

**PEDAGOGIC STRATEGIES TEACHERS USE TO TEACH READING IN ENGLISH
TO GRADE THREE DEAF LEARNERS AT SELECTED SPECIAL NEEDS SCHOOLS
IN LUSAKA DISTRICT.**

BY

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DECLARATION

Pedagogic strategies teachers use to teach reading in English to grade three deaf learners at selected special needs schools in Lusaka district, is my own work and that it has not been submitted for any degree or examination in any other University, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

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APPROVAL

This dissertation by Ngoza J Banda is approved as a partial fulfillment of the requirement for the award of the Degree of Master of Education in Literacy, Language and Applied Linguistics at the University of Zambia.

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ABSTRACT

This study sought to analyze the pedagogic strategies teachers use to successfully teach grade three deaf and hard of hearing learners to read English language. The objectives of the study were to; (i) Analyze pedagogic strategies teachers use to teach reading to deaf and hard hearing children. (ii) Examine the appropriateness of teaching and learning materials used when teaching reading to deaf and hard of hearing children. (iii) Determine the challenges faced by teachers in an English reading instruction. This research adopted two learning theories, which included constructivism and multimodality theory. The study was qualitative in nature and a case study design was adopted. To come up with the study sample, purposive sampling was used. Data was collected through semi-structured interviews and classroom lesson observations. The study sample consisted of three (3) administrators, seven (7) teachers and twenty-five (25) pupils totaling to thirty-five (35) participants. The collected data was analysed thematically as guided by the research questions. The findings established that teachers teaching deaf and hard of hearing learners reading in English employed a number of strategies in their reading instruction. The pedagogic strategies included picture reading, picture and word matching, lip reading, repeated class reading, fingerspelling, look and say, storytelling, translanguaging, sandwiching, interactive whole class reading, role play, language games, demonstration, miming, letter or word matching, question and answer, teaching using concrete or real objects and teaching learners Zambian sign language. The varied use of teaching and learning materials like picture charts, flash cards, picture cards, word cards, story books with a lot of pictures and real or concrete objects in hands-on and manipulative classroom activities proved to be appropriate and demonstrated the importance of employing a diverse range of resources in an English literacy instruction. The findings further revealed a number of challenges which ranged from the lack of teaching materials to the absence of specialized teachers. The study concludes that to the greatest extent possible, teachers used strategies and materials which were appropriate for deaf and hard of hearing learners despite facing a number of challenges which need addressing if teachers are to do a better job. Arising from the findings, the researcher recommends that the Ministry of General Education through the Curriculum Development Centre to work hand in hand with teacher specialists from respective Special Needs Schools so as to develop more appropriate teaching and learning materials for deaf or hard of hearing learners.

Key words: Pedagogic, strategies, reading, deaf and hard of hearing, constructivism, multimodal.

DEDICATION

This Dissertation is dedicated to my Late father; Joseph Banda, who saw me start this race. And to my mother, husband, children; Shiwamung'oma, Mangalida, Kabonganisho, Munkanda and Nthanda.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction/ Overview

“What disables deaf people is not that they cannot hear, but that they cannot read and write.”
(Enns, 2006)

This chapter introduces a study of the analysis of pedagogic strategies teachers use to teach grade three deaf and hard of hearing learners to read in English language. The chapter commences with the background, followed by the statement of the problem, purpose of the study, research objectives, significance of the study, research questions and definition of terms.

1.2 Background Information

The ability to read and write is essential and a fundamental skill to all academic success in all areas of study (Mkandawire, 2022). This means that literacy is fundamental in the educational progress of a child. Thus, children who lack or are delayed in the development of literacy skills find it difficult to participate freely in a classroom learning environment (World Bank Group, Making Inclusion Work: Module 5). This assertion applies to children who are hard of hearing or born deaf and are usually delayed in language acquisition through multiple challenges in communication skills. In most cases, the delay is as a result of not detecting the disability early, having hearing parents or parents’ denial of the child’s condition and not enrolling the children in school which is very common in Zambia. This alone greatly affects and disadvantages deaf children in early reading and other literacy skills. Below the National Literacy Framework (2013) clearly states the importance of teaching early grade reading to:

Unlike learning to speak a language, learning to read is not a naturally-developing skill; it requires an adaptation of the brain to be able to recognize letters and words (Wolf, 2007). Carefully planned instruction is necessary; reading must be taught as a subject in schools; and time on task is essential if learners are to develop the cognitive processes to become fluent readers (2013:9).

The foregoing statement shows the importance of teaching learners to read in a particular language.

Unlike hearing children who acquire a language naturally and already have great exposure in a particular language at the beginning of formal education, deaf and hard of hearing children on the other hand are delayed in language acquisition which later affects their language and literacy skills. According to Tongwa and Atemnkeng (2019) citing Matkin (1999), a delay in the development of a language in the early stages of a child at preschool level causes comprehension, expressive communication and learning problems. Since reading is a language-based activity that requires one to be fluent and understand the language, deaf and hard of hearing learners face a lot of challenges in learning how to read because they do not know the spoken language and have been exposed to a different language which uses signs. In addition, literature has shown that children learn to read better when taught reading in a language they know and are familiar with or can speak fluently in (Matafwali, 2010). More so, as argued by Marschark and Harris (1996) sign language is a language on its own with its own vocabularies, morphologies, and syntax. Thus, teaching deaf and hard of hearing learners as observed by Megawati (2020), requires a lot of effort and persistence on the part of the teacher because of the learners' innate characteristics like short memory, unstable emotions, and differences in hearing levels.

Reading is really challenging for deaf and hard of hearing learners, compared to other skills. According to Luckner et. al. (2005) hearing children find it easy to read because they learn to map or connect the spoken language, they already know to the printed words they read compared to deaf children who learn reading and writing simultaneously. Deaf or hard of hearing learners learn the reading skill in a different manner because they rely on signed words and visual resources for them to learn to read and write due to their inability to accommodate sounds and spoken language. Snow (2002) observes that an effective reader uses a variety of strategies to be able to read. However, deaf learners lack independent reading strategies such as, self-questioning, activating prior knowledge, summarizing the main idea, constructing representational images, predicting what text will follow, or drawing inferences when reading as stated by Andrews and Mason (1991) and Strassman (1992). For this reason, teaching reading in English to deaf pupils is a challenging and complex task that requires careful consideration of their unique needs and learning styles. English teachers are required to know how to use the appropriate strategies in teaching reading to deaf learners and hard of hearing learners. In addition, appropriate instructional methods and resources, could help deaf learners to develop

strong reading vocabulary and written vocabulary skills which could enhance language proficiency in English. Hence, the teachers are encouraged to be creative and innovative in their lesson preparation and lesson delivery in the classroom especially that some strategies used to teach hearing impaired learners will be different from those used when teaching learners with no hearing impairment (MOE, 2021).

Furthermore, language in a school setup plays a major role on learners' successes in all academic progression. This is so because it ensures that there is communication taking place among all the involved parts. Regardless of ones' disability or condition, communication becomes vital if learning is to take place. Children acquire their first language naturally through imitating what is spoken or seen around them. They learn how to use the spoken or signed language to express themselves for communication purposes. Conrad (1979) contend that a child has an inner speech which enables one to rehearse internally while trying to remember words they interact with in print and spoken language in their environment. However, children born with hearing impairment are limited in terms of language experience and literacy development because of not having access to auditory interactions and sign language (Salehomoum, 2018). Learners born without any hearing disability acquire oral language as they encounter the language through interaction however; children who are born deaf or those who became deaf before acquiring the spoken language have unique needs since their first language is visual instead of auditory. It is important to note that language abilities of deaf or hard of hearing children are often affected by their hearing loss, depending on the age of onset. Thus, learners who acquire their hearing loss early in life may have literacy issues. Several studies have shown that the literacy skills or levels of learners with hearing impairment are below that of hearing students (Easterbrooks et al., 2008; Krystal, 2017; Park et al., 2013; Werfel et al., 2015).

Chabari and Awori (2017) postulates that depending on the child's home environment, children with hearing impairment acquire language in different ways thus the need for a rich linguistic environment. Whether deaf or with no hearing loss, children with a background of a rich linguistic environment can have less challenges with emergent literacy skills. It is important to note that, despite deafness acting as a limiting factor of self-cognition and self-knowing of the world, other factors in the child's surrounding and environment could help to overcome the limitation and contribute positively to their development (Krasavina, Serebryakova,

Ponomarenko, & Zhuykova, 2019). Furthermore, children with hearing impairment could experience a sound language and literacy skills once they are exposed to a rich print environment and use of sign language to build their vocabulary at an early age in a particular language (Salehomoum, 2018). Easterbrooks et al. (2008) revealed that vocabulary has a lot of influence and plays an important role in comprehending print materials and texts. Vocabulary has proved to play a major role in both deaf and hearing children who struggle to read. Deaf children with a rich vocabulary achieve higher reading abilities unlike those with a limited knowledge of words. A sound vocabulary positively affects the child's reading skills and in line with this, Chikopela (2013) posits that at grade one level the first instruction given to pupils in reading is that of knowing the letters of the alphabet making it easy for them to remember what has been taught. It is therefore, important to teach the alphabetical principle at an early age to deaf children. Because it enables them to decode texts knowing that written letters represent sounds which are later blended to create words that carry meaning.

Girgin (2013), contend that in receptive and expressive language skills which are core literacy skills, children with hearing impairment have shown to face challenges which lead to literacy learning problems. It is important to mention that in the Zambian education sector, for children who are deaf or hard of hearing, sign language is used as a medium of instruction to teach them how to read in a particular language. The more a child uses sign language to interact and socialize, the more it improves proficiency which is an important condition to learning to read and write. According to the National Policy on Education, "Educating Our Future," (1996) the fundamental aim of the curriculum in both lower and middle upper grades is to enable pupils to read and write clearly, correctly and confidently, in a Zambian language and in English so as to acquire basic literacy skills (National Literacy Framework, 2013). However, learning to read and write in English should begin after learners have acquired basic skills in the local language." The use of English as a medium of instruction in schools especially in the early years has been disadvantageous for the majority of learners. To support early literacy and later, English literacy instruction, the ministry has introduced medium of instruction in a familiar language, in all subjects for lower primary, grade one to grade four respectively. While for upper primary, grade five to seven, the medium of instruction is English for all subjects except for Zambian languages subjects and other foreign languages. This means that if a child fails to break through to literacy in Zambian languages and English in the lower grades, learning in grade five onwards will be a

challenge for they cannot read to learn, hence, the challenge and struggle to excel academically. Therefore, teaching reading in English to deaf and hard of hearing learners contributes to their literacy development, which is crucial for academic success and integration into the wider hearing community. The teacher's resource book, part 1 (one) developed by USAID 'Lets Read' project, states that;

Language is a prerequisite for literacy for all children, and, therefore, teaching a child who is deaf how to read requires specific knowledge and skills on deaf pedagogy. Research has shown that when children who are deaf or hard of hearing have skilled teachers who have mastered sign language and appropriate teaching methods, can be successful in developing language and literacy skills which are critical to achieving academic success (USAID 'Lets Read' project, 2021:2).

Wolf (2007) supports the aforementioned argument by stating that deaf or hard of hearing learners do not learn words incidentally; but do so by receiving explicit instruction from the teacher. This means that the instruction of teaching reading should be carefully planned by teachers. Teachers need to carefully consider using appropriate strategies, activities and develop or choose teaching and learning materials that will benefit all the learners during instruction. In addition, as argued by Akpan and Beard, (2016: 396) "the major responsibility for today's educators should focus on providing a realistic learning environment for their students by modeling, through experimentation, leading questions and scaffolding to elicit student's knowledge." It is for this reason that the present study sought to investigate strategies teachers of deaf and hard of hearing learners used to teach reading in English. Therefore, the present research sought to analyze the pedagogical strategies teachers use to successfully teach grade three deaf or hard of hearing learners to read English language. When deaf or hard of hearing learners learn to read English fluently, they would not struggle to learn other subjects, and like any other child, they would be reading to learn instead of learning to read in their academic progression.

Furthermore, the school curriculum in Zambia advocates for inclusive education. The curriculum commands that learners be able to communicate fluently, independently and accurately in everyday life activities through language of instruction and the written form of the language. Teachers are advised to use learner- centered methods in order to develop learners with

appropriate skills and values who can contribute positively to the development of the country (CDC,2013). Emphasis is also placed on the importance of activating learner prior knowledge as they come to school and encourage teachers to recognize these skills in their teaching. Teachers must ensure that they build on learners' prior knowledge and experience by making learners active participates who can contribute and be productive in the learning process (CDC, 2013). Apart from the syllabus, it should be noted that additional instructional materials for teachers teaching deaf and hard of hearing learners to read have been developed by USAID 'Lets read' project through the Ministry of General Education, which include the resource books for teachers Part I (one), Part II (two) and Part III (three). Teachers' resource book part I (one) aims at providing the background Information on the theoretical information teachers need to teach literacy to learners who are deaf and hard of hearing. Part II is from Theory to Practice and it focuses on implementing the content from Part I into the daily lessons. It contains practical activity descriptions for every-day use and lesson plans. Lastly, Part III provides teaching materials such as teaching aids, materials, and templates to copy and use in lesson preparation. It is therefore, a teacher's duty and responsibility to plan teaching and learning according to the learners' needs, abilities, learning pace and experiences in life. The teacher should focus on accommodating and shaping the learning experiences accordingly. Additionally, incorporating real-life experiences and hands-on activities into reading instruction can make the learning process more meaningful and engaging for deaf and hard of hearing learners. Thus, this research will explore the English literacy instruction and the pedagogic strategies teachers use to teach reading in English language to grade three deaf and hard of hearing learners. In other words, the interest is on how teachers teach deaf and hard of hearing learners to read in English language and the pedagogic strategies they use to ensure that deaf or hard of hearing learners learn how to read just like any other child with or without a disability.

The study focused on the grade three deaf and hard of hearing learners because it is in this grade that learners start learning how to read and write in English. This research will therefore, address the questions: what pedagogic strategies do teachers use to teach reading in English to deaf learners? How appropriate are teaching and learning materials teachers are using to teach deaf learners reading in English?

1.3 Statement of the Problem

Zambian literature reveals that a number of studies have been conducted on early literacy of the deaf or hard of hearing learners in terms of reading comprehension and strategies used to help deaf learners comprehend text materials. Chikopela and Ndhlovu (2016b) researched on letter sound awareness among grade one and two Pupils with hard of hearing impairment in selected schools in Lusaka District, Zambia. The results of this study established that pupils with hard of hearing displayed insufficient knowledge in letter sound knowledge and sound blending tasks. Zemba and Chipindi (2020) researched on the challenges faced by pupils with disabilities in Accessing Primary Education in two selected inclusive education piloting schools in Livingstone District. The study found that the views of most school stakeholders were predominantly positive, reflecting an acceptance of the inclusive status of the schools. While Banda (2019) analyzed language practices used in teaching English language in inclusive education classrooms with hearing impairments. From the studies conducted on teaching methods and general experiences, it is clear that instruction for the deaf and hard of hearing needs further studies. The studies conducted so far have not focused on the language pedagogical practices to scaffold learning. Thus, it was unknown what language pedagogical strategies teachers used to teach the deaf and hard of hearing.

Therefore, as a question, the statement of the problem in this study was: what pedagogical strategies did teachers use to teach grade three deaf and hard of hearing learners to read in English language?

1.4 Purpose of the Study

The purpose of this study is to analyze the pedagogic strategies used by teacher to teach grade three deaf or hard of hearing learners to read in English language.

1.5 Objectives of the Study

The objectives of the study are to:

- i. Analyze pedagogic strategies teachers use to teach reading to deaf and hard of hearing children.
- ii. Examine the appropriateness of teaching and learning materials used when teaching reading to deaf and hard of hearing children.

- iii. Determine the challenges faced by teachers in an English reading instruction.

1.6 Research Questions

To achieve the set objectives and stay focused on the research, the following questions were used as a guide:

- i. What pedagogic strategies do teachers use to teach reading to grade three deaf and hard of hearing learners?
- ii. How appropriate are the teaching and learning materials teachers use to teach reading to grade three deaf and hard of hearing learners?
- iii. What challenges do teachers face when providing reading instruction to grade three deaf and hard of hearing learners?

1.7 Significance of the Study

This research would be a great contribution to the progressive accumulation of knowledge on applicable strategies teachers use to teach deaf and hard of hearing children to read in English language. The study would also be of help for future reference in teacher understanding and selection of strategies that can best help deaf and hard of hearing children learn to read English language. It was also hoped that the study would be found useful and meaningful by the relevant authorities like; policy makers, the Ministry of Education as well as useful to practitioners such as lecturers in Colleges of Education in the training of future teachers in line with inclusiveness. Furthermore, the study will serve as a model for future research to students in the literacy department and may be a source of data to other stakeholders dealing with the welfare of children who are deaf and hard of hearing.

1.8 Limitations of the Study

This study will include only teachers who teach deaf and hard of hearing learners in the selected special needs schools in Lusaka district and cannot be generalized to all districts in Zambia.

1.9 Operational definitions of terms

Pedagogy: the method of instruction one uses in teaching.

Strategies: planned activities one employs within a particular method.

Reading: look at, interpret, say loud and sign something that is written or in print.

Hearing impaired: hearing disorder or handicap.

Hard of hearing learner: used to describe individuals with mild to moderate hearing loss.

Deaf: someone with severe hearing disorder or handicap.

Teaching and Learning Resources: these are materials such as text, charts, concrete objects, videos and visual aids used by teachers and learners in the teaching-learning process.

1.10 Structure of the dissertation

This study has seven chapters. Chapter one presents the background information, followed by the statement of the problem, purpose of the study, research objectives, significance of the study, research questions limitations, definition of terms and structure of the dissertation. The chapter that follows is chapter two which provides relevant literature of the study. The third chapter presents the theoretical framework, followed by chapter four where the methodology of the study has been discussed. Chapter five is on data analysis, presentation and interpretation of the findings, while the next chapter which is chapter six discusses the findings of the study. The last chapter is chapter seven which draws the conclusion of the study and provides the recommendations. The pages that follow after chapter seven include the references and appendices.

