learning, and Lederberg, et al (2012) add also on language development as the most important area affected by hearing loss and that hearing loss at the young age affects language development, especially spoken language. Moreover, Pathan et al, (2018) highlight that a child's cognitive development revolves around the social and psychological planes and that the socio-cultural theory outlines a child's cognitive development through the instruction, encouragement and support by any educator. The findings of the study reflect that both the teachers and sign language interpreters are available to assist deaf learners acquire knowledge but competence in sign language remains a problem.

According to Donald et al. (2010), the understanding of ZPD is that cognitive development cannot be set apart from its societal relations in which teacher's direction, through language media makes influences. Therefore, findings of the study reflect that deaf learners' cognitive development is associated with language which is a barrier in their learning and sign language interpreters assist to mediate access to content through the use of sign language. The child matures and acquires knowledge and skills with the assistance of the more knowledgeable

individual to become independent. The findings of the study reflect both teachers and sign language interpreters as working hand in hand with the deaf learners to help them (deaf learners) develop, even though in the absence of sign language interpreters, these learners fail to be independent.

Moreover, Gudyanga (2014) states that more restricted chances for constructive interaction is due to the delayed language development experienced by many deaf children. The delay for deaf learners to acquire language hinders their access to education acquisition. Similarly, this study found that deaf learners delay to acquire sign language in the early stages as people around them do not use sign language and this affects their education as they only get to be introduced to professional sign language when they reach high school level; they learn language concurrently with learning content of different subjects. Lederberg et al. (2012) put it that language barriers that hinder teaching and learning for both teachers and learners entail learning the language and teaching at the same time. It can be argued that low competency in sign language for both teacher and learners negatively affects learners' studies as this study found that sign language interpreters introduce new signs altogether during teaching to disseminate the content delivered to the hearing peers. Similarly, Swanwick and Marschark (2010) are of the view that most learners with hearing impairment are not fluent in sign language this affects their learning negatively. Therefore, from the sociocultural theory language acquisition forms the foundation of access to education and the low competence is a critical barrier.

### 5.3 CHALLENGES OF SIGN LANGUAGE INTERPRETING IN FACILITATING EDUCATION

The findings of the current study indicate that due to insufficient number of sign language interpreters, interpreters are always in classes and lack time for collaborative planning with subject teachers. The findings compare with results from research as Lehloa (2019) indicates that collaborative planning between the teachers and interpreters was non-existent. This suggests that there are additional challenges to teachers and learners have low sign language competency and interpreters' lack of preparation would negative affect their efficiency in interpreting to subject content. It suggests that interpreting challenges will continue for as long as an interpreter does not prepare sufficiently for the content which she or he has to interpret.

Interpreters' low sign language competence is viewed by Lehloa (2019) reflecting the underdevelopment of Lesotho sign language which also affects dissemination of content to learners with hearing impairment. It is argued that if sign language is not improved or does not

gain recognition, access to education for learners with hearing impairment will continue suffering. Critical to underdevelopment of Lesotho Sign Language is Lehloa (2019) the lack of sign language vocabulary. The current study also found that sign language interpreters run out of vocabulary which results from their low competence in the language, lack of preparation with subject teachers and the peculiarity of science subject content. This affects the learning process of deaf learners negatively.

#### 5.4 CONTEXTUAL BARRIERS TO INTERPRETATION

The current study finds that SLIs feel overworked because they stay in class throughout the day. In the similar way, Lehloa's (2019) findings present the same issue in that one SLI interprets all subjects without any substitution. Asonye et al. (2018) also indicate the similar challenge that signing teachers feel overloaded too for they have to teach and interpret for non-signing learners. This indicates that the challenge of SLIs' loads will go on if there are no SLIs hired to try eliminate this problem.

The findings of the current study show that these SLIs sign the whole day and at times they feel they are overstressed and tired and become inefficient. Therefore, the findings of the current study echo Lehloa's (2019) findings that a single interpreter is made to interpret all subjects. Interpretation for all subjects has a possibility of an interpreter being inefficient because the interpreter, depending on their training, has a possibility that there may not be efficient interpreting all disciplines. For example, most of the SLIs have done the Art subjects, but they have to interpret Science subjects. The study therefore argues that interpretation across the disciplines may be affected by teachers' incompetence in those disciplines.

