

CHAPTER ONE

INTRODUCTION

1.0 Background

The background to the study is divided into two, the global perspective and the Zambian perspective. The chapter further presents the statement of the problem, purpose of the study, and objectives of the study, study questions, significance of the study, and the definition of functional terms.

The question of why some children have difficulties learning to read has been the focus of the great deal research for many years and much has been learnt about the probable and improbable causes of such difficulties (Frank et al., 2004). Of special interest in this very rich area of inquiry have been learners with hearing impairments. Hearing loss affects these learners and causes delay in the development of receptive and expressive communication skills. The language deficit also causes learning problems that result in reduced academic achievement. One of the academic areas that suffer is reading. In his study Paul (1998) observed that the development of reading skills is dependent on the reciprocity between word identification and comprehension.

However, failure to identify words and to comprehend has posed a lot of challenges on the grade one learners with hearing impairments in Lusaka district. Chamberlain and Mayberry (2000) cited that learners with hearing impairments have problems with reading because of their difficulty in acquiring the conversational form of language in which they are trying to read. We do not know whether or not this could be the case with the grade one learners with hearing impairments in Lusaka; hence this study. According to Chamberlain and Mayberry (2000) reading requires two related, but separable capabilities; familiarity with a language and mapping between that language and the printed word. However, grade one learners with hearing impairments in Lusaka (Zambia) are disadvantaged on both counts.

Studies carried out in Zambia on reading skills show low performance among learners in primary schools. The Southern Africa Consortium for Monitoring learning Quality (SACMEQ) (1998)

conducted a research on reading performance in Zambia and found that the reading levels were low. Kelly (2000) also revealed that the performance in reading skills were low and in most cases not grade appropriate. Ministry of Education, Science, Vocational Training and Early Education (2008) holds the view that learners with hearing impairments have individual challenges that are influenced, among other things, by their degree of deafness, the age at which they became deaf, their experience of language whether spoken or signed and communication with their families when they grow up.

However, it seems that the inadequacies in the education of children with hearing impairments are inevitable. Instead they are being preserved by hearing educators who seem to know too little about the end –products of their system. Worse still, the average child with hearing impairment usually has hearing parents who are unable to communicate (Leo, 1989). As a result, these learners with hearing Impairments are not exposed to sign language at birth. This means that they learn sign language and English language almost at the same time when they start school and this interferes with proper learning of reading skills. In all what has been cited it is not known in Lusaka (Zambia) if teachers are competent and are aware of such challenges in teaching reading to grade one learners with hearing impairments, hence the study.

Research indicates that normal reading ability assumes adequate language comprehension and fluent word identification. Written words are encoded (symbolized) representations of sight words, and signed words are encoded representations of environmental experiences and entities. Thus the ability to read depends on the acquisition of a variety of different types of knowledge and skills, which, themselves, depend on normal development of reading- related non-linguistic cognitive abilities (Frank et al., 2004).

Visual coding processes are sensory and higher-level visualization processes that facilitate storage of representations defining the visual attributes of environmental stimuli, including the graphic symbols used to represent written words. The heavy load on visual memory imposed by high degree of similarity characteristic of words derived from an alphabet also poses a lot of challenges to the learners because they process language by sight. Similarly, sight word learning

also depends on the learner's ability to acquire understanding and functional use of the alphabetic principle (Paul, 1998).

Therefore, facilitative strategies for learners with hearing impairments are primarily concerned with various aspects of communication. Other problems arise because deafness is an invisible disability and it is easy for teachers to "forget about it" and treat the learners as not having a disability. Unless critical measures are taken by the Zambia National Association for Deaf (ZNAD), Curriculum Development Centre (CDC) and other stake holders to address the problem, low reading levels will continue to characterize the education of learners with hearing impairments.

It has also been noted that the average learner with hearing impairments shows an ever increasing gap in vocabulary growth, complex sentence comprehension and construction and in concept formation as compared to learners with normal hearing (Ling and Ling 1989). This is a serious problem especially that most of the learners with hearing impairments leave school without being good readers. Further, the studies have shown that children do not typically "catch up" on their own. Children need to be taught to read. Learning to read thus differs fundamentally from learning to speak or sign a language. Reading does not come naturally to all individuals living in a community, it must be taught.

There may be no consensus among researchers, educators, parents, or learners with hearing impairments about the best reading strategies for learners with hearing impairments or hard of hearing (Frank et al., 2004). Some may argue that Zambian Sign Language (ZSL) is best for the deaf community in Zambia and that a child with hearing impairment is best prepared for a productive life when Zambian Sign Language is taught as the primary language of instruction. Others may suggest that speech reading or manually coded English should play an important role in the educational program of a learner with hearing impairment. Still others may argue that technology, such as cochlear implants, should routinely be made available to children with hearing impairments. The implications for both instruction and assessment of reading may be quite different depending on the perspective one takes on these issues. Unless addressed with well-designed instruction, struggling readers may stay that way.

Moreover, the education these learners receive may reflect many different instructional methods and though it is necessary to weigh these issues carefully when determining what constitutes an appropriate education for them, not much has been done to ameliorate the situation. Since the education of learners with hearing impairments' hinges on proper learning of literacy skills, this study therefore sought to establish the effects of home and school environments on reading among grade one learners with hearing impairments in Lusaka district.

1.1 Statement of the problem

The education of the learners with hearing impairments has been characterized by low reading levels, Leo (1989). Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) has made attempts to improve reading among the learners. However, it is not known if home and school environments have an effect on reading, hence the study.

1.2 Purpose of the study

The purpose of the study was to investigate the effects of home and school environments on reading among grade one learners with hearing impairments in Lusaka district so that the Ministry of education, Science Vocational Training and Early Education and other stake holders may reflect on other new instructional strategies that are likely to lift up reading proficiency levels for grade one learners with hearing impairments.

1.3 Objectives of the study

1. To determine the effects of the mode of communication at home on the acquisition of reading skills by grade one learners with hearing impairments.
2. To determine the effects of the mode of communication at school on the learning of reading skills by grade one learners with hearing impairments
3. To establish how teacher competences affect the learning of reading skills of grade one learners with hearing impairments.

1.4 Research questions

1. What effects do home modes of communication have on the acquisition of reading skills among the grade one learners with hearing impairments?
2. What effects do school modes of communication have on the learning of reading skills among the grade one learners with hearing impairments?
3. How does teacher competence affect the learning of reading skills of grade one learners with hearing impairments?

1.5 Significance of the study

This study is cardinal especially this time when Zambia has to examine how much of the millennium goals of education for all have been achieved. Most of the learners with hearing impairments complete grade twelve without attaining proficiency in reading. Reading is one of the means of communication which favours learners with hearing impairments. Where they cannot express themselves orally, writing and reading become the option to facilitate communication. But it is quite worrisome to realize the escalating poor reading levels in these learners. This study therefore, may be significant in that the findings might help teachers to reflect on their teaching practices and try to come up with methodologies that may help learners with hearing impairments acquire reading skills. Expected beneficiaries to this study may be learners on whom the study was conducted in that the findings of the study might bring about some innovations in the Ministry of Education in as far as reading is concerned. These changes may specifically be responsive to the needs of grade one learners with hearing impairments in classrooms thus, helping them attain higher levels of reading proficiency. The study might also show current trends in placement of teachers and learners and this may help parents and the community at large to appreciate early intervention in the education of learners with hearing impairments. Above all, the research may equally add value to literature which other scholars may use.