1.11 Chapter summary

This chapter discussed the background information on the pedagogic strategies employed by teachers in the literacy instruction for deaf and hard of hearing learners in Zambian special needs schools of Lusaka district. The chapter also discussed the statement of the problem, purpose of the study, research objectives, research questions, significance of the study, limitations of the study and finally operational definition of terms. The next chapter reviews related literature to the present study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction/ Overview

In this chapter, literature is reviewed according to the objectives of the study. The literature review shows that a lot of studies have been conducted on how deaf learners acquire reading and how they comprehend text materials. However, very few studies have paid attention to the pedagogic strategies teachers adopt to teach reading in English language to deaf or hard of hearing learners. Thus, more studies are required to identify successful strategies that could be used in the reading instruction of the deaf or hard of hearing learners and the appropriate teaching and learning materials that could be used during reading. The chapter establishes the relationship between previous studies and the current one for each category of literature reviewed so as not to merely itemizes studies without showing how the studies are related and different to the current one.

2.2 Pedagogic strategies teachers use to teach reading to deaf and hard of hearing children.

Chikopela & Ndhlovu (2016 b) researched on letter sound awareness among grade one and two Pupils with hard of hearing impairment in selected schools in Lusaka district, Zambia. Results of this study revealed that pupils with hard of hearing displayed insufficient knowledge in letter sound knowledge and sound blending tasks. Both expressive and receptive vocabularies did not predict sound awareness in pupils with hard of hearing due to inadequate instruction in this area. This study differs with the current study in that it focused on letter sound awareness among grade one and two Pupils with hard of hearing impairment in selected schools in Lusaka district.

Chiluba, Chibo, Mwaba, & Thole (2019) in the study titled, “An Assessment of the Health Literacy Among Deaf People in Kapiri Mposhi District of Zambia” focused on how well a deaf person can get the health information and services that they need, and how well they can understand them. This study was not restricted to any age group among the deaf but considered any deaf person in Kapiri Mposhi. The findings of this study were that Deaf people in Kapiri Mposhi were not aware of issues pertaining to their health and wellbeing. The study reviews that deaf people faced a number of communication barriers and literacy was among the factors adversely affecting their health care in terms of being able to receive full disclosure of their medical situation. Due to low health literacy levels, most deaf people were not able to read and

write. That study is important to the current study as it highlights the importance of reading and writing for a deaf person and how this impacts ones' socialization and interaction in society. Considering the findings from Chiluba et al. (2019), it is important that this study analyses the pedagogical strategies teachers use to teach deaf and hard of hearing learners reading in English language and assess how effective these strategies are in enabling learners to read written texts in English. It is important to note that this is a critical point for these learners to progress well in their academics because the medium of instruction from grade five to tertiary or higher learning is English and all teaching and learning materials are written in English. And has revealed by Banda (2021) that teacher's teaching methods had an impact on literacy skills development of the learners makes this research very important. In his research, Banda (2021) investigated the factors affecting literacy skills development among learners with hearing impairments at Magwero School for the Deaf. On the teaching strategies Banda's (2021) revealed that a number of strategies are used to teach deaf learners' literacy which include the following; collaborative, expository methods, question and answer, peer teaching, group work, role play, expository and demonstration. However, the findings showed that collaborative teaching strategy was used more prominently in the literacy teaching process compared to the other mentioned strategies. This study is similar with the current study in that it revealed teaching strategies used to teach literacy skills to deaf learners however, it contrasts with the current study because its main focus was on investigating the factors affecting literacy skills development for the deaf.

Banda (2019) analyzed language practices used in teaching English language in inclusive education classrooms with hearing impairments. The study established various Language Practices that are used by teachers and learners during teaching and learning instruction in inclusive classes of the hearing-impaired learners and the non-hearing impaired. Among the Language Practices were verbal and sign language, use of language interpreters in the classrooms, as well as using visual aids. The verbal and sign language practice as the policy suggests involves the use of a bilingual instruction where sign language and verbal language have to be used simultaneously. To communicate effectively and reach out to all learners in an inclusive classroom instruction the teacher needs to be bilingual (MOE, 2013). Through the Ministry of General Education, USAID 'Lets Read' project has produced resource books for teachers teaching learners who are deaf or hard of hearing to read, Part I which contains background information from Early Childhood Education to Grade 3 and provides teachers with

a variety of pedagogic strategies of teaching reading to deaf or hard of hearing learners (MOE & USAID ‘Let’s Read’, 2021). It is important for teachers teaching deaf and hard of hearing learners to use or adapt different approaches in terms of language and didactics to suit the linguistic needs of their learners in the classroom. Chapter four of part 1 resource book for teachers focuses on teaching reading to learners who are deaf or hard of hearing. It provides the formal reading instruction with continuous attention to sign language development, a specific order of teaching and the use of deaf or hard of hearing appropriate didactics. The chapter provides four steps of teaching: i.) An effective method for teaching sign language vocabulary; ii.) The use of sign language stories or texts as meaningful context; combined with asking open questions; iii.) A Multimodal Approach for teaching letters and new words; iv.) Reading written stories or texts that contain the newly learned signs and words. While chapter five focuses on general approaches to teaching and learning that is needed for effective teaching. This includes creating a learner free environment, with learner led activities and use of feedback for learning. More important is the guidelines in using this Resource Book, that “it is not written as a stand-alone guide and should be accompanied with specific teacher training. This way, teachers will be able to learn and apply the practical skills described in this book” (MOE & USAID ‘Let’s Read’, 2021:11). The question however, is how many teachers have been trained so far since the production of these resource books? The above-mentioned resource books for teachers are meant to fill in the gap created by the revised 2013 curriculum where deaf or hard of hearing learners were not fully accommodated. This could be seen in the production of these resource books for teachers to use as additional instructional materials written to offer strategies that could help in adjusting teaching to the linguistic needs of learners who are deaf or hard of hearing thus, making the teaching and learning process more fruitful, satisfying and joyful. These resource books have the right information for teachers teaching English language to deaf or hard of hearing learners and Banda’s (2019) analysis of language practices used in teaching English language in inclusive education classrooms with hearing impairments learners differ with the current study in that all the three books by USAID ‘Let’s Read’ Programme are not research papers but resource books, and Banda’s (2019) study address the language practices used when teaching in an inclusive classroom not in a special school, and how language is and can be taught to the deaf or hard of hearing learners.

Similar to the current research, is the study done by Sheilla (2011) which focused on teaching of Reading and Writing to Deaf Learners in Primary Schools in Uganda. The research design was a qualitative case study and it used interviews and lesson observations for data collection. The findings of the study revealed that teaching methodology adopted by the teachers was characterized by the use of elements of sign language, demonstrations, illustrations, and use of varied instructional materials. The methodology followed the whole word or sentence approach of teaching language. The teachers also demonstrated little knowledge of comprehensive methods of teaching reading and writing to deaf learners. The teachers were aware of the need to maintain eye contact and interpersonal relationships with the learners. They were conscious about the use of space for signing. The teachers' methodology was impacted on by the level of provision and nature of instructional materials used in teaching reading and writing to the deaf. Low inputs from the managers, for example, resulted in limited availability of instructional materials. This study is similar to the current study but differs to some extent as it looked at teaching methodology used to teach not only reading but also writing to deaf learners while the current focused on teaching reading only.

Mkandawire, Zuilkowski, Mwansa, and Manchishi (2023) looked at instructional strategies used by teachers in Multilingual classes to help non-speakers of the language of instruction learn Initial reading skills in diverse classes. The study was qualitative and data was collected through face-to-face interviews, focus groups, and lesson observations. The respondents were 23 grade one teachers. For data analysis, content analysis was performed through a meaning condensation process. Findings of the study revealed that teachers in multilingual classes used translanguaging, bilingual materials, remediation and reading interventions strategies to teach literacy among early graders. Further, parents, multilingual teachers, and bilingual learners were also used as resources in multilingual classes. Even though Mkandawire et al. (2023) looked at instructional strategies used by teachers in early grade reading the focus of the study was in multilingual classes which is not the case with the current study. Both studies researched on instructional strategies used to teach reading but the area of focus differs as Mwankawire et al. (2023) targeted teachers of grade one learners in multilingual classes with focus on non-speakers of the language of instruction while the current study focused on teachers of English for grade three deaf or hard of hearing learners in special needs schools.

A study by Megawati (2020) looked at teacher's strategies in teaching English for deaf students. This study had two objectives which were to describe the strategies used by the English teacher to teach students with hearing impairment and to discover the challenge found in teaching English for deaf students. In the findings, the study discovered that teachers used seven strategies to teach English to the deaf which included; (1) not pushing students to master grammar because the teacher tended to focus on teaching the deaf students to master vocabulary, (2) teaching with simple conversation due to the students' limitation in doing spoken conversation, (3) setting up ranges of students' ability to make the teacher easier in making teaching and learning process more effective, (4) not pushing students to do what the teacher wanted, (5) writing phonetic transcription to show the deaf students how to pronounce the word, (6) using diverse teaching media such as textbook, animation media, pictures, simulator, board game and hand-made flashcard to attract students and get them interested to learn English, and (7) speaking with low speed and clear sentence and using sign language at the same time (as the supportive means of communication) to make clear instruction for the students. In short, the study established that teachers tended to focus on vocabulary rather than other skills, teach simple conversation, give appropriate treatment based on student ability, give students freedom in developing their English ability, use phonetic transcriptions as guidance in pronouncing the words, use different media, and speak slowly and clearly when using sign language. The study associated teachers' challenges in teaching deaf children English to intrinsic talents such as learners' short memory, unpredictable emotions, and varying hearing levels. The current study is the same as that of Megawati (2020) in that they both look at teacher's strategies in teaching English for deaf students. However, the difference between the two studies lies in the area of focus, the present study focuses on pedagogic strategies used to teach reading in English language to grade three deaf or hard of hearing learners in Lusaka, Zambia while Megawati's (2020) study focused on teacher's strategies in teaching English for deaf students at SMP Luar biasa, Indonesian.

Furthermore, Odhiambo's dissertation (2016) focused on reading strategies adopted by deaf learners to enhance comprehension. The purpose of the study was to carry out an investigation on strategies adopted by learners with hearing impairments in reading for comprehension in special primary schools for the Deaf. The major conclusions of the study were that learners with hearing impairment used the look and sign method which was not suitable enough to enhance comprehension. In addition, Giggs (2000) as cited by Odhiambo (2016) reveals the four main

reading methods that could be used during teaching and learning. The four methods include the phonic, syllabic, and eclectic and look and say. He states that the phonics method is one of the best worlds known method that is widely used. The focus of this method is introducing the alphabet first by teaching the children letter names and their sounds, before they could begin blending the sounds to form a simple word which is the syllabic method. Giggs (2000) further reveals that look and say method expects the child to look around and say out the words they see in written form. The look and say method to deaf learners replaces say with sign, thus, called look and sign. While the eclectic method combines all the three methods in one lesson during the reading instructions. In terms of teaching methods, the study is similar to the present study but differs in teaching components in that Odhiambo's (2016) study focused on enhancing reading comprehension for the deaf learners while the present study focuses on strategies to teach reading to deaf or hard of hearing learners.

Moreover, Pinar et al. as cited by Herrera, Puente and Alvarado (2014:2) point out on deaf learners being bilingual in sign language and written language. This approach acknowledges the importance of both languages and recognizes that each plays a critical role in the education and development of deaf learners. With appropriate strategies and support, deaf pupils can become proficient readers and successful members of society. Herrera et al. (2014) suggests that "to better understand the relationship between sign language and written language, it is necessary to pay more attention to the fact that the majority of deaf readers are bilingual in sign language and written language, that in most cases is their second language". This study considers the written language as a second language hearing impaired learners learn as they learn to read. Herrera et al. (2014) thus, conclude that fingerspelling is an important strategy that could be used to facilitate the internal word representation of a deaf reader because in the acquisition of reading skills it serves as a support mechanism. This study further states that deaf learners if taught using appropriate strategies based on visualization have a higher achievement level in literacy and language. In addition, citing Haptonstall, Nykaza and Schick (2007), Herrera et al. (2014:2) conclude that "the use of finger spelling allows the child to establish a more reliable link between sign and writing and thus aiding the process of learning, and that it may also help to provide a phonological link with the written text". Like the current study these studies relate well with the current in that they also focused on strategies that can be used to teach reading to deaf or hard of hearing learners.

Girgin (2013) conducted a study on teacher strategies in shared reading for children with hearing impairment. This study sought to address the following objectives; What is the importance and frequency of shared reading activities in syllabus? b) What preparations are needed for shared reading activities? c) How should teacher read a storybook with class? Girgin concentrated at the teacher strategies in shared reading and not pedagogical strategies of teaching reading to hearing impaired learners. He makes mention that in a shared reading strategy text choice is very important. The study concludes that when selecting the books to use during shared reading the teacher should determine the learners' reading levels. "Furthermore, stories should be engaging and include repetitive elements in order to facilitate reading and support children's motivation" (Girgin, 2013:250). This study differs with the current in that the former specifically looked at shared reading while the latter generally focuses on reading.

Alegria (2004) analyzed the reading and spelling skills of deaf persons in his article Deafness and Reading. He states that for children to acquire phonological representation, lip reading and cued speech can be used in the teaching instruction. These can be used as resources to enhance learners' ability of understanding what is been taught. While Mumpuniarti's (2017) study explored pedagogical strategies that teachers use to support special need children in improving their level of literacy and numeracy. This study states the fact that every learner in a given classroom is unique and special. Therefore, the teacher is required to integrate various pedagogical skills and knowledge so as to accommodate all the learners' needs. This study differs with the current research in that the former focused on pedagogical strategies used to teach literacy and numeracy to slow learners while the latter will analyze the pedagogical strategies used to teach reading in English to deaf or hard of hearing learners. In the same line, Mwanza (2015) in her master's dissertation researched on preschool, executive functions and oral language as predictors of literacy and numeracy skills in first grade. This study sought to establish the extent to which preschool prepares children for learning to read and numeracy in first grade in Lusaka Zambia. The study further assessed whether preschool may interfere with learning to read in first grade if children do not speak Nyanja at home and depend on school for learning to read as well as learning the language of instruction (Nyanja). The study utilized a quasi-experimental design as children with and without preschool were assessed within the school setting. Results revealed that pupils who went to preschool did not outperform pupils who did not go to preschool in first grade. On the contrary those who went to preschool performed

worse. Children with preschool had a head start in alphabetic skills compared to children without preschool in the first grade but on all other literacy and numeracy tests there were no effects in favor of children who went to preschool. In terms of executive functions, the study revealed that preschool did not promote executive functions. But executive functions do predict literacy and numeracy skills. Specifically working memory and inhibitory control predict literacy and numeracy skills over and above other executive functions. It was also established that executive functions are better predictors of numeracy than literacy. The study further revealed that oral language is important for performance in literacy skills. This study differs with the present study in terms of area of focus; Mwanza (2015) focused on preschool, executive functions and oral language as predictors of literacy and numeracy skills in first grade while the current study focuses on pedagogic strategies only.

Tahang, Tapada, Uluelang, Umasugi, and Wahab (2023) investigated the teacher's strategies for teaching English to deaf students in a special school at Kota Sorong. The school where this study was conducted is committed to delivering outstanding education to kids with special needs, including the blind, deaf, mentally challenged, physically disabled, autistic, and others. The aim of the study was to discover teaching strategies English teachers applied in teaching English to deaf students. The researcher discovered two main strategies as the teaching strategies used in teaching English to deaf students which included repetition and visualization strategy. Firstly, the study concluded that the teacher used repetition strategy by repeating what is said several times or explaining the material more than once using signs or lip language, visual aids, and one on one interaction with an individual learner. This finding was aligned with Prasetya et al. (2023), who revealed that to get the deaf student's attention when learning English vocabulary, the teacher needed to use pictures as a media, sign language to communicate, as well as using drilling in learning process. The second strategy of visualization was used to help the teacher explain the content more easily making it easy for the learners to grasp the vocabulary words taught. Visual media or natural objects also supported learning success because deaf students learned things through their eyes first. With the help of learning media, especially visual media, it helped deaf students understand the material well (Rahmiati, 2022). The findings from these studies align with the current study in terms of teaching strategies used in teaching English to deaf students but differs on the area of focus because the current study looks at the literacy skill

which is reading in English language while the above studies looked at teaching English as a subject.

2.3 Resources or materials used to teach reading to deaf learners

Teaching and learning materials play a crucial role in supporting the education of hearing-impaired learners. In the Zambian education system, many schools lack adequate resources to use during teaching. This challenge is actually faced by teachers in many government schools and is worse in special needs schools. Zambian special needs schools face a lot of challenges that affect the academic progress of learners with disabilities. A number of studies conducted so far show that the teaching and learning materials meant to be used in Deaf schools are unavailable or inadequate and that the few available ones are not adapted to suit the Deaf learners. The Ministry of General Education in collaboration with USAID ‘Lets Read’ project (2021) acknowledges that there are very limited resource materials for learners with special education needs in the institutions and for teacher’s continuous professional development. “Therefore, the USAID Let’s Read’ Project should be commended for developing deliberate and targeted support to the deaf Learners who are hard of hearing in the area of literacy.” (MOE, 2021:2). The Ministry of General Education has stated that it will continue to support any efforts aimed at enhancing attainment of quality education for the learners with special educational needs. And studies conducted so far have revealed that there are appropriate resources and tools that educators could use to facilitate instruction and enhance the learning experience for learners. These materials may include sign language-based materials, visual aids, assistive technologies, tactile and sensory materials.