Eriamiatoe (2013) highlights the fact that inclusive education in Lesotho is affected by lack or shortage of human resources, and as such it means that the interpretation services would be a problem for as long as there is no addressing of human resource services. The study compares with the study by Asonye et al. (2018) who say that teachers in Nigeria who have sign language skills are overworked because there are not enough teachers with sign language interpreting skills, though the administration in the school of my study has employed SLIs, the insufficiency in their number makes them to also be overworked.

The study found that there are too many deaf learners per class and therefore sometimes it may affect interpretation as the SLI has to stand for the entire lesson. These particular findings compare with that of Marschark and Hauser (2012) to say classroom seating actually influences whether or not interpreting will be efficient because when there is more than 10 students in the

same class, the possibility that their seating will allow them to be all visible to the teacher is reduced because of the high number, so the interpretation may be undermined by the number of students per class.

Berndsen and Luckner (2012) state that regardless of an increase in the number of deaf learners in inclusive settings, not all educational environments are user-friendly for learners' educational needs. The findings of the study therefore indicate that COVID-19 has been indicated as a factor affecting educational environments for interpretation services as nose-bags hide the sign language interpreters' faces and prevent deaf learners from reading the expressions, emotions and the lips for information. There is no literature on the effects of COVID-19 on learners with hearing impairment.

## 5.5 TEACHER TRAINING FOR INCLUSIVE EDUCATION

The study found that trained teachers from the institutions studied only one sign language course, which may not be sufficient as any language specialists do at least five or more courses for their diploma or degree programmes. Additionally, not all teachers have done this one course at tertiary level, some of them have taken short trainings on sign language interpreting. The findings similar to Marschark and Hauser's (2012) study which found that most interpreters are not qualified, yet learners with hearing impairment must rely on them and this affects their education negatively as the interpreters have insufficient training. Similarly, in the context of Lesotho, Matlosa (2012) argued that sign language interpreters must be trained better to support deaf learners.

The findings revealed that the school organises sign language classes and workshops to ensure that teachers are equipped with sign language skills even though there are sign language interpreters in the school. Glaser and Van Pletzen (2012) supports that interpreters and teachers need to be trained in forms of language and pedagogy that would benefit all learners in class, including those who are deaf. This study has not explored how the training of both would work in practice except that teachers would know if their subject matter was interpreted well. However, the findings also reflect that it is in the benefit of both teachers and deaf learners so that communication is not broken in the absence of the sign language interpreters. Schmidt and Vrhovnik's (2015) study highlights the importance of teacher training in preparing them for inclusion and giving them more professional expertise as it enables them to work with children with special education needs, boosts their self-confidence, and help them develop a more positive attitude towards inclusive practice.

## 5.6 STRATEGIES ADOPTED TO TEACH THE DEAF

The study found that teachers and interpreters made some efforts to give remediation to missed learning opportunities for deaf learners, but the strategies used by teachers seemed fewer and probably inefficient strategies, given the fact that literature indicates that some of the most useful strategies for learners with hearing impairment include universal design and total communication. Ugwuanyi et al (2017) study emphasizes that teachers should be able to acquire and use the total communication technique during interaction to get appropriate communication. This may indicate the requirement for teachers to be trained in appropriate methods as some interpreters did only one sign language course in the formal training and without sufficient courses, the teachers may have not been trained in total communication.

Some of the strategies adopted, in this study, by teachers are repetition, remedial lessons and giving frequent exercises. Mapepa and Magano (2018) state that the teacher has to motivate learners by using appropriate teaching strategies and active learning techniques. However, the strategies used in this study do not measure in learner-centeredness as Winter and O'Raw (2010) indicate learner-centred methods include peer teaching and group work. Learner-centred approaches play a major role in effective teaching and learning at schools, so learners with hearing impairment can be urged to work together. Teachers also indicated that they use charts and videos. These findings contrast to those of Lehloa (2019) which indicates that teachers lacked resources. There could have been some changes in the school resourcefulness since 2019.