1.6 Limitations of the study

The sample size was small hence not representative of the entire population of learners with hearing impairments, teachers who teach these learners and parents of grade one learners with hearing impairments. Secondly, other stake holders with interest in education of learners with hearing impairments, Ministry of education, Science Vocational Training and Early Education Officials and Curriculum Specialists were not consulted.

1.7 Operational definitions

Hearing Impairment: Being unable to perceive sound with or without amplification

Reading: A psycholinguistic guessing game, a process in which readers sample the text, make hypotheses, confirm or reject them, make new hypotheses, and so forth (Goodman, 1976)

Low reading levels: Performance which is below the expected level in comparison with the reading syllabus of the learners' grade

Competence: a set of conscious, trainable skills and abilities which make a teacher effective

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter presents a general review of literature on the effects of home and school environments on reading among grade one learners with hearing impairments. Literature is presented in line with the objectives of the study as follows; to determine the effects of the mode of communication at home on the acquisition of reading skills of grade one learners with hearing impairments, to determine the effects of the mode of communication at school on the learning of reading skills by grade one learners with hearing impairments and to establish how teacher competences affect the learning of reading skills of grade one learners with hearing impairments. The chapter ends with a summary.

An aspect that is of great concern for all educators is poor reading ability. The Ugandan Ministry of Education and Sports (2007) observes that many learners are not developing proper reading skills. The main reason why learners may develop difficulties in learning to read could be that learners are not fluent enough in the language of instruction or have little, if any; experience at looking at books (children's books). The learners may also lack motivation because they have neither seen their parents read, so reading is foreign to them. It is not known whether or not the grade one learners with hearing impairments in Lusaka, Zambia experience the same hence, the study.

The relationship between deafness and low reading skills is complex and appears to be related to a variety of factors including academic achievement of teachers and parents of the children with hearing impairments, language competence of parents of children with hearing impairments, and the family background of children with hearing impairments. Chamberlain (2002) in his study on language acquisition by eye argued that reading development is contingent on a fully developed primary language, and that incomplete or inconsistent signed or spoken language may affect the development of reading proficiency. In the United States, 90 per cent of children who are deaf are born to hearing parents who should learn sign language as a second language to communicate

with their child. We do not know whether or not this could be the case in Lusaka Zambia hence, the study.

Some deficits of reading in some learners with hearing impairment are caused by lack of phonological awareness which includes problems of retrieval, difficulties of phonological memory, fluency difficulties in reading and reading comprehension. According to Paul et al. (1993), the slower learning pace results in low achievement levels and restricted amount gains. Paul and Quigley (1984), also point out that a teacher of learners with hearing impairments face a lot of problems with their learners in reading. He further elaborates that by the beginning reading stage, all or most of the multiple processes involved in reading are likely not to be developed to the same level as hearing children. Much of this may be a result of lack of appropriate environment and development procedures with children with hearing impairments in infancy and early childhood. This would mean that any language they may have internalized in their infancy is likely to be different from the language of instruction at School. In other words, children with hearing impairments are likely to have problems with every aspect of the reading process because lack of communication between them and their parents has great impact on their education. Most of the cited authors in this part of the literature are from the Western world. We do not know whether or not the grade one learners with hearing impairments in Lusaka, (Zambia) would behave the same way, hence the study.

Paul et al. (1984), claim that research indicates that most children with hearing impairments have difficulty with reading. For instance, where a hearing child brings to the reading process a substantial knowledge base resulting from a wide variety of infant and early childhood experiences which have been internalized through the spoken language acquired by interaction with parents and significant others, the child with hearing impairment brings to the same process a very impoverished knowledge base. This is not always due to lack of exposure to early experiences , but often to lack of a fluent language and communication system with which to signify and internalize those experiences in some manipulated code (Quigley and Paul 1984).

To elaborate further, Quigley et al (1984) claim that because of lack of a substantial knowledge base, children with hearing impairments are often lacking in inferential skills and figurative language and other linguistic skills which develop automatically in most young hearing children.

In other words, learners with hearing impairments do not have the experiential, cognitive, and linguistic base needed to learn to read fluently and this makes reading a basic language learning process for these children. However, the researcher wondered whether or not this could apply to grade one learners with hearing impairment under study in Lusaka (Zambia), hence the study.

2.1 The effects of the mode of communication at home on acquisition of reading skills by grade one learners with hearing impairments

According to Marc, et al (2000) there is an assumption that for most children reading begins at home and not in school. In our society, literacy has social and cultural bases whose roots are established early. The first stage in becoming a reader begins as soon as the child is exposed to and becomes aware of books and other artefacts of a literate tradition (Taylor, 1983). Children are exposed to print through television, through the environment for example, through street signs, food labels and through reading aloud by parents and others.

Through hearing, the child listens to the environmental sounds and begins to make sense of the sounds of language. For a child deprived of hearing the situation is quite different. A child with hearing impairment may live in a linguistically rich environment; however, access to language may be restricted (Barker et al., 2002). In an extensive study of literature regarding the impact that parents of children with hearing impairments have on the learners' communication development, Spenser and Lederberg (1997) pointed out the benefits to language development that come with parents who are themselves hearing impaired. They argue that children with hearing impairments of parents with hearing impairments acquire communication skills at the same ages and the same stages as hearing children. This may be because these children are surrounded by a rich linguistic environment that is appropriate for language development. Children with hearing impairments with parents with hearing impairments have also been reported to engage in early literacy activities including reading and writing and as a result, children with hearing impairments with parents with hearing impairments come to school with a language base upon which they may develop skills in reading, writing and knowledge across academic and curricular areas. The researcher wondered whether or not it could be the same with the grade one learners with hearing impairments in Lusaka (Zambia), hence the study.

On the other hand, the path to language learning is often very difficult to the Learners with hearing impairments with hearing parents. Baker et al. (1991) hold the view that most hearing parents who have children with hearing impairments are taken by surprise. They never considered the possibility of having a child with hearing impairments much less their role in that child's communication development. The parents are faced with the task of sorting through medical, communications, and educational options for their children with hearing impairments. Never having considered that they will need to learn to be their child's instructor in communication, many parents are overwhelmed with the responsibility and because of that, many parents have difficulty instilling a first language system in their children by signing to them. Musselman et al. (1960) pointed out that those learners with hearing impairments that are most successful have parents who are highly committed to their communication development. As challenging as this is, it is essential for parents to take an aggressive approach to helping their children learn to communicate (Barker, 1997). We do not know whether or not this could be the case with parents for grade one learners with hearing impairments in Lusaka, hence this study.

It is also important to note that learners with hearing impairments whose families do not use the language of instruction of the school are at greater risk academically. A further problem very unique to the learners with hearing impairments performance is the reality that most of them are exposed to non-native linguistic input. Ninety per cent of the children with hearing impairments are born to hearing families, (Urquhart 2009). Their families use a spoken language such as Chichewa, Bemba, Tumbuka as home language while they are taught English at School through Signed English which their families do not understand and as a result, they do not get help at home from their families due to communication barriers. Primarily, children with hearing impairments are at greater risk for acquiring adequate communication skills, either in English or any other language (Moores et al., 1977). The level of a mother's education is one such factor, as mothers with more education are more likely to have better sign language skills and their children with hearing impairments show better academic achievement. Parents with more education also tend to be more involved in their children's school activities. The researcher wondered whether or not that could be applicable to the grade one learners with hearing impairments in Lusaka, hence the study.