Penda (2017) explains the difference between teaching materials or aids and learning materials or aids in terms of how they are used in a lesson. She states that the latter is called learning materials because learners use the materials to learn what is been taught while the former means materials used by the teacher to teach learners. Smith (1998) cited in Penda (2017) emphasized the importance of using visual and concrete teaching and learning materials to learners with hearing impairment by the teacher. Smith (1998) explains that the use of concrete objects and visual aids help learners with hearing impairment learn better and grasp the concept easily instead of just depending on what is written on the board for them to understand what is being taught. Agreeing with Smith’s (1998) argument Penda (2017) observed that the concrete and

visual aids were appropriately used and yielded positive results as they were suitable and appropriate to the grade level of learners with hearing impairment whose needs were at the concrete stage. Although Penda's (2017) article addressed the use of teaching and learning materials with learners who have hearing impairment, it differs with the present study in that its focus was on the general teaching of hearing-impaired children specifically grade ones, while the current research will look at grade threes and the pedagogical strategies used to teach them reading in the English language. Penda's (2017) study looked at the teacher's lesson preparation to lesson delivery while paying attention to the methods of teaching, teaching and learning materials, media of instruction, classroom environment, teacher qualifications and role in the teaching and learning process while the current research will focus on how deaf learners are taught to read English language in grade three by focusing on the pedagogical strategies employed by teachers in lesson delivery and the appropriateness of the teaching and learning materials used to teach the deaf or hard of hearing learners.

Furthermore, a number of studies have shown how appropriate the use of visual and pictures in teaching reading has proved to be an important factor in the learners' understanding of factual information in the reading process (Nikolarazim, Vekiri & Easterbrooks, 2013; Gentry, Chinn & Moulton, 2004/2005). They add that there is a positive correlation between added visuals and reading comprehension that can also be shown through software visual resources. A study by Chikopela and Ndhlovu (2016a) looked at teaching materials in phonology for pupils with hard of hearing in selected schools in Chongwe. They found that teaching materials used by the teachers teaching deaf learners included; visual aids or charts, literacy games, concrete objects, sign language literacy books, flash cards, story books and electronic gadgets like computers, television and video tapes, and that these materials needed to be adequate and appropriate in the learning process (Chikopela & Ndhlovu, 2016a). This study thus concluded that materials which learners could see and touch proved to be very effective in teaching sound awareness, rhyming and reading. A similar finding was seen in another study by the same researchers where a good performance by learners was portrayed on letter naming task (Chikopela & Ndhlovu, 2016b). This finding was related to the fact that deaf pupils learn through picture and word association hence making it easy for them to remember the letters shown to them. We can thus note that the use of pictures or visual aids enhanced the deaf learners' written English skills which further helped them in their reading skills. Stressing the importance of these teaching and learning

materials, Muzata (2021) citing Ndonyo, Matafwali and Chakulimba (2017) emphasized the need for deaf learners to learn with appropriate teaching and learning resource because they learn way better with visual materials, they are able to touch and manipulate. The above studies are similar to the current study because of their focus on the importance and appropriateness of the teaching and learning materials when teaching deaf or hard of hearing learners which the current study also addresses as one of the objectives.

In addition, Mwanyuma (2016) conducted a research on ‘Factors influencing the academic achievement of deaf learners in Kilifi county, Kenya’, where she reveals that availability of teaching and learning materials affects the achievement of Deaf learners. She further states that the government did not help much because of failure to provide sufficient support in ensuring that teaching and learning materials were available to the school. Akakandelwa and Munsanje (2012) also revealed that teaching and learning materials found in schools for visually impaired learners were not adequate and suitable for learners. Ndhlovu and Matafwali (2020) reported lack of appropriate basic textbooks and other important materials to support the teaching and learning process of deaf learners in junior secondary to be one of the reasons for poor performance in integrated science. And citing Sagree, (2008) in their literature review, Ndhlovu and Matafwali (2020) observed that classes and instructional materials in certain deaf schools were not modified for learners with specific learning preferences and needs because some teachers believed that learning is solely the responsibility of learners, hence most teachers avoided performing their role of modifying their classes and instructional materials. Furthermore, in their findings Ndhlovu and Matafwali (2020) revealed that lack of teaching and learning materials such as texts books for Integrated Science, beakers, white board markers and laboratories affected learners negatively and hindered them from practicing or experimenting what they learnt due to lack of appropriate apparatus or chemicals. Citing Yosia, (2005), Ndhlovu and Matafwali (2020) showed that in most schools where learners with Hearing Impairment are found, the required teaching and learning materials was inadequate.

The problem of teaching and learning materials is also seen in Muzata’s (2017) results, where he revealed challenges that affected special education units in the implementation of the 2013 revised curriculum. Citing the e MESVTEE (2013) he reports ‘challenges of inadequate teaching and learning resources in various subject areas such as English, Mathematics and Zambian

languages among other challenges such as poor infrastructure and lack of computers’ (Muzata, 2017:175). In the same study, Muzata (2017) acknowledges that specialized materials are of prime importance to the effective teaching and learning of learners with education needs. He revealed the unavailability of specialized materials in the implementation of the revised curriculum which made it difficult for teachers to effectively implement the curriculum. In addition, lack of adapted teaching and learning materials for the revised curriculum negatively affected the teachers of special needs units who in most cases were teaching without books or adapted syllabuses for the 2013 curriculum. The lack of involvement and subsequent lack of providing necessary materials for curriculum implementation is an attack on the profession and not only on individuals. He further notes that the curriculum encourages teachers to improvise so as to meet urgent needs of their learners. However, lack of adapted books affects the profession in terms of teaching workloads and costs because improvisation by the teacher does not mean absence of key documents like text books or syllabuses (Muzata, 2017). In line with this argument, Ndhlovu and Matafwali posit that “lack of adapted materials is likely to frustrate the efforts teachers would like to put in teaching learners with Hearing Impairment” (2020: 81). Therefore, in the recommendation to the Ministry of General Education Muzata (2017) recommended developing teaching and learning materials for learners with special needs to be done side-by-side with the mainstream school materials so as to overcome unfairness in assessment and for purposes of putting inclusive education into practice. As observed by Muzata, Mahlo and Mabunda, (2019) there was neglect of learners with disabilities in curriculum adaptation and special education teachers were not fully involvement as a result, necessary requirements for learners with special needs were lacking. For example, learners with Hearing Impairment were not considered in the planning process which caused a shortage of teaching and learning materials, equipment and assistive devices resulting in difficulties in the teaching and learning process. Yielding from the recommendations made by Chikopela and Ndhlovu (2016), Muzata (2017), Muzata, Mahlo and Mabunda, (2019) and Ndhlovu and Matafwali (2020), the ministry of general education in collaboration with USAID ‘Lets read’ project has developed teacher resource books for teaching learners who are deaf or hard of hearing to read (part I, part II and part III). These books were produced in 2021 so as to assist teachers in teaching deaf or hard of hearing learners to read. Part three of these resource books focuses on teaching materials and a few different level stories and texts created by teachers of DHH learners during the

training. The guide is meant to assist teachers in teaching learners who are deaf or hard of hearing to read and as a source of inspiration for their own creativity to create materials that are suitable for their learners. In addition, to this is the *Zambian Manual alphabet* that is provided with the resource book. The above studies are important to the current study in that it has added more knowledge to the scholarly works that have been carried on in recent studies. Furthermore, the existing difference between the resource books and the current study is that the former is a teacher's guide and resource in the preparation of lessons while the latter is a research paper adding more knowledge to the scholarly works that have been carried on so far.

Mutungwa (2015) revealed that teaching and learning materials are very important in the education system because they directly and indirectly affect the academic performance of learners in a school. This means that there should be necessary materials and other support that learners can benefit from to access the curriculum in the same way as other learners without disabilities do. There is a need to incorporate different types of teaching and learning methods and techniques which would allow access to the curriculum by learners with disabilities. Providing audiovisual materials, projectors, pictorial presentations or modifying any amount of input allows learners with disabilities to access the curriculum (Muzata, 2017).

Mwangu and Muzata (2021) examined the attitudes of teachers and learners with hearing impairment in teaching and learning of home economics and expressive arts as vocational subjects of 2013 revised curriculum at ST Mzee (Pseudonym) Special School for learners with hearing impairment. The study established positive attitudes towards the teaching of vocational subjects by both teachers and learners. However, teaching and learning was compounded with challenges of lack of materials for practicals as reported by both teachers and learners. Teachers further reported lack of adequate room for practical activities in expressive arts. This study differs with the current research in that it focused on teachers and learners' attitudes in the teaching and learning of the two vocational subjects in secondary schools.

Malungo, Nabuzoka, Paul and Sachingongu (2018) presented a summary of results titled 'Qualitative study from Zambia on barriers to and facilitators of life-long learning'. The study was carried out by the University of Zambia (UNZA), in collaboration with SINTEF Digital, Norway. The survey was qualitative in nature and studied the barriers to and facilitators of lifelong learning and skills development for children and young persons with disabilities in

Zambia. On the resources for education the survey revealed that lack of resources in education was a major barrier to the education of children with disabilities in Zambia. They reported that there is a general lack of books, laboratories, libraries and computers in most schools. And special needs schools lack adaptive learning materials such as computers for persons with visual impairments, textbooks in braille, books in braille, braille paper and equipment for the hearing impaired is also scarce. They further report that Special schools have often been dependent on non-governmental organizations (NGOs)for support for these types of resources.

The above literature highlights the importance of using visual and sensory perception in teaching and learning process. The literature also reveals the importance of learners' needs to interact or use the authentic materials or tools provided in the teaching and learning process which help and motivate them. Therefore, in the teaching and learning process, a learner's interest is important and deaf learners in particular, could be motivated and their interests rose through the use of these teaching and learning materials.

2.4 Challenges encountered by teachers teaching reading in English to deaf learners.

Banda (2019) points out some of the challenges hearing impaired learners face in an inclusive educational environment leading to unfriendly behaviour and non-interactive attitudes both inside and outside the classroom. These challenges include lack of teaching materials, slowness in learning, lack of teachers who are able to sign and pupils not knowing standard sign language. Other challenges included missing of vital information by the sign language interpreters and the use of both sign and verbal language being time consuming. Furthermore, Banda (2019) reveals that hearing impaired learners felt safer when left alone or among their fellow deaf peers than mixing with learners without hearing impairment. The study clearly focused on pupil interaction and challenges faced by both teachers and learners in inclusive learning or teaching. Speaking of hearing-impaired learners staying in isolation, Herrera et al. (2014), also reveals that deafness itself was not what caused lack of social information and interpersonal communication which led to social and linguistic difficulties among these learners. Instead, these limitations and difficulties were as a result of not having access to a spoken language, fear of being laughed at and having an educational system that could not accommodate them wholly (Gutierrez,2004).

Odhiambo (2016) established that learners with hearing impairment have challenges when learning reading. The study further observed that learners with hearing impairment had serious

challenges in comprehending text materials during comprehension activities. In Odhiambo's dissertation the challenge is more of learner oriented than teacher centered during classroom instruction. However, this study will focus on the challenges encountered by both teachers and learners during teaching and learning activities. Furthermore, Odhiambo (2016) states that strategies used to teach deaf learners lacked in some ways. He argues that all the four methods used in teaching exhibited a challenge on the learners' part, in that the look and sign method lead to learners' failure to read a word minus comprehension and failing to sign out certain words because of the language not having corresponding signs. On the other side the phonic and syllabic methods expects a learner to say the sounds and syllables which is a big challenge to deaf learners who lack the auditory feature of speech. Furthermore, Tongwa and Atemnkeng's (2019) study revealed a number of challenges associated with the strategies teachers used in teaching vocabulary.

Mumba, Kasonde-Ngandu and Mandyata (2022) in their study, perceptions of teachers and pupils on factors affecting academic performance of pupils with hearing impairment in primary schools in Zambia reported a number of factors that seemed to be affecting pupils' academic performance in Zambia. Evident from the outcome, the study concluded factors affecting the pupils' performance ranged from; shortage of learning resources, lack of competence in the use of sign language by teachers, clouded school curriculum to insufficient learning time. The study further revealed that the low academic performance was believed to be a product of a combination of factors surrounding the learning of pupils with HI and not just an issue of lack of competence in the use of sign language. However, the study called for further increased competence in sign language among teachers for them to help pupils with HI experience school success. The study by Mumba et al. (2022) like the current study address the factors affecting academic performance of pupils with hearing impairment in primary schools in Zambia, however, their study differs with the current study in terms of study population. Mumba et al. (2022) study population focused on all the hearing-impaired learners in primary schools (hearing impaired learners from grade one to grade seven) while the current study 's population sample was on deaf or hard of hearing learners in the lower primary section, in particular, grade three deaf or hard of hearing learners in the selected special schools.

Mwanza's (2020) study looked at critical reflections on the Zambian Education system and the teaching of English in Post-Colonial Zambia. This paper took a critical look at the Zambian Education system by focusing on the teaching of English in secondary and tertiary institutions. In this paper, Mwanza (2020), observed remarkable progress in improving the teaching of English, however, he noted a number of issues that needed attention like, the recognition of translanguaging and its pedagogic value in the teaching. It is important to note that in this paper, Mwanza (2020) stated that the Zambian education system was still being confronted with the challenges of inadequate teaching materials, shortage of teachers, inadequate infrastructure, poor reading and writing skills in primary schools and over enrolment resulting into overcrowding in classrooms (Banda and Mwanza, 2017; Bwalya, 2019; Mumba, 2019; Mwanza, 2012;2016). In this paper, Mwanza (2020) further revealed challenges confronting the teaching of English which included lack of teaching and learning materials and lack of knowledge by teachers to understand and apply certain methodologies. Although this study focused on secondary schools and tertiary institutions, it is important to the current study in that it revealed the challenges teachers were facing in the teaching profession especially that the present study also sought to identify challenges teachers encountered in the English reading instruction for the deaf or hard of hearing learners.

Commenting on the implementation of the revised 2013 curriculum, Muzata and Mahlo (2019) observed that the content and teaching resource does not fully accommodate the learner with disabilities instead priority is paid more to learners without disabilities. It is for this reason, that the curriculum has failed to suggest or provide specific methodologies or pedagogic strategies special needs teachers could employ in teaching learners with disabilities. Instead, the syllabus leaves it open for teachers to be innovative and creative so as to come up with other strategies that can best be beneficial to a child with hearing impairment in the learning process. Muzata (2017) adds that teachers are very stressful because they are already faced with different challenges which include poor conditions of service while sometimes, they are forced to spend their own money so as to print, photocopy or translate a book into braille or sign language. He further identified the language of instruction as one of the challenges teachers teaching deaf students faced. He states that;

The policy of using a familiar language of instruction also has an impact on the teaching and learning for HI learners. Observations were made by two ESOs that the lack of books in sign language had compounded the situation. This is because teachers who are trained to teach HI learners are posted to districts where they do not know the local languages and have to depend on native speakers to translate for them what is written in the syllabi for the mainstream learners for them to translate to the HI learners. But because such teachers are not native speakers of the local language in the areas where they have been deployed to teach, learners find it difficult to understand the type of sign language used by teachers. Teachers also find it difficult to sign certain words in those localities (Muzata, 2017:190).

Similar to Muzata's above observation, Muzata and Mahlo, (2019) argued that the use of a familiar language as a medium of instruction compounds the already existing challenges related to sign language vocabulary further complicating effective delivery of the curriculum to learners with deafness at lower primary school level. It is against this background that this study will focus on analyzing the pedagogic strategies teachers use to teach reading to deaf learners in a grade three classroom. The two studies are related to the present study in that they address the challenges faced by teachers teaching deaf learners and learners with special education needs, however, the current study differ with the two studies as its focus was not on the challenges in the implementation of the revised 2013 school curriculum but on the challenges encountered by teachers teaching reading in English to grade three deaf or hard of hearing learners.

Muzyamba and Changala (2019) conducted research on the challenges faced by school management in the procurement of teaching and learning materials and their perceived effect on pupils' academic performance in selected secondary schools in Chipata. In the findings they concluded that school management played a major role in ensuring the procurement and availability of teaching and learning materials. It was responsible for sourcing for funds and supervising and monitoring of the procurement of the teaching and learning materials. The study also concluded that challenges faced by school management in procuring teaching and learning materials included inadequate and erratic government funding, resulting in failure by schools to procure necessary materials, which may have negatively affected pupils' academic performance. This study differs with Muzyamba and Changala's (2019) study reason being that it looked at

teachers' pedagogic strategies and the challenges they encountered in the English reading instruction and not on the challenges faced by school management in the procurement of teaching and learning materials and their perceived effect on pupils' academic performance

Megawati (2020) revealed four challenges faced by the teacher during the teaching and learning process for deaf learners. The first challenge being that most students suffered from short memory resulting into the teacher's use of a lot of repetition during instruction. The second challenge was students' short temper which often made them angry or bored easily when they were no longer interested in the learning process, to overcome this the teacher could always try to create a good learning environment that could make students feel comfortable and enjoy the learning process. The third challenge was differences of students' hearing ability, students' IQ and also students' background knowledge. The fourth and last challenge was that students had difficulties in mastering words learnt due to lack of exposure to the spoken language since most of them were born deaf. For instance, the challenges which teachers faced during teaching and learning process came from the students. In addressing the challenges teachers encountered in the English reading instruction, the current study has added more knowledge to the existing knowledge of the challenges faced by the teachers during the teaching and learning of English for deaf or hard of hearing learners in the Zambian context.