## 5.7 CONCLUSION

Conclusions are drawn in line with the objectives that guided the entire study and discussion of research findings. When exploring the first objective which reads, "To describe teachers/interpreters' views on challenges learners with hearing impairment face in learning through sign language interpretation", this study concludes that both teachers and sign language interpreters encounter challenges during teaching and learning and all these challenges hinder the learning process as content is not disseminated properly. Teachers at times fail to cater for these learners by rushing and therefore sign language interpreters end up not disseminating the set content due to incompetence and not being familiar with some concepts. The deaf learners end up not receiving the prepared content. The second objective reads, "To describe how sign language interpretation services are organised and managed at one inclusive school", the conclusion is that teachers and sign language interpreters fail to work together and plan their lessons. Again, sign language interpreters are few and are overworked, so they do not do their

work efficiently. This hinders equitable access to education for learners with hearing impairment. The third objective reads, “To describe the extent to which sign language interpreters view efficiency of their interpretation across curricula”, the conclusion is that the interpreters themselves are not familiar with some content, lack vocabulary to explain concepts in some subjects which makes them fail to explain themselves. They were only trained on basic of sign language not any content. Again, some teachers do not offer them enough support. Finally, the fourth objective reads, “To investigate strategies that seem to work for the sign language interpreting in assisting learners with hearing impairment”, the conclusion is that while some efforts are made to give remedial lesson for persons with hearing impairment strategies employed are limited given an array of strategies known to be effective in literature globally.

## 5.8 LIMITATIONS

The current study focused on sign language interpreters and subject teachers and has left out learners with hearing impairment, who are the main concern in the study. A study focusing on the learners’ views can give much information. Again, the study used qualitative approach, so in that case, the findings may not be generalised to outline experiences of all sign language interpreters and subject teachers in other schools. Moreover, it has also focused only one school as a case study yet there are other inclusive schools in Lesotho, so the findings may not be generalised beyond the schools.

## 5.9 RECOMMENDATIONS

Based on the results, discussions and conclusions of the current study, several issues would need to be addressed in order to minimize or eliminate challenges of sign language interpreting to facilitate learning for the deaf learners.

### 5.9.1 Recommendations for Policy Development

- i)** It is recommended that MoET assess the extent to which the Lesotho Inclusive Education Policy launched in 2019 is implemented to support learners with disabilities.
- ii)** MoET must adopt a policy position which must make Lesotho Sign Language one of the subjects to be taught at schools like Sesotho and English.
- iii)** MoET must develop a workload policy for interpreters and the policy must also indicate whether deaf learners must follow spoken language or sign language rules on their written work.

- iv)** MoET must allow schools to permit deaf learners have freedom to choose subjects to study to avoid having to study Sesotho as a subject as it seems a major challenge.

#### 5.9.2 Recommendations for professional development

- MoET must include sign language in the training of teachers so that sign language can be used as the medium of instruction for deaf learners.
- MoET should offer sign language interpreting courses and also those trained interpreters should specialise in different subjects like professional teachers.

#### 5.9.3 Recommendations on hiring interpreting staff

- MoET must intervene in hiring interpreters in that there should be an equal number of sign language interpreters to that of subject teachers.
- MoET must also ensure that the hired sign language interpreters have a degree from an interpreter education programme and have taken courses in educational interpreting.



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## Appendices

### Appendix 1: Letter from NUL to conduct a study

National University of Lesotho  
Educational Foundations Department

P.O. Roma 180

7<sup>th</sup> October 2020

District Education Manager  
Ministry of Education and Training  
Leribe

**RE: Nthabiseng Majoro (200300436)**

This letter introduces Nthabiseng Majoro 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: "**Challenges of sign language interpreting in facilitating learning for children with hearing impairment**", and wishes to interview staff at one school in Leribe, namely, teachers, and sign language interpreters. She will share with you the following, information letter for participants and a letter of introduction to the school principal.

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

Yours Sincerely



Paseka A. Mosia (D.Ed.)  
Senior Lecturer & HOD  
Educational Foundations Department  
National University of Lesotho  
P.O. Roma 180  
Lesotho  
Cell: +26658969867  
Email: [pa.mosia@nul.ls](mailto:pa.mosia@nul.ls) / [mosia296@gmail.com](mailto:mosia296@gmail.com)



## Appendix 2: Request Letter to District Education Manager

The National University of Lesotho  
P. O. Roma  
Roma 180

7<sup>th</sup> October 2020

District Education Manager  
Ministry of Education and Training  
Leribe

### **REQUEST FOR PERMISSION TO COLLECT DATA IN YOUR SCHOOL FOR A MASTER'S DEGREE**

With this letter, I request to be granted permission to collect data in one inclusive school in the district of Leribe. I am a registered postgraduate student in the Faculty of Education at the National University of Lesotho. For my thesis, I am investigating "**Challenges of sign language interpreting in facilitating learning for children with hearing impairment**". This is because learners with hearing impairment seem to be faced with challenges of language in inclusive schools and therefore this hinders their learning.