Parents, siblings and others provide young children with context in which development occurs and support and promote early learning. According to Leo (1989) most children with hearing impairments are born to non-signing parents and as a result, communication in the home is given special consideration. Children with hearing impairments' exposure to a natural language is an important step beyond the establishment of parent-child communication. Natural sign languages have some significant advantages for learning over artificially constructed English based sign systems designed to facilitate the development of reading skills by children with hearing impairments. Artificial sign systems do not appear to lead children with hearing impairments in either sign language or English (Leo, 1989)

When parents and their children with hearing impairments have better communication, regardless of whether they are hearing impaired or hearing and independent of the mode of communication, they have stronger and more secure relationships compared to parents and children with poor communication (Greenberg & Marvin, 2002). It is also important to note that parents serve as role models for children and young children will identify with and emulate physical and behavioural characteristics of their parents that appear to be valued. From an educational perspective, there can be no doubt that parents' involvement in their children's education is one of the single best predictors of academic achievement. A variety of studies involving hearing children has identified specific parental behaviours that help foster educational success (Hart & Risley, 1995; Janos & Robinson, 1985). These behaviours include provision of quality language interactions, spending time with children talking about school activities and helping with school work, involvement in academic and extra-curricular activities, answering questions about formal and informal academic issues in a supportive manner and fostering curiosity and creativity. Parents involvement in their children's education both at home and at school, can also instil, a sense of importance and value that their parents place on learning. We do not know whether or not this could be the case with parents of grade one learners with hearing impairments in Lusaka, hence the study.

2.3 The effects of the mode of communication at school on learning of reading skills by grade one learners with hearing impairments

The effect of the home environment on reading among grade one learners with hearing impairments could come about because most of them, especially those from hearing parents enter school without language (Conrad, 1979). In his study on the deaf school child, Conrad (1979) observed that most learners with hearing impairments use home, natural, village or bush signs and enter school with no communication mode useful than the crude gestures. Natural signing is the gestural communication system developed by a child with hearing impairments who lacks input from a language model in the family. This is a common experience for children with hearing impairments with hearing parents who are isolated from a sign language community. The researcher wondered whether or not the grade one learners with hearing impairments in Lusaka could experience the same, hence the study.

Home signs arise due to the absence of any other way to communicate. Within the span of a single lifetime and without the support or feedback of a community, the child is forced to invent signals to facilitate the meeting of his or her communication needs. The weaker part with this type of communication is that home signers with no human social interaction, develop no language at all. Home signs do not have a consistent meaning-symbol relationship, are not considered the same over a community of signers as they are not standardized and not shared by one large group (Frishberg, 1987). In other words, the home signs do not help the learners to learn to read because the signs may mean different things in different environments. Since the study has not been carried out in Zambia, the researcher wondered whether or not the grade one learners with hearing impairments in Lusaka could learn reading with home signs, hence the study.

In the same vein, most children in Zambian schools use signed English. This is a manual system designed to be used with speech. It is a semantic system in which signs represent the meanings of words found in Standard English dictionaries (Miles, 1994). Signed English serves two basic symbols and these are: a model of the English language and secondly, communicating information between people. The source of information when using this mode of communication is not only signs but also speech. Signed English also uses two kinds of gestures or signs: Sign

words and sign markers. Each sign word stands for one English word and the words are signed in the same order as words are used in an English sentence. The sign markers are used when changing the form and meaning of some words in a sentence for example, changes in number, possession and verb tense.

However, it must be noted that signed English is slower than natural speech or Zambian sign language. Signed English has a larger vocabulary and this makes it difficult for the learners with hearing impairments to learn to read as it cannot faithfully show every aspect of spoken English. In other words, Signed English is not a language in and of itself but merely a representation of the English language and as a result, it is very difficult for a child with hearing impairments who has never been to school to learn how to use it. This being the case, the researcher wondered whether or not the grade one learners with hearing impairments in Lusaka with traditionally different background could find it easy to switch from their traditional sign language to Signed English, hence the study.

Paul and Jackson (1993) support that when children with hearing impairments are exposed to both English and a signed language in the same environment; their spontaneous overwhelmingly language reflects the signed language. They further claim that children with hearing impairments face a double barrier to acquiring literacy. First, most children have not achieved fluency in Standard English in any form by the beginning of instruction in reading. Secondly, many of the reading curricular currently in use with hearing children assume a knowledge of spoken English and are therefore of limited utility to children with hearing impairments (Kirk, 1940).

Webster et al. (1985) hold the view that learning to read in learners with hearing impairments requires learning a language as well. Hence, even if a child with hearing impairment can recognize words, understanding of written material may not happen without a sure base of language. Learners with hearing impairments may take time to read effectively because they have never heard a word. In other words, learners with hearing impairments seem to be slow in learning to read fluently because they do not have the basic knowledge of the language they are learning to read and they are unfamiliar with the Standard English used for instruction at school (Monroe, 1928).

The other mode of communication used in Zambian schools is the sign language approach to communication. The sign language approach to communication also known as manual approach is seen as the natural, barrier –free language of the children with hearing impairments. This is the first language of the children with hearing impairments and hearing, born of parents with hearing impairments. The manual method encourages the use of and exposure to sign language from as early an age as possible thus, recognizing the importance of the critical period in language acquisition (Brazeltion and Greenpan 2000; Fisher, 1995). In order for natural sign language development to occur (with the same stages of language development as spoken languages), parents need to sign to their child with hearing impairments at an early age as possible, and contact with an adult with hearing impairment as a role models is recommended. The main objective of the manual paradigm is a well-developed child with hearing impairment who shows language development, cognitive skills, a strong cultural identity, social and emotional stability, and second language literacy. This approach falls within the social disability model, and the majority of the deaf community support it. We do not know whether or not this could be the case with grade one learners with hearing impairments in Lusaka, hence this study.

Furthermore, McIlroy (2010) in his study about discovering deaf identities, argued that it is essential that educators and parents have a deeper understanding of the needs and the identity choices available to their learners with hearing impairments to fit successfully through cross cultural dialogue. This would require that teachers are highly knowledgeable about deaf culture and are able to present the content in Zambian sign language. Applying and adapting content for this purpose requires expert knowledge of the language, culture, and learning styles of the learner with hearing impairments.

Additionally, when teaching through sign language, very often the assumption is that nothing else is required. This is untrue, as despite the fact that language is accessible; much incidental learning is missed often due to late identification and communication by parents. The teacher of a learner with hearing impairments needs to be adequately trained for the job. The researcher wondered whether or not the teachers for grade one learners with hearing impairments in Lusaka were good communicators in Sign Language, hence the study.

It is also important that the teachers of the grade one learners with hearing impairments understand the process of language acquisition and to understand how to bridge from Zambian sign language to English. The teacher for the learners with hearing impairments must also provide culturally sensitive instruction, including deaf role models and deaf culture. Most importantly, the teacher must sign at all times and if she or he wants to turn her or his learners with hearing impairments into readers she or he must make sure that the learners have a language. The researcher wondered whether or not the grade one teachers for learners with hearing impairments in Lusaka understood the process of language learning, hence the study.