Furthermore, Chibwe (2015) conducted a study on the contribution of sign language variations to academic performance of learners with hearing impairments. The study revealed that Sign Language Variation has contributed towards the academic performance of learners with hearing impairments negatively. The effects could be seen in several areas: such as where signs between learners and teachers were not the same, learners misunderstood concepts in class that were put across to them in Sign Language. He also addressed the challenges which were as a result of sign language variation. The results showed that challenges like low participation in co-curricular activities, lack of educational tours and poor adaptation to new environments were as a result of sign language variations. This study raised an important point of signs being wrongly observed due to their features of location and placement which had a negative effect on the deaf learners' academic performance and classroom communication. In addition, the study revealed the implementation of the ministry's homework policy in schools; however, it was very clear from the homework books that parents and caregivers did not help their children with the given work

at home due communication breakdown. To this challenge the researcher suggested orientation of parents and caregivers on the learners' language of use at school. The findings of Chibwe's (2015) study relates well with the present research through Agricola's description of a hearing impairment person's achievements to read and write when he states that signs or other visual pedagogical means of communication helped deaf learners to effectively express themselves and understand the world around them (Radutzky, 1993 as cited by Marschark & Spencer, 2003 in Chibwe, 2015). In terms of language practices in the classrooms, the study shows that as specialist teachers speak using sign language, the need to aid their instruction with dictionaries which can be used as additional recourse for acquisition of meaning as well as expansion of linguistic proficiency and scope was an important aspect in the actual classroom practices since forms of language used differ from context to context depending on the learners' different cultures and environments. The focus of Chibwe's (2015) study on sign language variations differs with current study's area of focus thus, making the two studies different from each other.

Zemba and Chipindi (2020) conducted a study on Challenges Faced by Pupils with Disabilities in Accessing Primary Education in two Selected Inclusive Education Piloting Schools in Livingstone District. The objectives of the study were; (i) To evaluate how school personnel, non-disabled pupils, community-based rehabilitation officials and parents view the inclusion of pupils with disabilities at the two selected schools in Livingstone district, (ii) To uncover the challenges pupils with a disability face at two selected schools in Livingstone district of Southern province of Zambia, (iii) To evaluate the quality of inclusive education practices at the two selected schools and (iv) To profile the type of support that the government and cooperating partners render to the two selected schools. The study concluded that despite the presence of various exclusionary factors, the two schools made some observable headway towards the improvement of inclusive learning for children with disabilities. The study also revealed a number of challenges to inclusive education which included; availability of teachers and teaching capacity which was still a concern, the curriculum not being flexible and school accessibility made it difficult to access learning in classrooms for children with disabilities. The similarity between Zemba and Chipindi (2020) and the present study is that both studies have addressed challenges in the primary education section. However, the current study differs with Zemba and Chipindi's (2020) study because it addressed the challenges faced by teachers in teaching

reading in English to grade three deaf or hard of hearing learners in special needs schools and not challenges experienced by learners with disabilities in an inclusive education system.

While there is a growing body of literature on inclusive education and literacy strategies for deaf or hard of hearing students, there is a noticeable gap in research specifically addressing the pedagogic strategies employed by teachers when teaching reading in English to Grade Three deaf or hard of hearing learners. From the literature that has been reviewed in this chapter, it is clear that no study has attempted to consider how important it is for a teacher to use the right pedagogic strategies when teaching reading to deaf or hard of hearing learners for them to acquire the skill. The challenge has been that most of the methods or pedagogic strategies used to teach reading to deaf and hard of hearing learners have been one sided meant for hearing learners thus putting a hearing-impaired learner on a disadvantage, and neglecting the unique challenges and instructional approaches relevant to Grade Three deaf or hard of hearing learners. This study aims to fill this gap by exploring and analyzing the specific pedagogic strategies used by teachers in Grade Three classrooms, by investigating their effectiveness in promoting English literacy skills among deaf and hard of hearing learners. This research will therefore, analyze strategies that could be used to benefit a deaf or hard of hearing learner so as to help strengthen teacher delivery.

2.5 Chapter summary

In this chapter, the main concentration was the analysis and review of the related literature from different scholars within and outside Zambia. The literature was related to pedagogic strategies, teaching or learning resources and challenges faced by teachers in teaching deaf or hard of hearing learners and their academic progress. The next chapter looks at the methodology that was used in carrying out this research.

CHAPTER THREE

THEORETICAL FRAMEWORK

3.1 Introduction/ Overview

In the previous chapter, the literature review was presented. The chapter reviewed studies done so far on the Pedagogic strategies teachers use to teach reading to deaf children, Resources or materials used to teach reading to deaf learners and Challenges encountered by teachers during the reading instruction. This chapter presents the theoretical framework that guides the study. Theoretical frameworks strengthen research by making strong connections between the current study and what has been developed already. It provides ones' research with the scientific justification for an investigation (Vinz, 2015). According to Kombo and Tromp (2013:56), "a theoretical framework is a collection of interrelated ideas based on theories". In this regard this research adopted two learning theories, which included constructivism and multimodality theory.

3.2 Constructivism

Constructivism is a learning theory that suggests learners actively constructing knowledge and understanding based on their prior experiences, interactions with the environment, and social interactions. The known and notable theorists of this learning theory include Jean Piaget (1950), Lev Vygotsky (1978), Jerome Bruner (1961), and John Dewey (1938). The constructivism theory emphasizes the importance of learners' active engagement in the learning process and their ability to build on their existing knowledge to construct new meaning and understanding. The key principles and concepts that govern this theory include the following:

1. **Active Learning:** According to constructivism, learning is an active and participatory process. Learners are not passive recipients of information but actively engage with the learning materials. Learners actively seek to make sense of the new information by relating it to their prior knowledge and experiences.
2. **Prior Knowledge:** This principle places emphasis on the significance of learners' existing knowledge and beliefs as the foundation for new learning. When learners encounter new information, they attempt to integrate it into their existing mental frameworks or schemas and modify their understanding where necessary.
3. **Social Interaction:** Social interaction plays a crucial role in constructivism. It encourages collaborative learning, discussion, and interactions with peers and teachers which

provides opportunities for learners to exchange ideas, negotiate meanings, and co-construct knowledge (Bruner, 1961 & Vygotsky, 1978).

4. Zone of Proximal Development (ZPD): The ZPD is a concept introduced by Lev Vygotsky (1978), referring to the gap between what a learner can do independently and what they can achieve with appropriate guidance and support from a more knowledgeable individual, such as a teacher or a peer. Vygotsky contended that effective learning occurs when learners receive support that is within their Zone of Proximal Development (ZPD).
5. Authentic Learning: Constructivists advocate for authentic and meaningful learning experiences that relate to real-world contexts. Learning is seen as more effective when it is relevant and applicable to learners' lives, as it allows them to see the practical implications of their knowledge.
6. Construction of Knowledge: In constructivism, knowledge is not passively transmitted from teachers to learners but actively constructed by learners themselves. Learning is a personal and subjective process, leading to unique interpretations and understandings for each individual.

Constructivism has influenced various educational practices and pedagogical approaches. Some common instructional strategies aligned with constructivist principles include problem-based learning, inquiry-based learning, project-based learning, and collaborative learning. In the constructive perspective allows new knowledge that is always based on the learners' prior or existing knowledge which they bring to learning situations (Akpan & Beard, 2016). Educators who adopt a constructivist approach often encourage students to ask questions, explore, experiment, and make connections between their experiences and new information. Teachers act as facilitators, guiding students through their learning journey rather than simply delivering content. By embracing constructivism, educators aim to foster deeper and more meaningful learning experiences, enhance students' critical thinking and problem-solving skills, and create a foundation for lifelong learning and intellectual growth. Through this theory, teachers need to do more than just teaching the learners but could direct students to have the ability to become increasingly self-dependent, self-directed and depend less on the teacher as they learn to read (Duyilemi & Bolajoko, 2014). Since the construction of knowledge is a dynamic process that requires the active engagement of learners who will be responsible for their own learning.

“Teachers must physically show students directions, ask the students to repeat it by using Say See Do teaching strategy, so that the student knows what is required to do” (Akpan & Beard, 2016: 395). This theory has been adopted in this study because it allows the teacher to create an effective learning environment based on the strategies selected, where learners take more ownership of their learning and tailor their educational experience.

The theory is meaningful in the study because it fosters a sense of community in the classroom through collaborative learning among deaf learners and encourages teachers to align their instruction with the principles of active engagement, real-world relevance, continuous assessment and holistic development. Furthermore, as stated by Duyilemi and Bolajoko (2014) constructivist strategies tend to lead to higher academic achievement, better high-level reasoning, critical thinking skills, deeper understanding of learned materials, greater time on task, less unruly behavior in class, lower levels of anxiety, motivation to learn and ability to view events from others. Thus, in the present study this theory will reveal pedagogic strategies that align well with the mentioned skills for deaf or hard of hearing learners. The study will therefore, determine how constructive the strategies and materials are on promoting critical thinking skills, deeper understanding of the content and other skills as propounded by the constructivism theory. In short the theory will help to show positive and more supportive relationships among peers, positive attitudes towards reading and high self-respect or esteem in the way deaf or hard of hearing learners interact with the teaching and learning materials.

In summary, constructivism posits that learning is a dynamic and personal process of knowledge construction. Learners actively build on their existing knowledge, engage with their environment, and benefit from social interactions to create new understanding. By adopting constructivist principles in this study, teachers teaching deaf learners could aim to empower learners as active participants in their learning journey, encouraging them to explore, question, and construct knowledge in meaningful and authentic ways. The theory further encourages development of effective and inclusive teaching strategies that suit the needs of deaf or hard of hearing learners accordingly in the context of reading.

3.3 Multimodality

This theory refers to the use of multiple modes or channels of communication in conveying information. It looks at how people communicate and interact with each other through the use of

multiple modes of communication such as writing, speech, posture, gaze and visual forms (Kress, 2009). Multimodality is used in this research to analyze the pedagogical strategies that teachers use to teach deaf learners reading in English lessons. For every successful lesson, communication is key to the teacher. Therefore, this theory fits well in this study whose key area is on analyzing teachers' pedagogical strategies to teach deaf learners who have sound deficiency, and rely so much on the visual signs for effective communication. To expand their reading vocabulary and read with comprehension, deaf or hard of hearing children need to receive an explicit instruction from the teacher. It is the teacher's responsibility to ensure that they integrate various sensory modalities, so as to enhance the overall communication experience during the lesson. Bock (2014) stresses that the communication process is multimodal because in making meaning one uses different forms of communication. For example, classroom communication demands that the teacher uses verbal and nonverbal language like written, speech, image, gesture, gaze, posture, music, color and technology. In short, multimodal theory demands that the teacher uses gesture, sign language, finger spelling, oral-speaking, reading and writing combined with a media strategy of the picture to effectively communicate with the deaf learners.

Furthermore, the theory provides a holistic approach in teaching that may enhance the effectiveness of teaching deaf or hard of hearing learners. It aims at creating a rich learning environment that accommodates and addresses the unique needs of deaf learners in acquiring reading skills. Kress and Van (2006) emphasis the idea that communication is not only limited to linguistic elements alone but involves a combination of semiotic resources which include linguistic signs (words), visual signs (images), and other non-verbal elements, all of which work together to convey meaning. Strives et al (2005) adds that both talk and gesture complement each other in making meaning. This theory is important in this research because it places the learner at the centre by ensuring that multiple modes of communication are used so as to appeal to different learning styles of deaf or hard of hearing learners. The theory is suitable for deaf or hard of hearing learners since it was especially developed for them; to effectively teach reading vocabulary as well as reading with comprehension (MOE, 2021). Therefore, the theory is appropriate as it enhances comprehension through multiple channels, creates inclusive learning environments, leverages technology, and recognizes the expressive possibilities of sign language. In short, the theory is a solid foundation for designing reading instruction that is not only

accessible but also engaging and effective for deaf or hard of hearing learners. Multimodality theory suggests that presenting information through multiple channels enhances comprehension. For Grade Three deaf or hard of hearing learners, this could involve combining written text with visual representations, sign language, gestures and interactive activities to deepen their understanding of the content or acquiring of the skill taught. The theory has been adopted in the present study so as to examine whether the pedagogic strategies used to teach deaf or hard of hearing learners are multimodal and learner-centered or not.

3. 4 Chapter Summary

This chapter has presented the theoretical framework. The two theories used in this study emphasize the importance of learner engagement and communication in the teaching and learning process. The active participation and engagement fostered by constructivism, coupled with the diverse modes of representation offered by multimodality, aim to make reading instruction a more accessible and meaningful experience for deaf learners. The next chapter presents the research methodology.

CHAPTER FOUR

METHODOLOGY

4.1 Introduction/ Overview

This chapter presents the research methodology that was used in the study. The various aspects of the methodology discussed in this chapter include the following sub headings: the research design, population, sample and sampling techniques, methods of data collection, research instruments, data collection procedure, data analysis and ethical consideration. This study adopted a qualitative approach to analysis pedagogic strategies teachers use to teach grade three deaf learners to read in English language.

4.2 Research Design

A research design as defined by Orodho (2005) is a plan on how to gather data, when to collect it and how to analyse it. This research used a qualitative approach (Milingo, Tambatamba & Cheyeka, 2021; Milingo, Ilubala-Ziwa, Mwale, N & Madalitso, 2020; Milingo, 2019) and used a descriptive research design. According to Bryman (2008) a qualitative research methodology is a strategy that usually emphasizes words instead of quantity in the collection and analysis of data. Qualitative research is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The research was qualitative in nature because it intended to provide an in-depth understanding on how deaf and hard of hearing learners were taught how to read English language. This design enabled the researcher to understand the experiences and outcomes both teachers and deaf learners encounter in an English lesson in a grade three classroom. The research was a descriptive study because the objectives of the study were meant to describe, explain and interpret the collected data with information about teachers' views on the strategies, teaching materials and challenges encountered when teaching deaf and hard of hearing learners to read in English language. The researcher considered the importance of the teacher's role in the child's reading ability. In other words, the purpose of a descriptive research design as defined by Kothari (1985), is to examine a phenomenon that is occurring at a specific place and time. Therefore, a descriptive research design was used in this study because it focused on uncovering the pedagogic strategies teachers employed in the reading instruction to teach learners who are deaf and hard of hearing to read in English language.

4.3 Study Population

Three selected special needs primary schools in Lusaka District were used for data collection. Best and Kahn (2006) defined population as a group that is of interest to the research and has one or more characteristics in common. In short, it is a group of individuals, objects or items from which samples are taken. The targeted population included all school administrators, all teachers of English for grade three (3) deaf learners and all deaf and hard of hearing learners in grade three from all the three special needs primary schools in Lusaka District.

4.4 Study sample and sampling technique

To come up with the study sample, purposive sampling technique was used. Mugenda and Mugenda (1999) define purposive sampling as a technique that allows a researcher to use cases that have the required data according to the objectives of the research. The goal of the researcher is to select cases that could provide rich information based on the purpose of the study (Orodho, 2005). The three schools and participants were selected using homogeneous purposive sampling because of the research's focus on teachers teaching grade three deaf and hard of hearing learners to read in English language in special needs schools in Lusaka district. This procedure was chosen because it helped the researcher to pick only teachers who taught deaf and hard of hearing learners' English language in the selected special needs schools. The study sample included one administrator from each school, making a total of three (3) administrators, seven (7) teachers and twenty-five (25) pupils totaling to thirty-five (35) respondents. The sample size was small as the importance was on what makes the experience unique rather than generalizability (Bradshaw, Atkinson, & Doody, 2017).

4.5 Methods of Data collections

Primary data sources were through semi – structured interview and structured classroom observations. Semi-structured interviews were used because they are flexible and adaptable. Interviews enabled the researcher to interact directly with the respondents and gave room to follow up questions (Lindlof and Taylor, 2000). School administrators and teachers were interviewed in line with the objectives as stated in chapter one while structured classroom observations allowed a systematic observation of the teaching strategies, use of visual aids, the incorporation of sign language, teacher-learner interactions, and the pacing of the lesson in the classroom setting.

4.6 Research Instruments

Two main research instruments were used in this study namely; interview guides and lesson observations check lists. During interviews a voice recorder and note book were used to record what was said, and lesson observations checklists were used to collect classroom data. The use of both interview guides and observation checklists ensured that data was triangulated.

4.7 Data Collection Procedure

An introductory letter was obtained from the Directorate of Research and Graduate Studies of the University of Zambia and then presented to the District Education Board Secretary (DEBS) and the Provincial Education Officer (PEO) for permission to carry out the research at the selected special needs schools in Lusaka. During data collection the researcher explained to the respondents that the research was purely academic. Semi -structured interviews were conducted to school administrators and teachers. While lesson observations were used to observe teachers and learners so as to identify the pedagogic strategies used to teach reading in English to deaf learners.

4.8 Methods of Data analysis

The collected data was analysed thematically as guided by the research questions. Lochmiller (2021) argues that thematic analysis as a method involves the identification of recurring patterns presented by researchers as overarching statements or themes. Thematic analysis was used in this research because it allowed the researcher to see and make sense of collective or shared meanings and experiences in the dataset. The collected data was identified, organised and interpreted in order to uncover meaningful insights on the pedagogic strategies teachers use to teach deaf learners to read in English language. In addition, the researcher used this method because it makes one's data analysis more valid due to its accessibility, transparency, and flexibility (Braun & Clarke, 2006).

4.9 Ethical considerations

According to Wood and Wood (2006), ethics are guidelines or set of principles for good professional practice which serve to advise and steer researchers as they conduct their work. In order for this study to be conducted successfully, Permission was sought from the University of Zambia, School of Education. The participants that took part in the research were informed of the procedures in the research. The researcher observed confidentiality by respecting the

respondents' privacy and making sure that no individual's name was used. Respondents were informed that their participation was voluntary and that they were free to leave the study if they so wished.

4.10 Chapter summary

Chapter three has presented the study design and methodology. The chapter explained the research design, population, sampling and its procedures. It has further given a description of data collection instruments and data analysis procedure. Ethical considerations were also highlighted. The next chapter presents the findings of the study.