The information which will be collected from this school will strictly be used for academic purposes which contribute to the fulfilment of Master's degree in Inclusive Education. The information obtained from these participants will be treated as confidential and under no circumstances will it or their identity be revealed without their permission. Participants will also be free to withdraw from this study at any time during or after data has been collected. I wish to interview staff in this school, namely, teachers, and sign language interpreters.

I have attached introduction letter from my supervisor, letter to the principal of the school for permission, information letter for participants, informed consent form and interview schedule.

I will highly appreciate your support.

Yours faithfully

Nthabiseng Majoro  
The Researcher  
[nthaeugymajoro@gmail.com](mailto:nthaeugymajoro@gmail.com) / 63066238/57388381

Appendix 3: Authorization Letter from District Education Manager



**LERIBE EDUCATION OFFICE. P.O. BOX 12. LERIBE 300**

15<sup>th</sup> October, 2020

**The Principal**  
Mount Royal H.S  
Leribe 300

Dear Principal

**Subject: Request to collect data in your school**

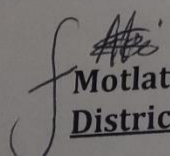
Nthabiseng Majoro wishes to collect data in your school for her research study

The study is on challenges of sign language interpreting to facilitate teaching and learning for children with hearing impairment. She wishes to interview sign language interpreters and teachers.

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

**NOTE:** Classes should not be disturbed

Sincerely

  
**Motlatsi Mosoang (MR)**  
**District Education Manager - Leribe**

*Tel: 22400210 / 22401360*



*Fax: 22400022*

## Appendix 4: Letter from the researcher to the principal

The National University of Lesotho  
P. O. Roma  
Roma 180

15<sup>th</sup> October 2020

The Principal

Dear Madam

### **REQUEST FOR PERMISSION TO COLLECT DATA IN YOUR SCHOOL FOR A MASTER'S DEGREE**


I am a registered postgraduate student in the Faculty of Education at the National University of Lesotho. For my thesis, I am investigating "**Challenges of sign language interpreting in facilitating learning for children with hearing impairment**". This is because learners with hearing impairment seem to be faced with challenges of language in inclusive schools and therefore this hinders their learning.

The information which will be collected from your school will strictly be used for academic purposes which contribute to the fulfilment of Master's degree in Inclusive Education. If permission is granted, I will inform those I am intending to interview about this study and they will be recruited for voluntary participation. The information obtained from these participants will be treated as confidential and under no circumstances will it or their identity be revealed without their permission. Participants will also be free to withdraw from this study at any time during or after data has been collected.

I have chosen your school for this study to collect data from, so I am therefore seeking permission to collect data from your school in October 2020. I have been allowed to collect data by the Faculty of Education. Please feel free to contact my supervisor should further information be required on the project.

Your co-operation in this regard will be highly valued.

Yours faithfully



---

Nthabiseng Eugenia Majoro

Email: [nthaeugymajoro@gmail.com](mailto:nthaeugymajoro@gmail.com)