2.4 How teacher competence affects the learning of reading skills of grade one learners with hearing impairments

Competencies denote a set of conscious, trainable skills and abilities which make a teacher effective (Czerepaniak 2004). Competencies are addressed in the context of changeability and uniqueness of each and every educational situation and mean a repertoire of knowledge, personal features (responsibility and ethical engagement) and educational techniques.

Czerepaniak (2004) conceptualises competencies as developing in the space of practice. Among the competencies identified are communication and the competencies that pertain to didactic and educational skills. To demonstrate such competencies, Czerepaniak (2004) suggests that it would require a teacher to use basic instructional means and measure, including various methods and forms of classroom teaching, learning and course work, adjusted to both the educational goals and educational settings.

Czerepaniak (2004) also holds the view that communication competencies include the teacher's capacity to use various discursive techniques and non-verbal language in communication in educational contexts and to stimulate linguistic sensitivity in learners with hearing impairments. The researcher wondered whether or not the teachers for the grade one learners in Lusaka had such competencies, hence the study.

The Ministry of Education (1992) recognizes teachers as being one of the chief determinants of educational effectiveness in that they are the ones who shape children's intellectual formation and promote their desire and ability to learn. The Ministry of Education goes on to say that as

such; teachers should be proficient in the subjects they teach by continuing to be learners themselves, advancing in the knowledge of their subjects and improving their teaching skills. This entails that advancing knowledge would be done through Continuing Professional Development (CPD).

This in turn called for initiatives and programmes which would impact heavily on the teaching and learning processes in schools. The teacher input in this case will be through ‘preparation and delivery of effective lessons emanated from teacher’s resourcefulness, which is derived from the training that teachers undergo, both In-Service Teacher Education and Continuing Professional Development’ (Ministry of Education 2007).

Mwanakatwe (1973) support the fact that a teacher is not a product of chance and that initial training, in- service education and Continuing Professional Development underpin what the teacher can accomplish in school. This entails that when teachers access a variety of reading and reference materials, their lessons are enriched and subsequently students benefit through improved learning outcomes. In addition, Ndopu (2010 M.Ed. Thesis unpublished), point out that researchers have supported findings that ‘the academic and professional training of teachers has direct and positive bearing on the quality of their performance and consequently on the achievement of learners. Therefore, the need for Continuing Professional Development is to improve input of personnel and the product, in this case the teacher and the learner respectively. In other words, the ultimate aim of all in-service and continuing professional development is the improvement of learners learning through the development of teachers as reflective, autonomous professionals who have not only developed a range of skills but also a broad knowledge of understanding of the subject content and of the conceptual framework of teaching and learning. The researcher wondered whether or not the teachers of grade one learners in Lusaka undergo Continuing Professional Development to improve their skills in teaching reading, hence the study.

Additionally, in the quest to enhance teacher competencies the Ministry of Education, Science, Vocational Training and Early Education has constructed a number of resource centres. A resource centre is a term used to describe a type of library that exists within the zone (where a

group of teachers meet) for Continuing Professional meetings. These centres contain resources such as books, journals, software and audio/video materials for learners and teachers to use (Alomran, 2007). Resource centres are run by Zone, District or Provincial Coordinators in order to provide access to quality and timely resources to teachers. A key aspect of a resource centre is the applications of self-study in a variety of different ways. We do not know whether or not the teachers for grade one learners with hearing impairments in Lusaka district use the resource centres to enhance their skills in teaching reading, hence the study.

Given the deficits learners with hearing impairments bring to the learning –to-read process it seems that the methods and materials used with hearing learners might not be appropriate for many learners with hearing impairments. The learners with hearing impairment may need special materials which have value for less able and problem readers. Therefore, there is need to provide materials for learners with hearing impairments which will match the limited experiences and limited knowledge of the vocabulary, syntax, figurative expressions, and other aspects of Standard English and which will increase in difficulty at a limited pace (Quigley et al., 1984). It seems logical that teaching reading to children with hearing impairments would require special methods based on visual language. The methods would have to take into account whatever form of visual language the child had internalized prior to the beginning reading process. In order to teach reading to these children, the teacher needs to be able to determine which language or communication form the child used and use it as the base for teaching reading. This in turn, requires that the teacher be fluent in sign language. The researcher wondered whether or not the teachers who teach grade one learners with hearing impairment in Lusaka were aware that it would require special methods based on visual language to teach reading to their learners, hence the study.

According to Chamberlain & Mayberry (2000) children can learn to read if taught by appropriate methods. It has been experienced that people become teachers in order to help make significant positive changes in learners' lives and teaching children to read is certainly one of those goals. Teachers however, frequently teach what they have been taught. Much evidence shows that teachers are not trained to address individual learning differences in general and specifically are not prepared to teach reading to their learners who arrive in their classrooms from highly

diverse backgrounds and a range of initial abilities (Schirmer&McGough, 2005).According to (Landsberget al., 2005) the obvious but often ignored fact is that children cannot read without knowing a language.Children who have no language upon which to map the printed code never learn to read. Moreover, knowing any language helps children to learn even if it not the language captured in print. It is also important to note that children cannot learn a first language through print. The printed code leaves out a great deal of information that is captured in a spoken or signed language. First language comes naturally to children when the language is spoken or signed, but not when it is printed. The researcher wondered whether or not the teachers who teach grade one learners in Lusaka were competent to teach reading to their learners who arrive in their classrooms from highly diverse backgrounds and havea range of initial abilities, hence the study.

Ministry of Education, Science, Vocational Training and Early Education (2008) has tried to put measures to address the reading problems by introducing programmes to improve reading skills in the reading policy. A new language policy called the Primary reading Program with the New Breakthrough to Literacy (NBTL) as one of its major components has since been introduced as an intervention measure to improve the reading standards in schools.” The New Breakthrough to Literacy (NBTL) requires grade one pupils to learn using their mother tongue. According to MESVTEE (2003) from the start; the grade one learners see in printed form those words they use every day in their local language. In other words, the learners realise that what they read is something that they already know a lot about. However, despite the governments’ effort to introduce the NBTL reading programme, the grade one learners with hearing impairments are still portraying low performance in reading. The researcher wondered whether or not the teachers were competent and used the familiar local language (Sign Language) in teaching reading, hence the study.

2.5 Summary

The literature reviewed has established some of the effects of the home and school environments on reading among the grade one learners with hearing impairments. The factors identified include lack of fluency by the learners in the language of instruction and lack of motivation because they have neither seen their parents read, so reading is foreign to them. Academic

achievement, language competence, and family background were also identified as some of the factors.

Other factors which could affect reading among the grade one learners with hearing impairments were that most of them, especially those from hearing parents enter school without language. These use home or bush signs. Home signs arise due to the absence of any other way to communicate. The weaker part with this type of communication is that home signers with no human social interaction, develop no language at all. Home signs do not have a consistent meaning-symbol relationship, are not considered the same over a community of signers as they are not passed on from generation to generation and are not shared by one large group.