CHAPTER FIVE

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

5.1 Introduction/ Overview

In the previous chapter, the research methodology was presented. This chapter presents the findings obtained during data collection process. The topic of the research was pedagogic strategies teachers use to teach reading in English to grade three deaf and hard of hearing learners at selected special needs schools in Lusaka District. The research questions were; (i) What pedagogic strategies do teachers use to teach reading to deaf and hard on hearing learners? (ii) How appropriate are teaching and learning materials teachers use to teach reading to deaf and hard of hearing learners? (iii) What challenges do teachers face when providing reading instruction deaf or hard of hearing learners? The findings will be presented according to the research questions. In presenting data, verbatim statements from the respondents are used to maintain the originality of the information collected and provide back up to the themes in each research question. Furthermore, verbatim statements are used because they enable better understanding of the data than would the researcher's paraphrasing of the statements. And as argued by Bryman, (2014) it is better to focus on what participants are saying and put less focus on how they express themselves.

5.2 Pedagogic strategies teachers use to teach reading to deaf learners.

This section addresses the first objective of this research and answers the first research question. It presents the pedagogic strategies teachers use to teach reading to deaf and hard of hearing learners.

5.2.1 Pedagogic strategies teachers use to teach reading to deaf and hard of hearing learners: Interview data.

The researcher sought to find out the pedagogic strategies teachers of deaf and hard of hearing learners use to teach reading in English language. There was need for the researcher to confirm from the teachers if they did teach deaf and hard of hearing learners to read English language before asking them about the strategies used in teaching reading. The data showed that in all the selected schools, teachers taught reading in English language to deaf and hard of hearing

learners. Teachers explained that English language is taught so as to allow deaf and hard of hearing learners to progress in their academic journey and be able to communicate with others. The fact that English language is the medium of instruction from grade five and beyond allows teachers to put in their best in teaching these learners to read in English language. Teachers explained that the challenge of not knowing how to read in English could be a very big problem to deaf and hard of hearing learners both in academics and social circles of life. They reported that if deaf and hard of hearing learners fail to read in English it could be difficult for them to communicate with others and understand the content across all subjects in the school syllabus. The teachers' responses also revealed that deaf and hard of hearing learners' reading levels and attitude towards reading in English varied according to schools. Two schools stated that learners reading levels was very good while one school reported that it was average as most of them struggled and found it difficult to read English words.

When asked about the strategies employed in an English reading lesson, the teachers' responses during the interview were as follows;

One teacher said that;

There are so many strategies, I use picture matching, picture reading and picture sign matching which help them to interpret the message. I also use lip reading so as to accommodate those who are able to understand when a person is talking by reading the lips. Class time reading is another strategy I use were I give learners simple books with a lot of pictures to read so that they see what they are reading and interpret the text. They also do role plays or try to act out what has been read (drama).

The teacher went on to say;

I use story telling by creating a simple situation like a family issue or what happened at home so as to allow the learners to narrate to their fellow learners. I also use play groups and group discussions; I create words for each group and allow learners to compete reading the words. I also teach them reading everyday by making them go through the simple words learnt. And I have made this a daily routine for my class. I also make them to finger spell their names and make the correct sign of their names daily in front of the class.

Another teacher added that;

I use a lot of concrete objects and picture where I show the object first write the word and sign it then show the object again when teaching vocabulary in my class. My learners understand better when they interact with the objects, this also helps them to internalise the words being taught and their meanings.

Another teacher said;

I teach reading in English by first telling them what the word is in local language. So, I use the local language then bring in the English language. When we start teaching with the local language it makes it easy for them to break through to reading in English.

Another teacher commented that;

In my class I find it easy for learners to understand when I first explain in the local language then say it in English. When am teaching them vocabulary for example, I first say and sign the word in Cinyanja then say and sign the same word in English language. This strategy makes it easy for my learners to master the word and its meaning.

Another teacher said;

When explaining or teaching during my lesson I use both sign language and verbal language, for me to accommodate all the learners because some learners are able to read the movement of the lips to help them understand what is being taught. Our school also makes home visitations where we interact with parents and try to orient them on the language used in school and why it is important for them to help and ensure that their children do the home work.

Assessment was also another strategy mentioned as one teacher started that;

I use assessment to evaluate the learners' reading abilities and providing feedback for myself and learners. Learners are assessed through tests, homework and the national assessment programme.

Another teacher said that;

The national assessment being implemented in schools allow me to have a one-on-one interaction with the learners and this helps me to know which learner is doing better, moderate or struggling. This information helps me a lot during lesson preparation because am able to accommodate and use appropriate materials during teaching.

Teachers also mentioned that there were a lot of programmes being implemented in the ministry to improve the literacy levels of the learners. One of such programmes at national level was the catch-up programme, where learners are made to read after lessons to improve their reading abilities with the teacher's guidance and support.

Teachers were also asked on which pedagogical strategies was more effective when teaching reading to deaf learners. The following were the answers from the teachers;

One teacher said;

Using of both Cinyanja and English when teaching English makes my learners to understand what I am teaching. So, I depend so much on using more than one language. I have also made reading corners in my class for learners.

Another teacher said;

I teach effectively through shared reading, picture reading, group work or play games and revision of taught words by making my learners read them every day. As an experienced teacher I use a lot of gestures, body language and any other gaze I see fit to make my learners understand.

Another teacher added that;

Storytelling and interactive reading of simple stories helps me a lot when teaching. I have also observed that parental involvement in some school activities work well too. Sometimes I ask my learners to ask their parents or any adult from home to read for them or tell them stories which they later share in class.

From the above responses it can be concluded that teachers employed a variety of pedagogical strategies in teaching and learning of reading in English to deaf learners. The study identified; picture reading, lip reading, repeated class reading, look and say, storytelling, translanguaging,

interactive whole class reading, role play, demonstration, language games, miming, letter or word matching, question and answer, and teaching using concrete or real objects. And from the strategies used during the reading instruction above, teachers were able to identify the most effective ones. For instance, language or literacy games allowed learners to take control of their learning. As the learners were playing the teacher monitored progress and provided appropriate help with the language use. What was interesting about using literacy games were the results at the end of the game and the way they collaborated. Since, for every game there is the winner and loser, to learners this means a lot to both parties because the winning group gains confidence while the losing group strives to improve their overall performance so as to win next time.

5.2.2 Pedagogic strategies from lesson observation

During lesson observation, the researcher observed a number of strategies used by the teachers during the reading instruction. It is important to note that teachers teaching the deaf learners used sign language as the major linguistic resource in the classroom. Sign language was the medium of instruction used in all the observed lessons, which is a plus for the schools for having at least specialized teachers to teach the deaf learners instead of relying on an interpreter. It is important to note that sign language is key to communication in a classroom for deaf learners however, teachers combined both verbal language and sign language when teaching.

Lesson Description A Lesson topic: Punctuations

Grade three

Before going into the major lesson, teacher introduced the lesson by asking each learner to finger spell their names and sign names. Teacher explained that this was a daily routine before start of every lesson because they need to know they sign names by heart.

Teacher: “*Good morning, who will be the first one to tell us their name*” (learners respond and teacher points at learners sign and fingerspell their names).

Learner 1: (signs and finger spells) “*My name is MASTER ZULU.*” (Teacher, together with the learners, clap for Zulu).

Learner 2: “*My name is MERCY MULENGA*” (she fails to sign her name properly; teacher asks other learners to help spell the name correctly.)

Learner 3: (comes in front and points at the friend and signs) “*your name is MERCY MULENGA.*” (Learner 2, repeats and signs her name correctly. This activity goes on until all the learners sign their names in front of their peers).

Teacher writes the following simple words on the board;

- *Ask*
- *Answer*
- *Sit*
- *Stand*
- *Dance*
- *Word*
- *Ready*
- *People*

(Teacher points at learners to come in front and read what is written on the board. While the learner is reading teacher points at the word and reads aloud while the learner follows the teacher’s lead by signing the words on the board. To read the learner first looks at the board, then signs the word while looking at the teacher who is reading aloud the words as the learner signs. When the learner signs the word correctly teacher ticks the word and moves to the next word. Where a learner struggles or fails to sign correctly the teacher asks the peers to help. During this activity the teacher and the learner maintains eye contact. This activity continues and teacher points at the learner who read all the words correctly to lead and guide as teacher had done before. Teacher sits down and observes as the activity continues and giving support where necessary.)

Teacher: “*Now let us read the words together*” (teacher leads by pointing at the words and saying them aloud as learners follow and read the words by signing the words correctly).

Learners: Learners read the words on the board together by signing the words correctly.

(Teacher points at the words and observes learners as they sign the words correctly, where learners fail to read the word correctly teacher repeats the correct sign of the word).

Teacher: (after reading the words previously learnt teacher introduces the topic of the day and writes on the board) writes the following on the board;

My family

- *Father*
- *Mother*
- *Daughter*
- *Son*
- *Brother*
- *Sister*

Teacher: *"Today, we're going to learn about our families. Can anyone tell me what a family is?"* (Teacher points at one learner to respond to the question).

Learner one: *"A family is me and the people I live with mother, father and my sister."*

Teacher: *"Very good. So today we will look at a family. We all have people we live with, who take care of us, our family. You will learn how to call the members of the family in English."*
(Teacher repeats the explanation)

(Teacher displays a picture chart showing a nuclear family, with pictures and signs of members of a nuclear family and explains)

Teacher: *"There are two types of families, a nuclear family and extended family. But in today's lesson we will only look at the nuclear family, okay"*

Learners: Listen to the teacher and nod.

Teacher: *"A nuclear family consists of parents and their biological or adopted children living together in a single household."* (Teacher draws the learners' attention by pointing at the picture chart of a nuclear family and explains) *"The nuclear family has a father, mother, son, daughter and brothers or sisters."* (Teacher repeats this explanation twice before proceeding to the next part.)

Teacher: Points at the word 'family' on the board and signs it. (Ask learners to sign 'family' and observes while she continues demonstrating the sign and saying 'my family').

Learners: Do as the teacher is doing and sign 'my family'.

Teacher: *"Good! Now, let's see what makes up a nuclear family."*

Teacher: *“Here are different members of a family. Let's learn their names.”* (Points at the word written on the board and reads it aloud while signing it ‘Father’)

Learners: Read by signing the word “FATHER”

Teacher: (Displays flashcards with family member names then holds up a flashcard with the word ‘Father’.) *“This is a father. Can you all say ‘father’ and sign it.”*

Learners: Read the word by signing it, imitating the teacher.

Teacher: Points at individual learners to read and sign ‘father’.

Teacher: *“Now I want you to show me how you say father at home. Show me the sign you use to say father at home or when you are playing”*

Learners: Respond to the teacher and show a variety of signs of father in their home language and explain the role he plays at home.

Teacher: Repeats the process for each family member.

Teacher: *“Now, let's match the names with the pictures.”* (Shows learners the flashcards and ask them to match with the correct picture.) *“Who is this?”*

Learners: Pick the flashcard and match with the correct picture.

Teacher: Repeats the process for each family member.

Teacher: Repeats the same procedure but now learners match the sign with the correct word.

Learners: Pick the flash card or points at the word on the board and signs the word.

Teacher: Writes simple sentences on the board.

“This is father. He takes care of the family.”

- *This is my sister. We like dancing together.*
- *This is my brother. He loves soccer.*

Teacher: Encourages learners to repeat the sentences and sign them.

Teacher: Asks students to form sentences about their own families.

Teacher: *"Great work, everyone! Today, when you go home, I want you to draw pictures of the members of your family. So tomorrow I want each one of you to show us your picture. Is it clear?"*

Teacher: Recaps the main points of the lesson.

Lesson summary

In this lesson description the teacher used visual aids like picture charts and flashcards; she also integrated interactive activities like picture-sign-matching, picture-word-matching; and used repetition and read the words out aloud to cater to the needs of all learners including those who could lip reading so as to foster both linguistic and conceptual understanding of the concept of a nuclear family in learners.

Lesson Description B

Lesson topic: Punctuations

Grade three (this class consisted of five learners, who were coded as learner A to E.)

Teacher: (Explains in Cinyanja) *"Today we are going to learn about punctuations. We will discuss how punctuations are used in a sentence. We are going to learn how we can use capitals and full stops correctly in sentences."*

Teacher: *"Letters can be written in lower case or small letters and upper case. You already learnt on how to write the lower case and upper case of the alphabet."* (Teacher models by writing Aa, Bb, Cc, and displays a chart showing the alphabetical order in both lower and upper case and their signs.) *"So now I want you to point at the correct letter on the chart showing both lower case and upper case of the remaining letters of the alphabet"*

Learners: Take turns in pointing at the letters on the chart, then writes the letter on the board, and signs it.

Learners: respond to the teacher and write on the board

Teacher: Writes a simple sentence on the board without capitalization and punctuation.

"Today, we're going to learn about how to make our sentences clear and neat. Look at this sentence. What do you notice in this?"

Learner one: *“The words are written in small letters.”*

Teacher: *“Very good. What else do you observe?”*

Learners: Stare at the teacher trying to think.

Teacher: (repeats the question but still no one answers.) *“Every sentence needs to start with a capital letter and must end with a full stop or question mark if it is a question.”* (Teacher signs and repeats the same explanation in Cinyanja.)

Teacher: (Writes on the board to show learners how to write a full stop and a question mark. Then displays picture cards showing a full stop and question marks.) *“Who can come and show us how a full stop and question mark looks like?”*

Teacher: (Rubs the first letter in the sentence on the board and asks learners to come and write the upper case of the rubbed letter.)

Learner A: writes the capital letter for the beginning letter of the first word in the sentence.

Teacher: *“A full stop is written by placing a dot at the end of the sentence. It is supposed to be seen and comes at the end of a sentence.”* (Teacher demonstrates and repeats the process for the question mark.)

Learners: Listen attentively and observe.

Teacher: Writes four simple sentences on the board and asks learners to put a full stop or question mark at end of each.

Learners: Take turns to write a full stop or question mark to the sentences on the board.

Teacher: Emphasizes the importance of making sentences clear and easy to understand by using the correct punctuation mark.

Teacher: (Displays flashcards with examples of sentences.) *“Let's look at these sentences together. We're going to focus on three things: capital letters at the beginning and full stops or question marks at the end.”*

Teacher: *Engages learners to work in pairs, identifying capital letters, full stops and question marks in the sentences on the flashcards.*

Students: Work in pairs.

Teacher: Encourages learners to present their answers before the class. Learners are corrected where they put a wrong punctuation.

Learners: Present their answers and discuss the correct answers stating why the answer is wrong or right.

Teacher: "Now, let's practice! Copy and punctuate the sentences in your exercise books. Remember to start your sentence with a capital letter and end with the right punctuation mark; full stop or question mark."

Learners: Do the activity individually.

Teacher: Moves around and marks the learners' books.

Teacher: *"Great work, everyone! Today, we learned about using capital letters, full stops and question marks to make our sentences clear and complete. Why do we use these punctuation marks?"*

Learners: Respond through signing.

Teacher: Reinforces the importance of clear communication in writing and thanks all the learners for their active participation.

Lesson summary

In this lesson description the teacher incorporated visual aids, interactive activities, and collaborative exercises .to teach through demonstrations, the teacher taught the use of capital letters, full stops and question marks in sentences. The hands-on approach and group activities reinforced learners' understanding through both individual and collective engagement.

LESSON DESCRIPTION C

TOPIC: VERBS

GRADE THREE

Teacher: Displays a chart with pictures of people performing different actions; a person cooking, running, sweeping and playing. Then teacher draws learners' attention to the chart and introduces the lesson.

Teacher: *"Today, we're going to talk about action words. I want you to tell me what actions you can see people doing in this picture?"*

Learners: *Observe and respond using signs, fingerspelling while others try to perform the action.*

Teacher: *Verbs are words that describe actions. We use verbs to describe what someone or a thing is doing. And today we are going to focus on these action words."* (Repeats and demonstrates and ask learners to say the action.)

Teacher: *"What am I doing?"*

Learners: *"You are reading" (chorusing)*

Teacher: *"Now can you tell me other action words that you can think of apart from the ones I have written on the board."* (Repeats)

Learners: respond to teachers' question.

Teacher: Writes down the verbs suggested by the learners.

Teacher: *"Now I want you to look at the flashcards and tell me the pictures that match with the words we have on the board."* (Teacher shows flashcards with pictures depicting various actions. Teacher repeats the instruction.)

Learners: Engage in identifying and discussing actions.

Teacher: Ticks the matching verbs and writes down the identified verbs missing on the board.

Teacher: *"Very good boys and girls. Now I want you to look at how I will make a sentence from the verbs we have on the board."* (Teacher writes four sentences on the board and asks learners to read the sentences.)

Learners: Take turns to read the sentences and then the whole class reading follows.

Examples:

- *She is sweeping.*
- *Mr Mulenga was cooking.*
- *The pupils are writing.*
- *The children are playing.*

Teacher: *"Now, let's make sentences! Choose a verb and use it in a sentence."* (Teacher encourages students to create two sentences each using verbs in their individual exercise books. Teacher goes around helping learners with challenges.)

Learners: Create and write down the sentences in their books.

Teacher: Divides the class into small groups.

Teacher: *"In your groups, take turns acting out different verbs. And let your classmates guess the action you're showing?" (Repeats)*

Students: Engage in playing the 'guess what it is game', using verbs to act out actions.

Teacher: *"Very good boys and girls! (And asks the following questions.)"*

- *What do we call words that tell us about actions?*
- *What are some actions we talked about today?*

Learners: Respond through signing, acting out and writing.

Teacher: Recap on verbs and their role in describing actions. And gives homework on create more sentences using verbs.

Lesson summary

This lesson used visual aids, interactive activities, and collaborative exercises to teach learners what verbs are and how they are used in sentence construction. The combination of picture prompts, individual practice, and group activities reinforced the understanding of verbs as words that describe actions in a fun, entertaining and engaging manner.

5.3 Appropriateness of teaching and learning materials used to teach reading to deaf and hard of hearing learners

The researcher also sought to find out the appropriateness of the teaching and learning materials teachers used in their lessons. The respondents explained that the use of teaching and learning materials is critical to their profession because most learners learnt better and fast whenever the materials were used. It was revealed that teachers used their own initiatives to make most of the teaching and learning materials for their deaf and hard of hearing learners but with challenges. Teachers explained that of all the teaching and learning materials visual aids, concrete objects and manipulative or hands on materials enhanced learners quick grasp of the language concept being taught. One teacher explained that;

When am teaching using written texts, picture charts or real objects my learners actively participate because they are able to understand certain words, just by looking at the visual cues am using even before I can explain the meaning to them.