Cell: +266 63066238

+266 57388381

Supervisor

Dr. Paseka A. Mosia

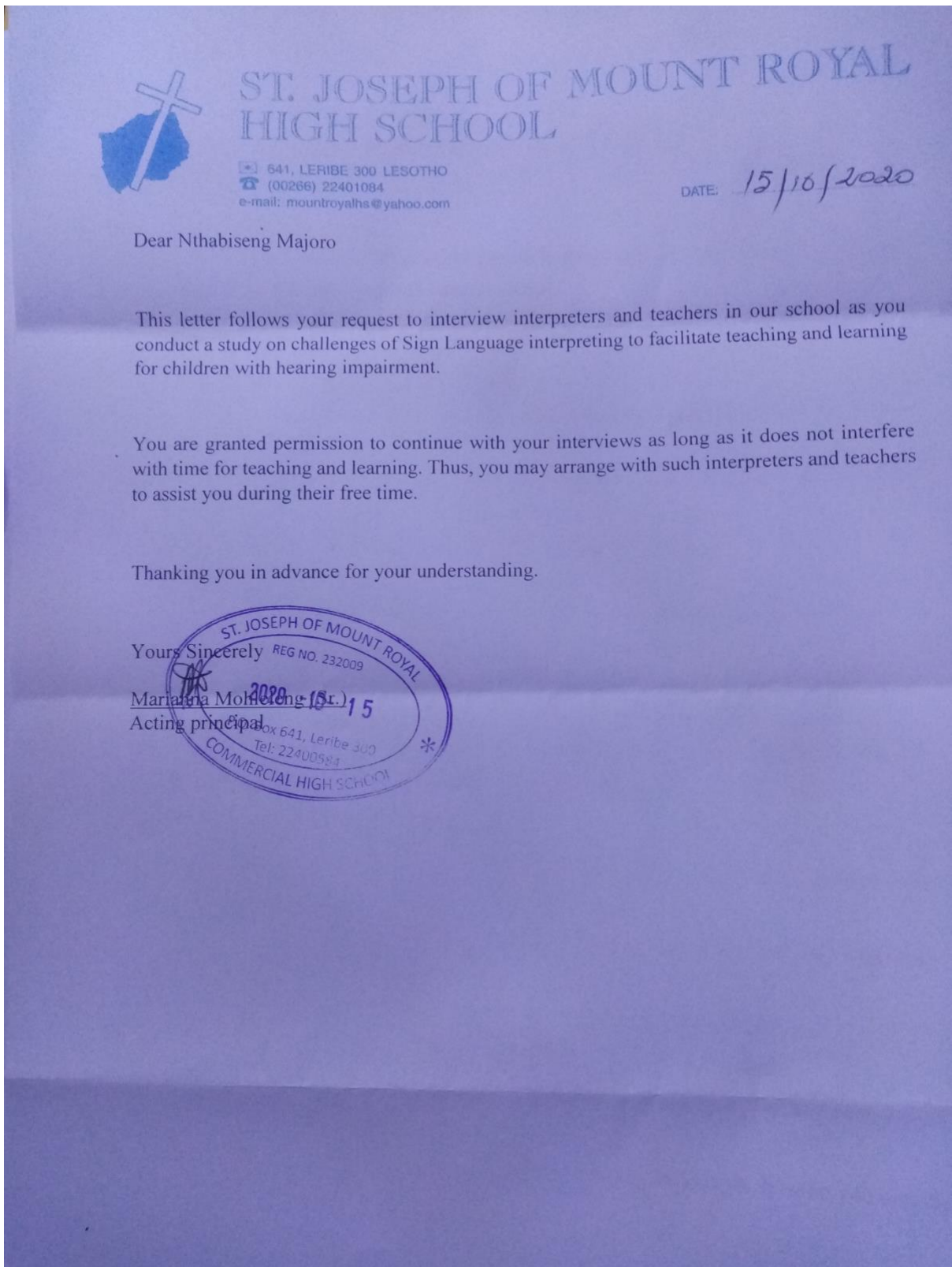
The National University of Lesotho

P. O. Roma 180

Email: [mosia296@gmail.com](mailto:mosia296@gmail.com)

Cell: +266 58969867

Appendix 5: Letter from the principal to the researcher



## Appendix 6: Letter of information for consent to participate in a research

P. O. Box 56

Maputsoe 350

Date 29 October 2020

**Re: Letter of information for consent to participate in a research.**

**Title of the study: Challenges of sign language interpreting in facilitating learning for children with hearing impairment**

**Dear Fellow Research Participant**

I, Nthabiseng Majoro, am a registered M.Ed. student in the Faculty of Education, Department of Educational Foundations, at National University of Lesotho (NUL). With this letter I am cordially inviting you to participate in a study entitled as above. The purpose for conducting this study is to satisfy requirements of obtaining a doctoral degree in Inclusive Education.

In this study, I am exploring the experiences of learners from poverty-stricken families on accessing secondary education as themed in inclusive education, and how policies and practices in Lesotho could be improved on enhancing inclusive education. This information can be used to improve the implementation of inclusive education in Lesotho secondary schools, while at the same time can contribute to Lesotho (or an African) relevant literature about inclusive education. There are no risks anticipated beyond those experienced during an average conversation.

Should you volunteer to participate in this study, you will be asked to respect the privacy of other participants as individuals or as a group by not disclosing any content discussed during the study. I will analyse the data while also ensuring that your responses remain confidential, and no names will be included in any reports. Shortly after the transcription has been completed, I will send you a copy of the transcript so as to give you an opportunity to confirm the accuracy of our discussion and to add or to clarify any points. Anonymous quotations will be used in reporting the findings of the

study. Data collected during this study will be retained on a password protected computer for 12 months in my locked room.