The literature has also shown that teacher competence is yet another factor. This affects learning of reading skills of grade one learners with hearing impairments. Teaching grade one learners with hearing impairments to read requires knowledge of sign language and use of visual manipulations. In order to be successful, a reading teacher must engage the learner using the learning modalities most common to grade one learners with hearing impairments. Despite all the efforts made by all researchers, the researcher wondered whether or not the findings by other researchers could be applicable in Zambia, hence the study.

CHAPTER THREE

METHODOLOGY

3.1 Overview

This chapter outlines the methodology that was used in this study. It constitutes the following: research design, target population, sample size, sampling techniques, research instruments, data collection procedure, data analysis and ethical considerations.

3.2 Research design

A case study design was used in this study. Gosh (2003:224) defines a case study as a method of collecting information about an individual, a family, and an institution, a group of persons that can know precisely the factors and causes of a practical phenomenon. Komb and Tromp (2006) support that a case study seeks to describe a unit in detail, in context and holistically, it is a way of organising educational data and looking at the situation to be studied as a whole. Therefore, on the basis of the above definitions, the researcher chose a case study design over other designs to allow in depth investigation of the effects of home and school environments on reading among grade one learners with hearing impairments in Lusaka, Zambia.

The study used both quantitative and qualitative methods of data collection. The use of both quantitative and qualitative paradigms in a study increases the quality of the final results and provides a more comprehensive understanding of the phenomenon being studied in that the results obtained by the use of one paradigm could be elucidated by the use of another paradigm (Greene et al., 1989).

3.3 Target population

The target population for this study was all teachers teaching pupils with hearing impairment in grade one, parents of pupils and grade one learners with hearing impairments in Lusaka district.

3.4 Sample size

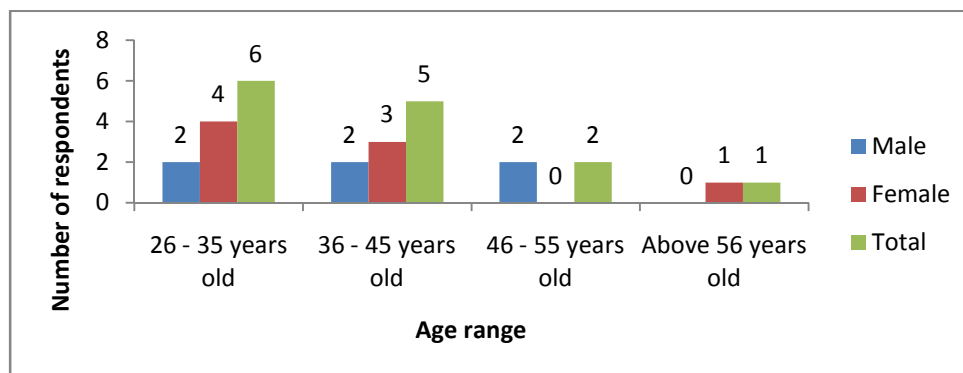
The sample for this study comprised 47 respondents consisting of 10 teachers, 23 learners with hearing impairments and 14 parents of children with hearing impairments in Lusaka district.

3.4.1 Demographic characteristics of parents

Gender and age of parents

Parents were asked to indicate their gender and age. In this study age and gender was important because females spend more time with their children than males and they are likely to help their children than males. Young parents are also likely to be interested in their children's work than older parents. Figure 1 below shows their responses.

Figure 3.1: Gender and age of parent respondents (n = 14)

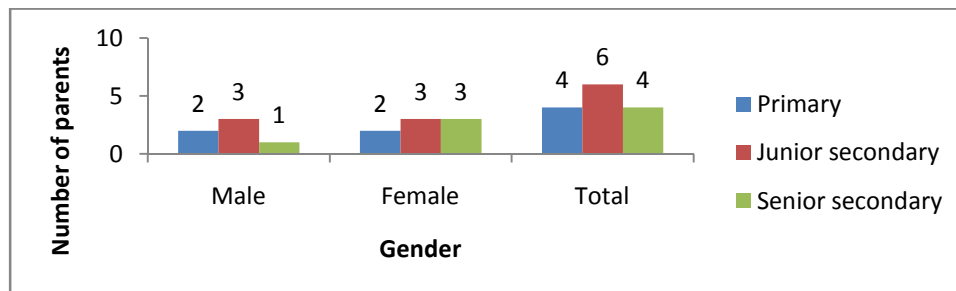


The figure above shows that most of the female parents (4) were aged between 26 – 35 years old followed by three who were aged between 36 – 45 years old. As for the male parents, there was an equal distribution of two (2) parents each in the age ranges of 26 – 35; 36 – 45 and 46 – 55 years old, respectively. One female parent was aged above 56 years where as there was no male parent in this age group. Generally, most of the parents were in the age groups of between 26 – 35 years old and 36 – 45 years old.

Parents' highest level of academic qualification

Parents were asked to indicate their highest academic qualification levels. In this study qualification of parents' respondents was important because the support a learner with reading challenges would receive from literate parents may not equal that the other learner with illiterate parents would get. Figure 3.2 shows their responses.

Figure 3.2: Highest level of academic qualifications of parents (n = 14)



The figure above shows that most of the male (3) and female (3) parents said that they had junior secondary as their highest academic qualification. The figure also shows that more female parents (3) than their male counterparts (1) indicated that they had senior secondary as their highest academic qualification. Further, the data above shows that an equal number of male (2) and female (2) parents said they had primary academic level of education.

Parents' highest level of professional qualification

As regards to parents' highest professional qualification, all the male (6) and female (8) respondents indicated that they had a certificate as their highest professional qualification.

3.4.2 Demographic characteristics of teachers

Gender and age of teachers

Teachers were asked to indicate their gender and age. In this study gender of teachers' respondents was important because it is believed that female teachers especially mothers know how to handle and motivate children and have interest in the young ones. Furthermore, newly trained teachers have undergone training programmes in reading such as New Break Through to

literacy (NBTL) which has been highly recommended by the government and we expect the young teachers to be very effective in teaching reading.

Table 3.1 below shows their responses.

Table 3.1: Teachers' gender and age

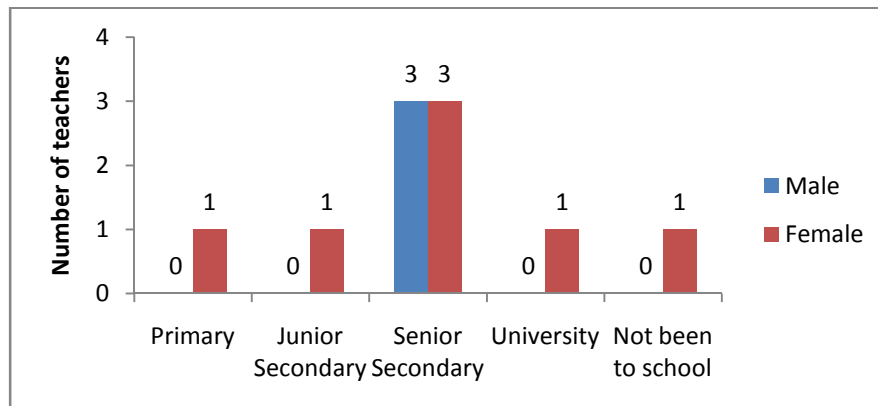
Age	Gender of teachers		Total
	Male	Female	
Below 25 years old	-	1	1
26 – 35 years old	2	1	3
36 – 45 years old	-	5	5
46 – 55 years old	1	-	1
56 and above	-	-	-
Total	3	7	10

The table above shows that of the 10 teachers, most of the female (5) and male (2) teachers were aged between 36 to 45 years old and 26 to 35 years old respectively. Only one female and one male teacher were aged below 25 years old and between 46 and 55 years old, respectively.