Another teacher added;

I sometimes use myself or learners to reinforce understanding of what am teaching, like when am teaching letter shapes, I use body movements to show the letter shape or posing in a particular position to represent a letter, and acting out the meaning of a word. After telling the learners the meaning of the word I demonstrate by acting the word out or ask one to act out the word and ask the peers to guess what the word represented by figuring out the action. My learners find this to be fun which makes them to actively participate and interact with each other.

Another teacher said;

When I use look and say, I use cards as learning aids, on the cards I draw appropriate pictures with sentences written under them. I also put picture charts around the classroom walls and ask learners to match what is on the cards with the appropriate pictures.

Another teacher added;

I actually adapt most of the books to suit my learners in terms of language level, illustrations or how books are presented. I do this by making sure that the book suits the level of my learners and is written in simple English.

Another teacher mentioned that;

When I write a story for my learners, I avoid use of long paragraphs instead I present the story in bullet form, highlight the new words and provide their definitions using charts. I make sure the story has pictures to help learners' understanding.

Another teacher said;

When I am teaching through story reading, I use picture cards to tell the story. The whole story is read by arranging the cards in a logical order that makes sense. For the first part of the story, I put up the picture cards together and tell what is happening, then learners work in pairs to build the story by completing the remaining parts of the story. To successfully read the story I give my learners enough time to think and process what is happening as they build the story.

Another added;

Teaching using concrete objects or real objects helps the learners to understand what I am teaching with very few challenges. I do this by first showing the object then sign and write the word, and again show the object. This helps my learners to link the meaning of the word to the object presented.

Teaching and learning materials aid deaf or hard of hearing learners a lot in understanding the concept being taught unlike when the teacher teaches without or with inappropriate ones. It can

therefore, be concluded that deaf learners need enough time to conceptualize what is being taught so as to allow them to process information sequentially rather than simultaneously because they rely so much on the visual representation in the classroom for effective and successful learning. For this reason, teachers need to be creative and innovative when creating or choosing the teaching and learning aids.

5.4 Challenges faced by teachers during an English reading instruction in a classroom

School administrators and teachers were asked on the challenges faced during the reading instruction in the classroom. A number of concerns on the challenges were pointed out during the interview with the teachers, administrators and as observed during lesson delivery in the classroom. For the sake of coherence, the identified challenges will be represented as sub topics below;

5.4.1 Lack of teaching and learning materials

Teachers explained how lack of learning and teaching materials affected their lesson preparation and delivery. They all revealed that most of the materials used in teaching were self-improvised and time demanding. Preparing the appropriate materials also meant sacrifice on the teacher's side and ensuring that the materials are interactive, educative and entertaining. Teachers complained that this was not easy because one needed to be creative and committed so as to make visual aids that could support and make learning easy for deaf learners. Especially that the deaf or hard of hearing learners heavily relied on what they saw in order for them to get meaning. Both administrators and teachers revealed that for a successful lesson preparation and delivery, the teacher needs access to the curriculum framework as a key reference, the syllabi, the teachers' handbooks, learners' books, computers and the skills to use these teaching and learning materials. However, the curriculum was failing them in this part because it did not provide any specialized materials that teachers can use in teaching learners with special needs. Below is what the teachers had to say on teaching and learning materials;

One teacher said;

It is sometimes difficult to teach because books to use for deaf learners are not there me, I just use my own experience to teach them. Otherwise from the books, there is no guidance given on how to sign language a word.

Another teacher added;

We don't have the teacher's guide and the learner's books to use in our lesson preparation and lesson delivery.

One teacher complained that;

Yes, I face a lot of difficulties in teaching my learners because I have no teacher's books specifically meant for the deaf learners when teaching English. What is there is the books for the so-called normal learner which I need to modify so that it fits my learners well.

Another teacher added that;

Some of the materials used in teaching are adequate but not enough for all the learners. For example, I have a challenge in finding enough appropriate books for my learners to read independently. So, they usually have to share the books in pairs or groups, making it difficult to lend them the books to read at home or in their spare time.

One administrator said;

The teaching and learning materials used by our teachers are meant to be used in a normal school. The ministry of education has not yet distributed books meant for learners with special needs. Teachers teaching learners with specials are having a lot of difficulties in coming up with the materials to use when teaching their learners.

5.4.2 Phonics instruction

It was revealed that teachers found it difficult to teach sounds because deaf learners cannot hear the sound and be able to use it. Teachers reported that they rely more on the word letter matching or phonetic exercises which help deaf or hard of hearing learners grasp the sound-symbol relationships during the instruction. One teacher explained that;

I don't teach sounds to my pupils because they can't hear or say the sound. I instead introduce them to the letters of the alphabet; I start by teaching them how to sign the letter before they learn how to write them. I use pictures with letters of the alphabet and a

word of an animal, fruit or food that begins with the initial sound of the letter I am teaching.

Another teacher said;

I have failed to teach reading using phonics or syllabic methods where learners connect letters to their sounds and vice versa. So, I approach this differently by using strategies that support learning to read for my learners. Once they learn the letter signs and are able to recognize the letters of the alphabet, I concentrate on teaching them reading vocabulary. I think once they understand the meaning and can sign or read the word, they are able to do the correct thing even when the word has been used in a different context. Most of the time when I introduce new words, I first start by writing the new word and then show them how the word is signed. For some words we fingerspell the word. This strategy helps the learners to make connection between the written word and signs.

Another teacher added;

For me teaching my learners how to sign the letters is the first thing I do. After they learn how to sign the letter correctly, I then teach them how to write them. I use letter cards or flash cards for them to see and manipulate. We do more of practice on matching the letters on the cards with the ones written on the board and sign the letter. Matching the words with the appropriate pictures or meaning helps them a lot to read the word once I teach the new meaning of words.

Another teacher also said;

When teaching letter sounds, I rely so much on my learners seeing what am teaching. I make letters on a chart and on flash cards, then ask pupils to say them, blend them and segment them. It is not easy but with a lot of demonstrations and practice my pupils are able to blend and segment the letter sounds.

Another teacher added;

When teaching the initial letter sounds to my learners, I prefer using real things like fruits, cleaning materials or plants. For example, /a/ for apple, b/ for book, /e/ for egg, and /p/ for plate. These at least help a lot in their learning.

5.4.3 Modification of teaching materials

Teachers reported that they always modified the teaching materials so as to suit the deaf and hard of hearing learners' level of understanding. It was observed that most of the materials suggested in the school curriculum were meant to be used when teaching the so-called normal learners. Teachers reported that the materials available did not suit the deaf and hard of hearing learners hence the modification process at every stage of lesson preparation. Thus, modification itself is a challenge because it gives the teacher too much work and is time consuming. Because there are varying abilities in the classroom, the teacher needs to prepare individualized activities based on the learner's learning ability and level. For example, one of the sampled schools has only one class for the deaf, a multi grade classroom. This class accommodates all the deaf learners in the lower primary section who are at different levels, age and learning ability. To address the academic needs of all the learners the teacher moves an extra mile to prepare lesson plans for each group and individual activities for each lesson which is involving and time consuming. The teacher spends a lot of time on lesson preparations and moves slow on covering the syllabus. When interviewed one teacher had the following to say;

I have a lot of work to do for the class because during lesson planning, I have to ensure that I accommodate all the learners which is time demanding on my part. Like when they enter school most of the pupils do not know the standard sign language so I also teach them the standard sign language which is time consuming.

Another teacher said;

In my class, communication becomes a challenge because some learners still struggle on the use of the standard Zambian sign language. So, I find myself teaching sign language instead of the intended topic.

Another teacher added;

As a teacher I also have challenges of the correct sign for some English words and the school has no teachers' guides or text books to refer to. So, for difficult words I

fingerspell the word and learners do the same. Other times I explain the meaning of the word then fingerspell.

5.4.4 Discriminative Curriculum

Commenting on whether the curriculum was accommodative to deaf learners or not, both school administrators and teachers stated that the curriculum was not accommodative to deaf learners. All the respondents indicated that there was need for a modified curriculum that could cater for the needs of deaf learners. Most curricula are designed as if all students learn in the same way.

One teacher commented that;

The curriculum is not accommodative and not balanced. We follow the same curriculum used for the so called normal. Deaf learners cannot learner at the same pace as the normal so the teacher has a lot of work because we try to adapt the curriculum to fit the deaf learners.

The teacher went on to say;

As a teacher I have a lot of work to do when preparing for the lessons, for example some words cannot be signed easily and the curriculum does not help much in this area.

Another teacher added that;

The curriculum is not flexible and is not helpful to teachers teaching the hearing-impaired learners. And the strategies of teaching suggested in the curriculum is all normal, nothing for the deaf learners.

Administrators mentioned that not all the strategies used to teach reading to deaf learners are adequate especially that the curriculum does not suggest the right pedagogy specifically for the deaf learners. One administrator said;

Teachers use the same strategies suggested in the syllabus to teach certain topics. The problem here is that some of the strategies do not help hearing impaired learners, strategies like sound letter matching because these learners cannot hear sound or produce sound.

Another administrator added;

The curriculum we are using has little guidance on how deaf learners can be taught. And the books both learners and teachers' guides are meant for hearing learners.

5.4.5 Lack of parental involvement

Lack of parental support from home affected the deaf learners a lot. Teachers complained that some parents are a problem and many of them are not interested in their children's education. Some of these parents are also very difficult to work with; they do not supervise their children and definitely do not help them with their homework. Due to poverty, some parents look at a deaf child as a burden and one who cannot progress academic wise. Because of this reason, a number of deaf learners enter school when they are above entry age and are usually absent for lessons. One teacher explained that;

It is difficult to monitor the learners progress sometimes because others only come to school once a week and are very behind in content coverage. On top of that most of them are slow learners, I have to repeat what am teaching several times in order for them to get the concept. This also affects the syllabus coverage of content to be taught.

Another teacher added that;

Absenteeism of pupils is too much. Some pupils only come to school twice in a week, this makes my work difficult because these pupils are not moving at the same pace where others remain behind and it is not always that I attend to such learners. Parents are not helping much in this area.

Another teacher added;

When I give homework, some pupils are not supervised or monitor at home so they bring back unfinished work or do not do the work at all.

5.4.6 Lack of specialized teachers

The schools had very few special teachers to teach the deaf learners. For example, one school has one multi-grade for deaf and hard of hearing learners against one special teacher. This teacher has to ensure that all the learners are attended to according to their level. There is too much work

and when the teacher is sick or engaged in other duties learners are left without a teacher. This teacher complained that;

I get tired a lot because there is too much work for me. I always have to prepare different works for my learners in one lesson because we only have one class with learners who are in different grades. For example, others started school early and are supposed to be in grades two, three and four but are being taught in one class. This is so because these learners used to learn in an inclusive class and were being taught by teachers who are not fluent or do not know sign language. To cater for deaf learners this class was introduced this year in February 2023 and am the only qualified teacher to teach them.

The school administrator further added that;

We have introduced a multi-grade class for deaf learners and have a specialized teacher teaching them. However, the teacher has too much work to do because of having different levels in one class. We need more teachers who are specialized especially that the number of learners is increasing making it difficult for one teacher to plan effectively.

5.4.7 Learners' slow progress in reading

It was revealed that most learners missed classes and faced a lot of hardships from home. Teachers explained that the learners were a bit slow to get or understand the concept being taught and that a teacher needed to repeat the same thing over and over, coupled with an appropriate teaching or learning material so as to enhance learners' understanding. This demands a lot of patience and commitment on the teacher's part. Teachers further reported that learners' absenteeism was very high making it difficult for smooth work coverage and monitoring of learners' progress especially in reading. One teacher commented that;

It is difficult to tell sometimes whether they have gotten the concept or not. So, when I give class exercises am able to know those who need more support and those who have understood.

Almost all the teachers interviewed said that one can only judge how well the lesson was based on the classroom activities and exercises given, that the pupils actually missed out the concept when they did not perform well in most of the given exercises and activities. One teacher pointed out that;

The school has no library where learners could interact with books during and outside the lesson. And the few books available for reading have no room where they can be stored.

Another teacher said;

When am reading a story to my learners I have challenges in keeping them focused on what is being read. I usually use a number of activities during reading to make the lesson interactive and keep learners motivated and focused on what is being read. For example, when they are looking somewhere else instead of looking at me, I gently tap them on the back or shoulders. And when they give correct answers, I give them a high five or clap for them, this helps me to keep them focused in the lesson.

Another teacher added that;

I usually have challenges on getting their attention and keeping them focused during story telling or reading aloud. So, I use different strategies like facial expressions to maintain their attention and also eye contact keep them interested in the lesson.

Another teacher said;

It is difficult for learners to learn because some English words do not have corresponding signs in sign language. The way some words are signed in English is sometimes confusing for the learners. Deaf learners have a challenge in understanding tenses for example.

5.4.8 Poverty and stigma

Teachers reported that most of the learners come from poor families living in poverty and face a lot of stigmas from the guardians, peers and community. They reported that most families had limited resources and parents were struggling to provide school needs like books, pencils or other necessities for their children. Teachers explained that some parents were not interested and willing to spend any resources to send their children to school because they did not see the potential of progressing or succeeding academically by their deaf child. One teacher pointed out that;

Most of my pupils come from poor and broken families, this affects their performances in class. Some of them complain of coming to school without eating anything while others are rarely in school because of other family problems.

Another teacher noted that;

Sometimes in the middle of a lesson, a pupil just starts crying or is sleeping in class. When I ask what the problem is they say am hungry or did not sleep properly in the night.

Another teacher added;

Most of the deaf learners do not mix with other learners because of fear to be teased or laughed at since they cannot speak.

5.4.9 Chapter summary

This chapter presented the findings of the study and the verbatim from the respondents. The researcher examined the challenges faced by the school and teachers teaching deaf and hard of hearing learners' literacy and the support given to teachers teaching deaf learners English. From the above results, it is clear that there were a number of challenges that teachers faced during teaching. The study also cited other challenges that affected the reading progress in English by deaf and hard of hearing learners as follows; learner absenteeism, slowness in understanding what is being taught, lack of interest in academic work, quick to lose interest during the lesson, lack of concentration, lack of signs for some English words and communication breakdown. It is also evident from the results that deaf learners encounter a number of difficulties during reading lesson resulting in reading variations within the classroom. It was equally noted that teachers employed a number of strategies to support the struggling learners like; giving a variety of activities, exercises, remedial work and use of different modes of communication in the classroom like gestures, facial expression, eye contact and body language.

From the above findings it can be established that the challenges teachers faced when teaching reading in English to grade three deaf and hard of hearing learners ranged from lack of teaching and learning materials, Phonics instruction, modification of teaching materials, Curriculum, lack of parental involvement, lack of specialized teachers to learners' slow progress in reading and other learner-oriented challenges mentioned in the above paragraph. The chapter that follows presents the discussion of the findings presented in this chapter.

CHAPTER SIX

DISCUSSION OF FINDINGS

6.1 Introduction / Overview

This chapter presents an analysis of the findings presented in the previous chapter. The chapter presents a discussion of the findings based on the objectives of the study. The discussion shall be guided by the constructivism and multimodality theories as presented in chapter three of this study and other related literature shall be used as reference.

6.2 Pedagogic strategies teachers use to teach reading in English to deaf learners.

In relation to objective one that sought to investigate pedagogic strategies teachers use to teach reading in English to deaf and hard of hearing learners. The study established that teachers teaching grade three deaf and hard of hearing learners, teach the learners to read in English language through a variety of pedagogic strategies.

The pedagogic strategies established from the findings through the conducted interviews included; picture reading, picture and word matching, lip reading, repeated class reading, fingerspelling, look and say, storytelling, translanguaging, sandwiching, interactive whole class reading, role play, language games, demonstration, miming, letter or word matching, question and answer, teaching using concrete or real objects and teaching learners Zambian sign language. For argument's sake the above strategies as established from the lesson observations were realized in the lesson through modelling, visualization, collaboration, memorization, translanguaging, repetitions, phonics exercises and assessments. These findings agree with Mkandawire, Zuilkowski, Mwansa and Manchishi (2023:1) who observe that pedagogical strategies intended for regular classes may not adequately address the educational needs and aspirations of culturally and linguistically diverse learners with unique backgrounds that diverse learners such as the deaf need diverse approaches to teaching. By incorporating these strategies in their lessons, teachers were able to create a constructivist learning environment that promoted active engagement, collaboration, and used multiple modes of communication to give meaning to deaf learners as they developed their reading skills.

The incorporation of pictures in reading lessons revealed very good results in helping the learners' conceptualization of the learnt words through hands-on and manipulative activities.

Chikopela & Ndhlovu (2016b) reported that deaf pupils learn through picture and word association hence making it easy for them to remember the letters shown to them. The results of the present study agree with the foregoing statement since teachers used a variety of strategies that used pictures like, picture and word matching, picture and word substitution, picture-sign-matching, matching pairs like; word-sign-matching and word-fingerspelling matching as well as look and say activities. These strategies stress the importance of using pictures when teaching the deaf or hard of hearing learners for purposes of enhancing comprehension and vocabulary development. This finding is further supported by Herrera et al. (2014) when they state that deaf learners if taught using appropriate strategies based on visualization have a higher achievement level in literacy and language. Based on these results, the study recognizes the fact that this strategy is also multimodal in that it puts into consideration learners diverse learning preferences and styles, and addresses them through use of sign language, print, visual cues, visual storytelling techniques, facial expressions and other sensory-rich experiences. In addition, Chikopela and Ndhlovu (2016a) reveal that materials which learners could see and touch proved to be very effective in teaching sound awareness, rhyming and reading to deaf learners. This finding agrees with the findings of this study that use of concrete resources is appropriate when teaching deaf or hard of hearing learners because it enhances learners' understanding of the taught concept with less difficulty. It can therefore, be concluded that deaf and hard of hearing learners need enough time to conceptualize what is being taught so as to allow them to process information sequentially rather than simultaneously because they rely so much on the visual representation in the classroom for effective and successful learning. For this reason, teachers need to be creative and innovative when creating or choosing the teaching and learning materials.