I look forward to professionally cooperating with you and thank you in advance for your assistance in this project. If you have any questions or concerns regarding this study, please contact me on 63066238 or 5738838 or via e-mail at [nthaeugymajoro@gmail.com](mailto:nthaeugymajoro@gmail.com).

Yours sincerely,

Majoro N. Signature and Date \_\_\_\_\_

Participant's Signature and Date \_\_\_\_\_

## Appendix 7: Informed Consent

### CONSENT TO TAKE PART IN RESEARCH

I \_\_\_\_\_ voluntarily agree to participate in this research study titled: **CHALLENGES OF SIGN LANGUAGE INTERPRETING IN FACILITATING LEARNING FOR CHILDREN WITH HEARING IMPAIRMENT.**

- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
- I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- I understand that I will not benefit directly from participating in this research.
- I agree to my interview being audio-recorded.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research, my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- I understand that under freedom of information legislation, I am entitled to access the information I have provided at any time while it is in storage. I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

#### Participant's consent statement

I have read the above information. I asked questions when I had them, and my questions were answered satisfactorily. I volunteer my consent for this study. I am aware that the discussions will be audio recorded and grant consent/assent for these recordings, provided that my privacy will be protected. I undertake not to divulge any information that is shared in the group discussions to any person outside the group in order to maintain confidentiality.

**Participant Signature and Date** \_\_\_\_\_

#### Researcher's consent

I believe the participant is giving informed consent to participate in this study

**Researcher Name and Date** \_\_\_\_\_

**Researcher Signature and Date** \_\_\_\_\_



## Appendix 8: Interview Schedule

### INTERVIEW FOR SIGN LANGUAGE INTERPRETERS AND SUBJECT TEACHERS

**1) Research Question - What challenges do learners with hearing impairment face in learning through sign language interpretation?**

#### **Interview questions for the sign language interpreter:**

- i) In your experience as an interpreter:
  - a. Do you ever encounter challenges imparting lessons efficiently to all deaf learners?
  - b. What do you find as problems in imparting content knowledge to the learners?
  - c. For which subjects do you find interpreting most difficult?
  - d. How do you overcome the challenges in B & C above?
- ii) In your opinion:
  - a. What interpreting challenges do most deaf learners encounter during lessons?
  - b. How are they supported to cope with their challenges?
- iii) What kind of planning and engagement with the subject teacher goes into a 40-minute lesson?
- iv) If (iii) above does not happen or is limited, how do you cope or become efficient in your interpretation services?

#### **Interview questions for subject teachers:**

- i) To what extent do you think your lessons are accessed equitably by learners with hearing impairments?
- ii) If there are challenges, what do you ascribe as causes for the challenges encountered by learners with hearing impairments?
- iii) How do you ensure that the challenges stated (ii) are minimized?
- iv) What level of sign language ability is expected of subject teachers?
  - a. How do you make sure that the sign language interpreter has disseminated the exact information you have presented?
  - b. In a situation where you doubt if interpretation is accurate, how do you remedy that?

**2) Research Question - How are sign language interpretation services organized and managed at an inclusive school for the deaf?**

**Interview questions for sign language interpreters:**

- i) How many sign language interpreters are there to every class with a learner(s) with hearing impairments?
- ii) How is the work of a sign language interpreter typically organized?
  - a. What is the typical working hours of an interpreter?
  - b. How does the workload affect their efficiency?
- iii) What adaptations are there when there is more than one learner in one class?
  - a. How easy is it to interpret for two or more learners in one class?
- iv) Given the way the services are organized, how efficient is the work of sign language interpreters?
- v) How far do subject teachers understand the importance of interpretation during their teaching?

**Interview Questions For teachers:**

- i) How are sign language interpretation services organized in your school for effectiveness of your teaching?
- ii) How important is efficient interpretation during teaching?
  - a) Are sign language interpretation efficient?
  - b) What are the main shortcomings to the way services are provided?
- iii) To what extent do you think teaching and learning activities for learners with hearing impairments are equally accessible to those without the impairment?

**3) Research Question - What are the strategies that seem to work for the sign language interpreting in assisting learners with hearing impairment?**

**Interview questions for both sign language interpreters and subject teachers:**

- i) In your view, what strategies are efficient in facilitating education of learners with hearing impairment?
- ii) To what extent are these strategies easy to use in this/your school?
- iii) What learning material can help support challenges with interpretation services?

**I thank you for your time and your willingness to participate in this study.**