Teacher's highest academic qualification

As regards the highest academic qualification that teachers possessed, Figure 3.3 below shows teachers responses.

Figure 3.3: Teachers highest level of academic qualification by Gender (n = 10)



The figure above shows that of the 10, most of the male (3) and female (3) teachers indicated that they had senior secondary as their highest level of academic qualification. The rest of the responses were as seen in Figure 10 above.

3.4.3 Teachers highest professional qualification

As regards to the highest professional qualification that teachers possessed, Table 3.2 shows teachers responses. In this study highest professional qualification of teachers' respondents was important because the teachers with the highest qualifications were believed to have rich knowledge and wider understanding about the effects of home and school environments on reading and are more likely to have better Sign Language skills.

Table 3.2: Teachers highest professional qualification by gender

Highest professional qualification	Gender of parents		Total
	Male	Female	
Certificate	1	4	5
Diploma	2	3	5
Degree	-	-	-
Doctorate	-	-	-
Total	3	7	10

As can be seen from the table above, most of the female teachers indicated that they had a certificate (4) and a diploma (3) as their highest professional qualification while one male teacher had a certificate and the two others had a diploma.

3.4.4 Sampling techniques

In selecting the school, teachers, parents and learners who participated in the study, purposive sampling procedure was employed. This method of sampling was preferred among others because it only targeted people who were expected to be information laden that would provide the most needed information for this study. According to Kombo and Tromp (2006) the power of purposive sampling lies in selecting information rich cases for in-depth analysis related to the central issues under study. In this case, the teachers, parents and grade one learners were believed to have rich knowledge and wider understanding about the effects of home and school environments on reading among grade one learners with hearing impairments in Lusaka district

3.4.5 Research instruments and data collection

In collecting data for this research the following instruments were used: semi-structured questionnaires and Basic Skills Assessment Tool (BASAT) in English were used. The questionnaires were used to obtain information from the teachers and parents regarding their views on the effects of Home and Schools environment on reading among grade one learners with hearing impairments in Lusaka district while BASAT was used to assess learners' performance.

3.4.6 Data analysis

Data was analysed both qualitatively and quantitatively. Qualitative data was analysed using thematic analysis. Description of each theme was done and interpreted critically and objectively. The Statistical Package for Social Sciences (SPSS) was used to analyse quantitative data from the semi-structured questionnaires. Computer generated tables of frequencies and percentages were used in describing distributions of the variables which were presented in the form of tables, pie charts and figures.

3.4.7 Ethical considerations

The study took into account all possible potential ethical issues such as to ensure compliance; the identity of respondents was kept confidential. Additionally, during the research, respondents' responses were neither interfered with nor contested by the researcher. Informed consent was also obtained from both respondents and the people in charge of the research area and all respondents were treated equally.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.0 Overview

This chapter presents the findings of the study. While the presentation would follow objectives, some themes generated from various research instruments used were also used to provide specific responses from the respondents. The objectives of the study were to: determine the effects of the mode of communication at home on acquisition of reading skills by grade one learners with hearing impairments; determine the effects of the mode of communication at school on learning of reading skills by grade one learners with hearing impairments and to establish how teacher's competence affects the learning of reading skills of grade one learners with hearing impairments.

4.1 The effects of the mode of communication at home on acquisition of reading skills of grade one learners with hearing impairments

In order to establish the effects of the mode of communication at home on acquisition of reading skills of grade one learners with hearing impairments, data was collected from the parents.

4.1.1 Whether child recognises his/her own name and mode of communication at home

Parents were asked to indicate the rate at which they used Verbal Language, Zambian Sign Language, Signed English and Home Signs when communicating with their children with hearing impairments and whether through the use of these modes of communication their children were able to recognise their own names. Table 4.1 shows the results.

Table 4.1: Whether child recognises own name by mode of communication

Mode of communication	Recognises own name	Extent of use of mode of communication					Total
		Never	Sometimes	Often	Always	No response	
Verbal Language	Yes	2	2	3	1	3	11
	No	-	-	1	2	-	3
	Needs help	-	-	-	-	-	-
Zambian Sign Language	Yes	5	3	-	2	1	11
	No	1	-	2	-	-	3
	Needs help	-	-	-	-	-	-
Signed English	Yes	6	1	-	1	3	11
	No	1	1	1	-	-	3
	Needs help	-	-	-	-	-	-
Home Signs	Yes	-	2	-	7	2	11
	No	-	1	-	2	-	3
	Needs help	-	-	-	-	-	-

The table shows that three parents indicated that they often used Verbal Language and that their children with hearing impairments were able to recognise their names while six of the parents said that they never used Signed English but their children with hearing impairments were able to recognise their names. The table also shows that five parents said that they never used Zambian Sign Language and yet their children with hearing impairments were able to recognise their own names. Furthermore, the table shows that seven parents indicated that they always used Home Signs and that their children were able to recognise their own names. The table above shows that use of Signed English and Zambian Signed Language had no effect on the child's reading ability. However, from the table it can be said that use of home signs seems to have an effect on the child reading ability as evidenced by seven parents who said that they always used

Home Signs and that their children with hearing impairments were able to recognise their own names.

4.1.2 Whether child could read 1-syllable word by mode of communication at home

Parents were asked to indicate the rate at which they used Verbal Language, Zambian Sign Language, Signed English and Home Signs when communicating with their children and whether through the use of these modes of communication their children were able to read 1-syllable word. The findings were as shown in Table 4.2.

Table 4.2: Whether child could read 1-syllable word by mode of communication at home

Mode of communication	Whether child could read 1-syllable word	Extent of use of mode of communication					Total
		Never	Sometimes	Often	Always	No response	
Verbal Language	Yes	-	-	1	-	-	1
	No	1	2	3	3	3	12
	Needs help	1	-	-	-	-	1
Zambian Sign Language	Yes	1	-	-	-	-	1
	No	5	3	2	1	1	12
	Needs help	-	-	-	1	-	1
Signed English	Yes	1	-	-	-	-	1
	No	5	2	1	1	3	12
	Needs help	-	-	-	-	-	-
Home Signs	Yes	-	-	-	1	-	1
	No	-	3	-	7	2	12
	Needs help	-	-	-	1	-	1

The table shows that five parents indicated that they never used Zambian Sign Language while another five of the parents said that they never used Signed English and that their children with hearing impairments were unable to read 1-syllable word. The table further shows that three parents indicated that they sometimes used Zambian Sign Language when communicating with

their children with hearing impairments at home but their children could not read 1-syllable word. Another three of the parents indicated that they sometimes used Home Signs however; their children with hearing impairments could not read 1-syllable word. Furthermore, the table shows that seven parents always used Home Signs but their children with hearing impairments could not read 1-syllable word.

4.1.3 Whether child could read 2-syllable word by mode of communication at home

Parents were asked to indicate the rate at which they used Verbal Language, Zambian Sign Language, Signed English and Home Signs when communicating with their children and whether through the use of these modes of communication their children were able to read 2-syllable words. The findings were as shown in Table 4.3.