It was evident from the findings that teachers used a variety of language games to teach reading by allowing learners to work as pairs or in small groups. Games are important as they allow learners to take control of their own learning as they play. This strategy helps learners to improve their linguistic skills through practice and collaboration. Collaboration involves skills of teamwork, working in groups and allowing individuals to cooperatively work with others (Handsley, 2011). It is evident in the findings of this study that use of language games during the reading instruction promoted collaboration and learners had plenty of opportunities to practice what they had learnt amongst themselves with minimal control from the teacher. Games further

gave learners a sense of satisfaction and motivation when working on a given task because they expected a reward of some kind in terms of academic achievement at the end of the game (Duyilemi & Bolajoko, 2014; Lord, 2001). This strategy allowed the use of language as much as possible, which eventually helped learners to maximize their learning and language use. The purpose of using games in lessons is to enable learners to work independently and learn by doing, as they begin to use language on their own. Learners also become responsible for their own learning as they use and practice the knowledge acquired by interacting with the content instead of imitating or just repeating and relying entirely on the teacher (Mogashoa, 2014). Stavin, (2000) as cited by Duyilemi & Bolajoko, (2014) state that constructive learning allows learners to work in mixed ability groups and get rewarded on the basis of the success of the group as a whole. As learners work in mixed ability groups, small groups or as a pair the teacher facilitates and the classroom activities are organized so that learners can interact with and learn from each other as well as the teacher and the world around them.

Storytelling was another strategy used to teach reading in English language to the deaf or hard of hearing learners. Storytelling is another way of teaching shared reading. This strategy is not only appropriate to grade three deaf and hard of hearing learners, but also helps them to consolidate the vocabulary and structures they have already learnt. Young children enjoy stories and through stories they begin to realize that English language too has stories and that the language they are learning could be as fun as their mother tongue. This finding is in line with the ‘fifteen principles for reading to deaf children’ Laurent Clerc National Deaf Education Center (Gallaudet University, 2023) that suggests re-read stories on a ‘storytelling’ to story reading continuum because deaf learners enjoy listening to the same story over and over. It is important to note that most stories contain elements of repetition which the learners remember subconsciously as they listen to the story over and over again. This is evident in the findings where teachers revealed that when the learners hear the same story for some time, they are able to tell it with the teacher. In line with this finding, Girgin (2013) contends that stories read to the deaf learners should be appropriate and according to the learners reading levels not forgetting the aspect of being engaging by including repetitive elements that could facilitate reading and support children’s motivation. For this reason, teachers need to consider the age, language use and level of learners when choosing a story. This strategy reinforces the language learners have already learnt. It is enjoyable and involves the learners directly in the process of storytelling. The teacher asks open

ended questions and gives learners enough time to construct meaning and respond accordingly to the questions asked, thus, the teacher promotes higher-order thinking skills in learners (Akpan and Beard, 2016).

Demonstration was another strategy popularly used by the teachers and it was done through different classroom activities. Teachers reported that demonstrations made learning a bit easy and allowed learners to get the concept a bit faster because it allowed learners to first observe the teacher perform the task, then learners taking charge of their learning by practicing and using the language more creatively as they performed the language tasks given either in groups, pair work or independently. In this strategy the teacher acts as a facilitator and scaffolds learning by encouraging students to express their problems and then facilitate ways to aid students with appropriate solutions to their problems by using what they already know to go beyond what they already think. Furthermore, Baker and Piburn (1997), and Akpan and Beard, (2016) claim that knowledge is built in social contexts, where learning instruction must encourage student-to-student interactions and collaboration. This is further supported by Jothula, Ganapa, Sreeharshika, Naidu and Abhishek (2018) who perceived demonstration as the best method of teaching which emphasizes importance of active learning methods. It is important to mention here that, demonstrations could either be verbal with action or nonverbal through actions only, hence multimodal and creation of a free atmosphere for learners to participate freely. Therefore, the study conclude that demonstration is an effective strategy that keeps learners active participates and sometimes employs the use of nonverbal language in the lesson. More so, because children lose interest if teachers do not use multiple means of communication like animated face, eye contact, body language and facial expressions that help children understand a teacher better. From the findings, body gestures were also used to enhance learners' understanding of the vocabulary words taught. The study thus establishes the use of a combination of the visual resources with other modes of communication by the teacher when teaching the deaf or hard of hearing learners. In support with these findings is the study by Tahang et al. (2023) who posits that repetition strategy could be used as an effective strategy in teaching the deaf or hard of hearing learners where the teacher teaches by repeating what is said several times or explaining the material more than once using signs or lip language, visual aids, and one on one interaction with an individual learner. This finding also aligns well with Prasetya et al. (2023), who revealed that to get the deaf student's attention when learning English

vocabulary, the teacher needed to use pictures as a media, sign language to communicate, as well as using drilling in learning process. This finding is also in line with the principles of multimodal approach when teaching deaf or hard of hearing learners, as the teacher uses pictures as a media, sign language to communicate, as well as use drilling in lesson delivery.

Evident from the lesson observations was the use of visualization to teach which was realized through visual scaffolding and sandwiching. The findings show that teachers applied visual scaffolding as a strategy however; they did not mention it as scaffolding during interviews but made mention of asking questions on what the learners were seen in the pictures. For instance, teachers who mentioned using picture reading or picture story reading explained how they taught and engaged learners into the lesson.

It is also evident in the findings that teachers used fingerspelling as one of the pedagogic strategies. Herrera et al. (2014) contends that fingerspelling enables a learner to establish a more reliable link between sign and writing which aids the process of learning, and that it may also help to provide a phonological link with the written text. In addition, Tongwa and Atemnkeng (2019) results revealed that fingerspelling had a broad range of advantages and meant differently for individual students. In their study deaf learners reported that fingerspelling helped them a lot in learning English better. When fingerspelling, learners receive support that is within their Zone of Proximal Development from the teacher. Similarly, Reitsma (2009) as cited in Chikopela and Ndhlovu (2016) add that fingerspelling provided a phonological link to the print that deaf learners encounter every day. The strategy enabled learners an opportunity to think and rethink about their own spelling skills in English language.

Repeated reading strategy of the same text as stated by the National Literacy Framework (2013) enables learners to ‘...increase their retention of words, and develop reading fluency, which in turn, is a necessary step to reading with comprehension (NLF, 2023:17). The study concludes that reading of the same words, passage or text every day was an effective strategy for deaf or hard of hearing learners since it enhanced learners’ fluency and correct signing of the words when reading to their peers in the classroom. This strategy also enabled both the teacher and learners to provide immediate feedback to each other during reading. In addition, this strategy of making learners go through what they have learnt over and over again enabled learners to acquire automaticity in reading by recognizing the over-all-shape of the word and read it even

when used in different contexts instead of only chanting words from their memory (Florida Reading Centre).

Furthermore, the findings of this study revealed that repetition strategy was also used in the daily routine reading of what has been taught, where learners read the same words or texts every day before the start of the lesson until the teacher was satisfied. This strategy encouraged memorization or rote learning because learners read the same things over a period of time until they were able to recognize and read the words automatically. This view is supported by the above statement by the National Literacy Framework (2013), because learners were made to repeat reading of things they had been taught and not just reading words or texts they had not learnt before. This point of clarification on the use of memorization or rote learning to deaf or hard hearing learners is crucial for purposes of differentiating instruction in the learning process with other strategies as the lesson progresses. In this case, learners were made to repeat and practice reading previous words or text every day before the introduction of a new topic.

Translanguaging was used as a teaching strategy in the lessons. Sign language is a medium of instruction for deaf learners and teachers teaching deaf learners incorporate sign language alongside written English and learners' home language in a reading instruction. It was evident in the findings that Zambian sign language serves as a bridge that is connecting learners' existing language skills with the new language (English) they are acquiring. Translanguaging allows both the teacher and learners to make use of multiple languages and modes of communication so as to enhance the teaching and learning process. This view is supported by Banda and Mwanza (2017) who argue that the nature of translanguaging is both bilingual or multilingual and multimodal. According to the present study's findings, teachers of the deaf or hard of hearing learners were bilingual when teaching reading of words in the classroom where both sign language and written language were used. Agreeing with this finding, Pinar et al. as cited by Herrera et al. (2014) points out on deaf learners being bilingual in sign language and written language. They state that this approach acknowledges the importance of both languages and recognizes that each plays a critical role in the education and development of deaf learners. This enabled deaf or hard of hearing learners to make connections between the written and signed forms of language. The visual representation of both languages in this case enhanced comprehension and vocabulary development of the learners. However, as observed by Banda and Mwanza (2017), we need to

note that, translanguaging is said to be multimodal because it recognizes and utilizes multiple modes of communication and enhances the overall learning experience. So through this strategy the teacher could also say the word in local language (chinyanja) and allow learners to say the same thing in their preferred languages hence enabling learners to express their own views in the language of competence. Banda (2019) supports these results when she explains that the pedagogic alternation of languages in the lesson allow learners regardless of their linguistic abilities or background to feel involved and become active participants in the teaching and learning process (see also Nyimbili and Mwanza, 2021; Mashinja and Mwanza, 2021; Mwanza, 2020; Mubita and Mwanza, 2020; Banda and Mwanza, 2020; Mwanza and Bwalya, 2019; Banda and Mwanza, 2020).

Translanguaging in this study, was seen to encourage interactive discussions during instruction where the teacher facilitated the discussions and allowed learners to express themselves in a variety of languages like their mother tongue, sign language from both home and school, and written English and for learners who could lip read verbal language. In addition, as argued by Alegria (2004) children have a chance of acquiring phonological representation, when lip reading and cued speech are used in the teaching instruction. Therefore, translanguaging as a pedagogic strategy helped to instill confidence in the students and removed the fear of poor performance because learners were allowed to be themselves as they interacted with each other (Duyilemi & Bolajoko, 2014). The teacher engaged learners in whole class interactive discussions where he or she promoted learners' expressive skills and encouraged active participation hence implementation of a learner-centered driven pedagogy during instruction. The findings also revealed that teachers were able to provide an enriched language environment that promoted a wide range of meaningful experiences through receptive, expressive and written language opportunities for the deaf or hard of hearing learners. Banda (2019) supports this finding when she argues that teachers use verbal, sign language and written form of language so as to recognize linguistic repertoires of learners in their classroom. In addition, citing Simpson and Warner (2010), Banda (2019) states that children with special needs benefit a lot from socialization with their developing peers because their peers are able to model appropriate social interactions for them and provide the opportunity for participating in such interactions.

The findings further established that the daily reading routines before start of the lesson every day; of words that have been taught and texts that has been read before, helped learners to memorize and remember words being read on their own. Teacher's use of repetitions, routines and multi modal teaching techniques helped to enhance the learner's memory, so was the teaching and re-teaching of the same concept to the learners in a variety of context for accuracy. This finding is similar to Nisak el al. (2019) who contends that memorization is an appropriate strategy that aids learners to memorize some vocabulary words or obtain information. It was observed that teachers taught the content to the learners through repetitions, for example when explaining or demonstrating something the teacher would do the same activity more than once or explain something over and over again; the teacher only proceeds after assessing that the learners have understood. This view is in support with Alasim (2018) who also suggested that teachers must give deaf or hard of hearing pupils enough time to understand and respond through re-explaining the concept more slowly by speaking slowly and clearly. In line with this argument, Tahang, et. al. (2023) add that deaf or hard of hearing learners require more time in the learning process so the teacher needs to recognize their learning pace and accommodate them by speaking slowly and clearly, and re-explaining the material using multiple modes such as sign language, lip reading, visual aids, and by re-explaining the material to individual learners who need more scaffolding. It is important to note at this point that when the teacher uses the repetition strategy and re-explains the content using different means of communication modes to accommodate all the learners; the principles of multimodal approach are being effectively applied in the teaching and learning process. This view aligns well with the research done by Prasetya et al. (2023) who stated that teachers needed to use multiple means of communication in order to get the deaf student's attention and employ strategies like use of pictures as a media, using sign language to communicate, as well as using drilling when teaching English vocabulary and during the teaching and learning process.

6.3 Appropriateness of the teaching and learning materials used to teach reading to deaf and hard of hearing learners

The study established how critical availability of appropriate teaching and learning materials was when teaching deaf or hard of hearing learners reading in English language. From the results it has been revealed that the use of teaching and learning materials is critical to the teaching profession because most learners learnt better and fast whenever the materials were used. The

findings established that of all the teaching and learning materials used; visual aids, concrete objects and manipulative or hands on materials enhanced learners quick grasp of the language concept being taught. This view is in support with a number of studies that contends that appropriate use of visual aids and pictures in teaching reading has proved to be an important factor in the learners' understanding of factual information in the reading process (Nikolarazim, Vekiri & Easterbrooks, 2013; Gentry, Chinn & Moulton, 2004/2005). This finding is also supported by Smith (1998) cited in Penda (2017) who emphasized the importance of using visual and concrete teaching and learning materials to learners with hearing impairment by the teacher. Similar to the findings, Penda (2017) reported that the concrete and visual aids were appropriately used and yielded positive results as they were suitable and appropriate to the grade level of learners with hearing impairment. Similarly, stressing the importance of these teaching and learning materials, Muzata (2021) citing Ndonyo, Matafwali and Chakulimba (2017) emphasized the need for deaf learners to learn with appropriate teaching and learning resource because they learn way better with visual materials they are able to touch and manipulate. The findings of Chibwe's (2015) study relates well with the present research through Agricola's description of a hearing impairment person's achievements to read and write when he states that signs or other visual pedagogical means of communication helped deaf learners to effectively express and understand the world around them (Radutzky, 1993 as cited by Marschark & Spencer, 2003 in Chibwe, 2015).

In addition, the findings of this study further established that the incorporation of pictures in reading lessons revealed very good results in helping the learners' conceptualization of the learnt words through the use of picture charts, flash cards, picture cards, word cards, story books with a lot of pictures and real or concrete objects in hands-on and manipulative classroom activities. This finding is in agreement with Chikopela and Ndhlovu (2016a) who revealed that materials which learners could see and touch proved to be very appropriate and effective in the teaching and learning process for deaf or hard of hearing learners. Furthermore, Mwanyuma (2016) supports this finding when she stresses the importance of visual materials in information retention that the brain is capable of recalling what has been learnt after seeing it over and over again. She argues that concepts become more visible and self-explanatory in the learning process through learner interaction with the pictures, diagrams or other visual and manipulative resources. The results of this study also revealed that most of the teaching and learning materials

used in the lessons were locally made by the teachers from cheaper materials like boxes, bottles and lids to mention a few. Evidence of these materials was seen in some of the available ones in the classroom and the talking walls around the classrooms.

Furthermore, though the present research has seen the Ministry's effort in collaboration with USAID 'Let's Read' project to provide additional materials for teachers to use as guides and resources to aid their preparation and delivery of lessons when teaching deaf or hard of hearing learners, in the findings of this study teachers did not seem to be aware of the availability of these resource books. Therefore, it is important to note that teachers are not using these resource books maybe because they have not yet been made available in the schools or teachers are not aware that such materials are available through the Ministry of General Education. Hence the reason why none of the participants mentioned the existence of these handy and effective resource books or use of the resource books in the teaching and learning process.

The present research made an observation on the unavailability of technological aids or tools in the teaching of reading English to the deaf learners by the teachers. This contrasts with the view that there is a positive correlation between added visuals and reading comprehension that can also be shown through software visual resources as reported by Nikolarazim, Vekiri & Easterbrooks , 2013; Gentry, Chinn & Moulton, 2004/2005. The use of visual technological resources in the teaching and learning process is thus very significant and indispensable. In line with this, Kumar and Durga (2018) reveal that learners need authentic materials or tools which could lead to successful and comfortable learning environments for both teachers and learners. However, for a deaf learner the visual technological aids could help and motivate them in teaching and learning process. In addition, the computer and internet could enhance learning and cognitive thinking of learners. For instance, as reported by Chikopela and Ndhlovu (2016:124) "...exposing deaf children to opportunities for fingerspell coding for example by means of computer-based exercises and sequencing worksheets can enable them to analyze finger spelt English words in the same way that hearing pupils apply their knowledge of letter-sound correspondences to decode words in their spoken vocabularies". Furthermore, incorporation of authentic activities in the teaching and learning process could enable the learner to be consciously engaged in meaningful activities that could be shared with others in groups hence allowing learners to build knowledge structures (Holzer, 1994).

6.4 Challenges faced by teachers during the reading instruction in a classroom

The findings of this study established a number of challenges faced by teachers when teaching reading in English to grade three deaf or hard of hearing learners which ranged from lack of teaching and learning materials, Phonics instruction, modification of teaching materials, discriminative curriculum, lack of parental involvement, lack of specialized teachers to learners' slow progress in reading, poverty and stigma, and other learner-oriented challenges mentioned in the above paragraph.