Table 4.3: Whether child could read 2-syllable words by mode of communication at home

Mode of communication	Whether child could read 2-syllable word	Extent of use of mode of communication					Total
		Never	Sometimes	Often	Always	No response	
Verbal Language	Yes	-	-	1	-	-	1
	No	1	2	3	3	3	12
	Needs help	1	-	-	-	-	1
Zambian Sign Language	Yes	1	-	-	-	-	1
	No	5	3	2	1	1	12
	Needs help	-	-	-	1	-	1
Signed English	Yes	1	-	-	-	-	1
	No	5	2	1	1	3	12
	Needs help	1	-	-	-	-	1
Home Signs	Yes	-	-	-	1	-	1
	No	-	3	-	7	2	12
	Needs help	-	-	-	1	-	1

The table shows that five parents indicated that they never used Zambian Sign Language while another five parents said that they never used Signed English and that their children with hearing

impairments were unable to read 2-syllable words. The table further shows that six parents indicated that they always used Verbal Language when communicating with their children with hearing impairments at home but their children could not read 2-syllable words. Further, three of the parents indicated that they sometimes used home signs when communicating with their children with hearing impairments however, their children could not read 2-syllable words. Furthermore, the table shows that seven parents indicated that they always used home signs but their children with hearing impairments could not read 1-syllable word.

4.1.4 Whether the child could read 3-syllable word by mode of communication at home

As regards to whether the child could read 3-syllable words through parent's use of one of the following mode of communications at home: Verbal Language, Zambian Sign Language, Signed English and Home Signs when communicating with their children and whether through the use of these modes of communication their children were able to read 3-syllable word, Table 4.4 shows the results.

Table 4.4: Whether child could read 3-syllable words by mode of communication at home

Mode of communication	Whether child could read 3-syllable words	Extent of use of mode of communication					Total
		Never	Sometimes	Often	Always	No response	
Verbal Language	Yes	-	-	1	-	-	1
	No	1	2	3	3	3	12
	Needs help	1	-	-	-	-	1
Zambian Sign Language	Yes	1	-	-	-	-	1
	No	5	3	2	1	1	12
	Needs help	-	-	-	1	-	1
Signed English	Yes	1	-	-	-	-	1
	No	5	2	1	1	3	12
	Needs help	1	-	-	-	-	1
Home Signs	Yes	-	2	-	7	2	11
	No	-	1	-	2	-	3
	Needs help	-	-	-	-	-	-

From the table, it can be seen that seven parents indicated that they always used home signs when communicating with their children and that their children were able to read 3-syllable words. Further, the table shows that two parents said that they sometimes used home signs while the other seven parents indicated that they always used Home Signs and that their children were able to read 3-syllable words.

4.1.5 Whether child could read sentences by mode of communication at home

Parents were asked to indicate the rate at which they used Verbal Language, Zambian Sign Language, Signed English and Home Signs when communicating with their children with hearing impairments and whether through the use of these modes of communication their children with hearing impairments were able to read sentences. The findings were as shown in Table 4.5.

Table 4.5: Whether child could read sentences by mode of communication at home

Mode of communication	Whether child could read sentences	Extent of use of mode of communication					Total
		Never	Sometimes	Often	Always	No response	
Verbal Language	Yes	-	-	1	-	-	1
	No	2	2	3	3	3	13
	Needs help	-	-	-	-	-	-
Zambian Sign Language	Yes	1	-	-	-	-	1
	No	5	3	2	2	1	13
	Needs help	-	-	-	-	-	-
Signed English	Yes	1	-	-	-	-	1
	No	6	2	1	1	3	13
	Needs help	-	-	-	-	-	-
Home Signs	Yes	-	-	-	1	-	1
	No	-	3	-	8	2	13
	Needs help	-	-	-	-	-	-

The table shows that eight parents indicated that they always used Home Signs when communicating with their children with hearing impairments but their children could not read sentences. The table further shows that two parents indicated that their children sometimes used verbal Language when communicating with their children with hearing impairments but their children could not read sentences while the other three parents indicated that their children often used verbal Language when communicating with their children with hearing impairments but their children could not read sentences. The other three parents indicated that their children always used Verbal Language when communicating with their children with hearing impairments but their children could not read sentences. Furthermore, three parents indicated that their children sometimes used Zambian Sign Language when communicating with their children with hearing impairments but their children could not read sentences while the other two parents indicated that their children sometimes used Zambian Sign Language when communicating with their children with hearing impairments but their children could not read sentences. Similarly, the other two parents indicated that they always used Zambian Sign Language when communicating with their children with hearing impairments but their children could not read sentences. However, two parents indicated that they often and always used Verbal Language and Home Signs respectively when communicating with their children with hearing impairments and their children were able to read sentences.

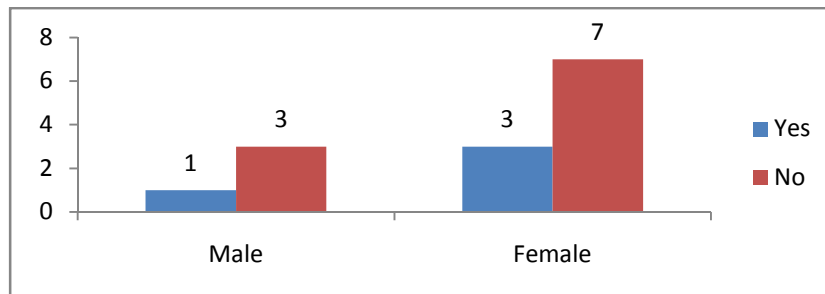
4.1.6 Parental support

In order to establish the effects of parental support at home on acquisition of reading skills of grade one learners with hearing impairments, data was collected from the parents. The findings were as presented below.

4.1.6.1 Parents responses as to whether their children attended pre-school

Parents were asked to indicate whether their children had attended any pre-school education. Figure 4.1 shows their responses.

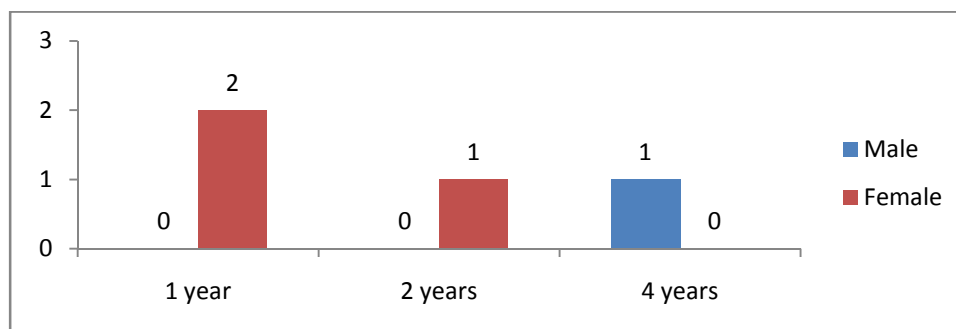
Figure 4.1: Whether child attended pre-school by gender of Parents (n = 14)



The figure shows that seven female parents and three male parents indicated that their children had never attended pre-school while three female parents and one male parent said that theirs had attended pre-school.