Lack of teaching and learning materials was one of the major challenges teachers faced in the teaching and learning process of deaf and hard of hearing learners. Teachers reported that the school through the grants given by the ministry had funding to procure the teaching and learning resources however; the challenge was on where to buy the appropriate materials to suit deaf and hard of hearing learners. The findings of this study established that most of the materials used in teaching were self-improvised and aided the learning process by making it easy for learners to link what they were seen to what the teacher was explaining or reading. However, it was revealed that preparing these appropriate materials was time demanding for the teachers and also meant a lot of sacrifice on the teacher's side in ensuring that the materials were interactive, educative and entertaining. Teachers explained that they used locally made teaching and learning materials to enhance learners' understanding. This finding is fully supported by Muzata and Mahlo (2019) who reported that lack of teaching and learning materials such as teachers and learners' books came out loudly as a barrier to an effective implementation of the 2013 revised curriculum. In line with Muzata and Mahlo's (2019) view, the findings of the present study revealed that key reference materials in teacher preparation like the syllabi, teachers' handbooks, learners' books and computer-based resources were not available to the teachers in the schools. Similar to this finding is the findings by Ndhlovu and Matafwali (2020) who reported that lack of appropriate basic textbooks and other important materials to support the teaching and learning process of deaf learners in schools affected the learners' overall performance. In addition, citing Yosia (2005), they showed that in most schools where learners with Hearing Impairment were found, the required teaching and learning materials was inadequate. Muzata (2017) in line with this finding argues that, lack of adapted teaching and learning materials for the revised curriculum negatively affected the teachers of special needs units who in most cases were teaching without books or adapted syllabuses for the 2013 curriculum. The lack of involvement

and subsequent lack of providing necessary materials for curriculum implementation was an attack on the teaching profession and not only on individual teachers. Atemnkeng (2019) also revealed that lack of teaching and learning materials in schools was among the major challenges faced. Furthermore, lack of adapted books affects the profession in terms of teaching workloads and costs because improvisation by the teacher does not mean absence of key documents like text books or syllabuses (Muzata, 2017).

The second challenge was that teachers teaching deaf or hard of hearing learners to read failed to teach using the phonics instruction. It was revealed that teachers found it difficult to teach sounds because deaf or hard of hearing learners could not hear the sound and be able to use it. The results of this study established that to teach deaf or hard of hearing children to read in English the phonics or syllabic teaching methods for reading as suggested by the National Literacy Framework did not work, instead teachers used different strategies to teach. From the findings teachers explained that deaf or hard of hearing learners understanding of word meaning and recognizing of letters to form a word was more crucial to teach than just learning letter-sound correspondence. Therefore, the study established that since deaf or hard of hearing learners do not hear the sounds and sounds have little or no meaning to them, the teacher needs to be aware of this and focus on teaching them to read with understanding by linking the sign to the word and engage them in fingerspelling so as to help them remember and understand the order of the letters and letter signs of the alphabet. These findings are in line with the guidance given to teachers teaching deaf or hard of hearing learners to read in the resource book for teachers to use different didactics when teaching the alphabetical principle or phonics to these learners (USAID ‘Lets Read’ project, Part one, 2021).

Modification of the teaching and learning materials was the third challenge identified in this study. Because of having a curriculum that aligned the teaching methods and strategies to the hearing learners, the modification process at every stage of lesson preparation was a challenge since it gave the teacher too much work and was time consuming and costly. Furthermore, teacher needed to be creative, innovative and resourceful so as to only modify the material or content and not to alter the original content in the school curriculum. In line with this finding, Muzata (2017) asserts that to adapt or modify the teaching methods, strategies or learning materials teachers used their own initiative because there was no alternative curriculum, no

adapted teaching resources or syllabuses in sign language or braille to make reference to when planning for learners with special needs. The danger however, lies in the fact that teachers may not fully understand the fundamental concepts necessary for effective curriculum adaptations and modifications for learners with learning needs (Muzata, 2017).

Modification of the teaching and learning materials by the teachers teaching deaf or hard of hearing learners cannot be discussed in isolation without mentioning a discriminative curriculum, which is the fourth challenge identified in this study. It is evident that teachers modify the curriculum to suit the deaf or hard of hearing learners because most of the suggested methodologies and strategies benefit the ordinary learners without disabilities more than the former. Zemba and Chipindi (2020) who revealed that to adapt and implement the general education curriculum, teachers resort to their professional judgement to continuously try to modify and adapt the learning processes to suit individual learners with various disabilities. The results of the present study agree with Zemba and Chipindi (2020), however, critical to this is that “the curriculum is characterized by a lack of teacher and school level autonomy, which act as barriers to local, needs-based adaptation” (2020; 124). The results of this study revealed that the revised 2013 curriculum being implemented was discriminative in that it was not inclusive at all. Teachers stated that it was unfortunate that the school curriculum had been designed as if all learners learn in the same way. Apart from this, the findings show that the school curriculum was not accommodative enough to deaf or hard of hearing learners.

Hence, the findings of this research make it clear on how lacking the curriculum is to the learners with special needs particularly the deaf or hard of hearing learner. Similar to these results, Muzata and Mahlo (2019) observed that the content and teaching resource of the revised curriculum does not fully accommodate the learner with disabilities instead priority has been paid more to learners without disabilities. It is for this reason that the curriculum has failed to suggest or provide specific methodologies or pedagogic strategies special needs teachers could employ in teaching learners with disabilities. Since there are varying abilities in the classroom, the teacher needs to prepare individualized activities based on the learner’s learning ability and level. This view is in agreement with Muzata (2017) who adds that teachers are very stressful because they are already faced with different challenges which include poor conditions of service while sometimes, they are forced to spend their own money so as to print, photocopy, modify or

translate a book into braille or sign language. However, it is important to mention that teachers teaching deaf or hard of hearing learners in the primary lower section have been provided with additional materials to aid their lesson planning and lesson delivery. This could be seen in the production of the three resource books for teachers to use as additional instructional materials alongside the school curriculum, written to offer strategies that could help in adjusting teaching to the linguistic needs of learners who are deaf or hard of hearing thus, making the teaching and learning process more fruitful, satisfying and joyful (MOE & USAID 'Let's Read', 2021).

The fifth challenges faced by teachers teaching deaf or hard of hearing learners to read in English language was lack of parental involvement. It was established in the results of this study that parents rarely paid attention or helped their children with school work or homework. For some learners, parental involvement was completely absent which later affected the learners' overall performance academically. Shama (2008) as cited by Mumba, Kasonde-Ngandu and Mandyata (2022) is in agreement with this finding when he observes that factors such as increasing involvement of parents, flexibility in the curriculum and use of responsive or accommodative assessment approaches contributed a lot to the learners' good performance. In the same line, Mumba et al. citing Agyire-Tettey et al. (2017) revealed that challenges that hindered deaf learners' academic success arose from different systems and factors which included pupils themselves, their parents and other institutional barriers that existed in deaf education.

Furthermore, lack of specialized teachers and learners' slow progress in reading affected the teaching of deaf or hard of hearing learners to read with fluency in the schools. The findings of this study established that schools only had one specialized teacher to handle the deaf or hard of hearing learners. It was further revealed that most learners were slow in grasping concepts making it difficult for teachers to teach sufficient content. On top of this, learners came from poor families living in poverty and faced stigma from their communities.

Among others, some of the challenges faced by both teachers and learners included factors like; pupils failing to pay attention to their academic work; insufficient instructional resources and learner absenteeism, slowness in understanding what is being taught, lack of interest in academic work, quick to lose interest during the lesson, lack of concentration, lack of signs for some English words and communication breakdown. These findings are in support with Tongwa and Atemnkeng (2019) who reported that the inability to understand signs from teachers, difficulties

in understanding key vocabulary because of limited signs for words, pedagogic approach and communication problems were some of the challenges learners faced.

From the findings this study concludes that the challenges teachers faced when teaching reading to grade three learners ranged from lack of teaching and learning materials, Phonics instruction, modification of teaching materials, Curriculum, lack of parental involvement, lack of specialized teachers to learners' slow progress in reading and other learner-oriented challenges mentioned in the study.

6.5 Chapter summary

The discussion of the findings in line with Kontra (2017) reveal that it is vital for the teacher to use adequate and effective strategies when teaching deaf or hard of hearing learners to read in English because lack of teaching methodology and a scarcity of learning resources designed especially for these learners place them at a significant disadvantage. The next chapter provides the conclusion and the recommendations of the study.

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATIONS

7.1 introduction/Overview

The previous chapter presented the discussion of the study in line with the study's objectives. This chapter presents the conclusion and recommendations based on the discussion of the findings.

7.2 Conclusion

7.2.1 Pedagogic strategies teachers use to teach reading to deaf learners.

This study sought to analyze the Pedagogic strategies teachers use to teach reading in English to deaf or hard of hearing learners. From the findings it can be concluded that teachers teaching deaf or hard of hearing learners reading in English employed a number of strategies in their reading instruction. The strategies identified, ranging from picture reading to teaching using concrete objects and incorporating Zambian Sign Language, not only emphasized the importance of visual and experiential elements but also highlighted the need for flexibility in instructional methods. It is important to note that most of the strategies employed in the lessons were learner-centered and multimodal thus enabling learners to be active participants throughout the lesson and make use of a variety of communication forms to effectively express themselves or construct meaning from the read words or texts. Therefore, the findings established that teachers teaching deaf or hard of hearing learners, were able to choose teaching strategies which arouse the unique interest and curiosity to learn in the deaf or hard of hearing learners. By providing instruction in multiple modalities, including use of sign language, teachers were able to create a more accessible and equitable learning environment which accommodated the learners' different learning styles or conditions. The incorporation of Zambian Sign Language as a pedagogic strategy further reflects the commitment to recognize the unique needs of deaf or hard of hearing learners.

In conclusion, it is important to note that these strategies not only engaged learners in the learning process but also provided opportunities for language immersion and application in real-life contexts. And in line with the principles of constructivism, the inclusion of interactive whole-class reading, language games, and demonstration techniques reveal the importance of

active engagement. These strategies promoted a participatory classroom culture by encouraging learners to collaboratively explore language and meaning.

7.2.2 Appropriateness of teaching and learning materials used to teach reading to deaf learners

In conclusion, the findings of this study offer compelling evidence for the significant impact of incorporating visual elements, particularly pictures, in reading lessons for Grade Three deaf or hard of hearing learners. The results showed that most of the teaching and learning materials used in the lessons were locally made by the teachers from cheaper materials and that the incorporation of pictures in reading lessons revealed very good results in helping the learners' conceptualization of the content. Teaching of deaf or hard of hearing learners was done through the use of picture charts, flash cards, picture cards, word cards, story books with a lot of pictures and real or concrete objects in hands-on and manipulative classroom activities. The varied use of these teaching and learning resources has proven to be instrumental in enhancing learners' conceptualization of the taught content. The positive outcomes achieved through the incorporation of these resources demonstrate the importance of employing a diverse range of resources in an English literacy instruction. This not only aligns with the principles of multimodal learning but also caters to the diverse learning preferences and needs of deaf or hard of hearing learners. For instance, the Picture-rich materials engaged learners' visual senses by facilitating a deeper understanding of words and fostering a more interactive and participatory learning environment. The inclusion of real or concrete objects in hands-on and manipulative activities further enhances the experiential aspect of learning, promoting a more holistic understanding of language.

Furthermore, the use of pictures provided a visual scaffold, aiding learners in connecting abstract phonetic concepts to concrete representations. Therefore, the study concludes that visual aids, authentic concrete and real objects contributed a lot in the learners' understanding and conceptualization of the concepts because these aids allowed learners to be fully engaged in the learning process and activated learner's prior knowledge in the whole process.

7.2.3 Challenges faced by teachers during the reading instruction in a classroom

Teaching reading to deaf learners comes with a lot of challenges on both the teacher and learners. In conclusion, a number of challenges faced by teachers in teaching deaf and hard of

hearing learners to read in English illuminated in this study ranged from the lack of teaching materials, challenges with phonics instruction, modifications needed for teaching materials, curriculum-related issues, limited parental involvement, the absence of specialized teachers, poverty and stigma, and the slow progress of learners in reading. These challenges underscore the critical need for targeted support and interventions to address these challenges collaboratively by bringing all stakeholders on board; involvement of teachers teaching the deaf, school administrators, teacher educators in colleges, policymakers, and parents. Most of these challenges faced during reading in English could be handled well by the teachers if there is careful consideration on what pedagogic strategies are effective and the appropriate materials to use. For instance, implementing strategies such as resource mobilization, enhancement of professional development for teachers, curriculum enhancements, proactive parental engagement, and the allocation of specialized resources could contribute significantly to overcoming these challenges.

As established in the study teachers teaching deaf or hard of hearing learners reading in English were trying their best to teach. Thus, it can be concluded that to improve the deaf or hard of hearing learners' literacy skills in English language, teachers needed to continue employing a number of strategies to support the struggling learners like; giving a variety of activities, exercises, remedial work and use of different modes of communication in the classroom like gestures, facial expression, eye contact and body language. And the fact that the world is slowly moving into the technology era, the more reason why teachers should employ visual technological aids into their lessons for the benefit of a deaf or hard of hearing learner.

7.3 Recommendations

With regard to the findings of this study, the following recommendations were made:

1. The curriculum could be revised so as to cater for learners with special needs and clearly guide teachers on the right and effective pedagogy to use when teaching deaf learners.
2. The Ministry of General Education to train and distribute the resource books produced in collaboration with USAID 'Let's Read' project, for teachers teaching deaf or hard of hearing learners in all special needs schools.
3. The Ministry of General Education through the Curriculum Development Centre to work hand in hand with teacher specialists from respective Special Needs Schools so as to

develop more appropriate teaching and learning materials for deaf or hard of hearing learners.

4. The Ministry of General Education, colleges of education, school administrations and other stakeholders to work collaboratively and ensure that visual technological Aids and Tools are made available for teachers teaching reading to deaf learners because nowadays there are so many websites available for teaching and learning a particular language. Teachers to consider incorporating these authentic materials especially visual ones so as to promote, improve and motivate deaf or hard of hearing learners' interest in the teaching and learning process.
5. This study focused on the pedagogic strategies teachers teaching grade three deaf or hard of hearing learners English language employed in their reading instruction. Similar to the current study, future studies could investigate and explore how other literacy skills are taught to the deaf or hard of hearing learners and strategies or techniques used to teach these skills in English language.

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APPENDICES

APPENDIX A

Dear participant,

This serves to give you an understanding of the purpose of this study and procedures that will be followed. You are asked to sign this form to indicate that you have agreed to participate in this study. Please note that you need to be clear on the implications for your participation which has been explained before signing this form.

The researcher is a University of Zambia student pursuing a Master's Degree in Literacy and Applied Linguistics. The researcher's main purpose is to analyze the pedagogic strategies used by teachers to teach reading in English language to deaf children in grade three. Your participation in this exercise is therefore dependent on your consent. You are free to refuse to participate in this exercise. The researcher would like to assure you that all data collected from this study will be treated with ultimate confidentiality. Above all the rights of the participants will be protected and respected. Be assured that no harm will result from your participation in this exercise. You are free to ask for any clarification at any point of the exercise and to inform the researcher if you feel uncomfortable about any procedure in the study.

Declaration

I have read and fully understood this document. Its content has been explained to me. I therefore, agree to participate in this exercise.

Signature Date

APPENDIX B

INTERVIEW GUIDE FOR TEACHERS WHO TEACH DEAF LEARNERS AND HARD OF HEARING LEARNERS

A. Personal details

(i). Gender Male { } Female { }

(ii). Age of learners Grade of learners taught.....

B. Pedagogic strategies teachers use to teach reading to deaf and hard of hearing children.

1. What is reading in a classroom situation?
2. Do you teach your learners how to read in English language? If so, what methods do you use to teach?
3. What are the attitudes of learners towards reading in English?
4. What strategies do you use in your teaching that support learners' ability to be able to read?
5. Which of the strategies is more effective to use when teaching reading?
6. How do you assess reading abilities of your learners?
7. Describe how you support literacy development to learners who are deaf?
8. What are the measures put in place to influence the literacy skills development of deaf learners?

C. Resources or materials used to teach reading to deaf and hard of hearing learners

8. What type of materials do you use when teaching deaf learners?
9. What teaching or learning materials do you find helpful to support learners' reading abilities?
10. How appropriate are the teaching and learning materials used to teach reading in English to deaf children?
11. What support do you receive from the school administration in teaching literacy?

D. Challenges encountered by both teachers and learners in a reading classroom

12. What challenges do you face when teaching reading in English to deaf learners?
13. What challenges do learners face when learning how to read in English?
14. What challenges do you teachers and learners encounter during teaching and learning in the classroom?
15. What are some of the interventions that can help in the teaching of reading in English to deaf learners?
16. Does the curriculum support deaf learners' ability to learn reading in English language?

E. Curriculum

17. Is the curriculum accommodative to deaf learners?
18. How flexible is the curriculum in allowing you to adapt content to suit the deaf learners?
19. Does the curriculum provide adequate strategies for teaching deaf learners
20. Is the curriculum is suitable for deaf learner

APPENDIX C

INTERVIEW GUIDE FOR SCHOOL ADMINISTRATORS AT DEAF SCHOOLS

1. How are the literacy levels of the deaf learners in school?
2. Are the methods used to teach reading in English to deaf learners effective to support learners?
3. What support is the administration giving to teachers of deaf learners?
4. What support do you give to deaf learner in their learning of reading in English language?
5. What challenges do you face as a school in teaching literacy?
6. What is your comment on the recommended strategies in the syllabus to teach reading?
7. Do you encourage teachers to be resourceful?
8. Are the teaching and learning materials used to teach reading in English adequate and appropriate for teachers to teach pupils how to read? Yes [] (b) No []
9. If not what is the administration doing to help the situation?
10. What are the measures put in place to influence the learners reading skills?
11. do you receive any help from the government to support deaf learners' literacy development?
12. Does the government provide sufficient support in ensuring that teaching and learning materials are available to the school?

APPENDIX D

OBSERVATION CHECKLIST

The question was: what strategies do teachers use to teach grade three deaf and hard of hearing learners reading in English language? Under this question, the following aspects will be considered.

1. Does the teacher use the following strategies during teaching;
 - a. Collaborative
 - b. Expository methods
 - c. Question and answer
 - d. Group work
 - e. Role play
 - f. Expository
 - g. Demonstration
2. The use of teaching materials
3. Encouraging the use of learning devices
4. What learner centered activities is the teacher using during lesson delivery?
5. Does the teacher use pair work, group work or individual work during teaching?