For the respondents who responded in affirmative, a further question was asked to them to indicate the number of years that their child had been in school after pre-school. Figure 4.2 below shows their responses.

Figure 4.2: Number of years child has been in school after pre-school by Gender of parents (n = 4)



The figure 4.2 shows that two female parents indicated that their child had attended pre-school for one year while one male parent and one female parent said that their child had attended pre-school for four years and two years, respectively.

Furthermore, the parents who indicated that their children had attended pre-school were asked to state the performance of their children in reading. Of the four parents three parents stated that their children's reading levels were satisfactory.

4.1.6.2 Parents responses on whether they sometimes taught their children how to read

Parents were further asked to indicate whether they sometimes taught their children how to read. Their responses were as shown in the figure below.

Figure 4.3: Whether parents taught their children how to read (n = 14)

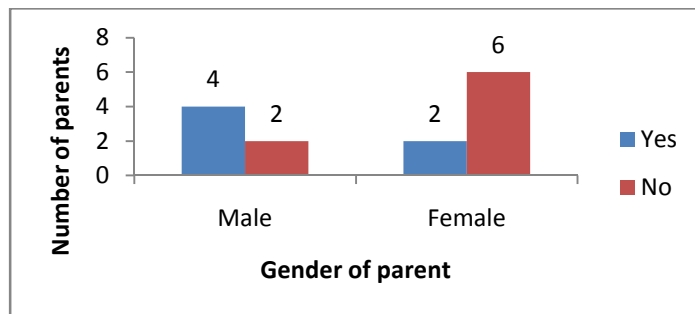


Figure 4.3 shows that more male parents (4) than their female counterparts (2) indicated that they at times taught their children how to read. Further the figure illustrates that more female parents (6) than male parents (2) said that they did not teach their children how to read. For the respondents who agreed that they taught their children how to read, five of the respondents indicated that they used sign language books while one of the parents said they used Jehovah's Witness Christian books children's materials.

4.1.6.3 Frequency at which the child does ask to have stories read to him/her

Parents were asked to indicate how often their child asked to have stories read to him/her. Their responses were as shown in Table 4.6.

Table 4.6: Frequency at which child asked parents to read stories

Frequency	Gender of parents		Total
	Male	Female	
Always	-	-	-
Often	-	-	-
Sometimes	3	2	5
Never	3	6	9
Total	6	8	14

The table above shows that majority of female parents (6) indicated that their children did not ask them to read stories for them while three male parents and two female parents said that their children sometimes asked them to read stories to them. The rest of the responses were as shown in the table above.

4.1.6.4 Frequency at which child asked parents for words to be spelled for them

Parents were asked to say how often their children asked them to spell words for them. Table 4.7 shows the responses from the parents.

Table 4.7: Frequency at which children asked parents to spell words for them

Frequency	Gender of parents		Total
	Male	Female	
Always	1	-	1
Often	-	-	-
Sometimes	1	4	5
Never	4	4	8
Total	6	8	14

As can be seen from Table 4.7 above, the majority of the parents (8) indicated that their children never asked them to spell words for them. However, five of the parents said that their children sometimes asked them to spell words. The rest of the responses were as shown in the table.

4.1.6.5 Frequency at which children asked parents to make letters when painting and drawing

The table below shows the responses of parents as regards to how often their children asked them to make letters when painting and drawing out of school hours.

Table 4.8: Frequency at which children asked parents to make letters when painting and drawing

Frequency	Gender of parents		Total
	Male	Female	
Always	3	1	4
Often	-	1	1
Sometimes	3	6	9
Never	-	-	-
Total	6	8	14

Table 4.8 shows that the majority of female parents (6) and three male parents indicated that their children asked them to make letters when painting and drawing while three male parents and one female parent said that their children always asked them to make letters when painting and drawing.

4.1.6.6 Frequency at which child asked parents to sign any story when painting and drawing

As regards to how often children asked their parents to sign any story, Table 4.9 below shows their reactions.

Table 4.9: Frequency at which child asked parents to sign any story

Frequency	Gender of parents		Total
	Male	Female	
Always	3	1	4
Often	1	1	2
Sometimes	-	3	3
Never	2	3	5
Total	6	8	14

As can be seen from Table 4.9, most male parents (3) said that their children always asked them to sign stories while most female parents said that their children sometimes (3) and never (3) asked them to sign a story. The rest of the responses were as shown in the table.

4.2 The effects of the mode of communication at school on learning of reading skills bygrade one learners with hearing impairments

In order to establish the effects of the mode of communication at school on learning of reading skills of grade one learners with hearing impairments, data was collected from the teachers of the learners with hearing impairments.

4.2.1 Medium of instruction at school and reading comprehension skills

Teachers were asked to indicate the medium of instruction among the following: American Sign Language, Zambian Sign Language and Signed English that they used in school to teach reading skills to the learners with hearing impairments. They were also asked to state whether through the use of these medium of instruction pupils were able to recognise their own names, read 1-syllable word, read 2-syllable words, reads 3-syllable words and sentences. Table 4.10 show the results.

Table 4.10: Pupil's reading ability and medium of instruction at school

Medium of instruction	Recognises own name		Reads 1-syllable word		Reads 2-syllable words		Reads 3-syllable words		Reads sentences	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
American Sign Language	5	0	0	5	0	5	0	5	0	5
Zambian Signed Language	2	0	1	1	1	1	1	1	1	1
Signed English	1	2	0	3	0	3	0	3	0	3
Total	8	2	1	9	1	9	1	9	1	9

The findings showed that five teachers indicated that they used Zambian Sign Language while two teachers said that they used American Sign Language and that the pupils were able to recognise their own names. However, five teachers each indicated that they used Signed English but their pupils could not read 1-syllable word, 2-syllable words, 3-syllable words, and sentences. The above table illustrates that medium of instruction had an effect on pupils reading skills.

4.2.2 Medium of instruction at school and reading comprehension skills

Teachers were asked to tick the pupil's response to four picture items. The first item was the ball under the table. This item needed the pupils to state the position of the ball; the second item depicted a person sleeping. Here, the pupils were to state what they saw in the picture; the third item was a picture depicting a girl child drawing a chair. In this item, pupils were asked to indicate what the picture was all about; and finally the fourth item was a picture showing the sun shining and pupils were asked to state what they saw in the picture. Table 4.11 shows the pupils' scores for each item.

Table 4.11 Pupil's reading comprehension scores and medium of instruction at school

Medium of instruction	The ball is under the table		He is sleeping		She is drawing a chair		The sun is shining	
	Correct	Wrong	Correct	Wrong	Correct	Wrong	Correct	Wrong
American Sign Language	1	4	1	4	2	3	-	5
Zambian Signed Language	2	10	1	11	2	10	3	9
Signed English	2	4	1	5	2	4	1	5
Total	5	18	3	20	6	17	4	19

The table shows that as regards to item 1 which depicted the picture of the “ball under the table”, majority of the pupils (18) could not tell the position of the ball while only five were able to state the position of the ball. As regard to item 2 which depicted a boy sleeping; only three children gave the correct answer whereas the majority (20) got it wrong. The other item that depicted a girl child drawing a chair, only six out of 23 children got the answer correct while the rest failed to state what they saw in the picture. The last item was that which depicted the sun shining. The table shows that out of 23 children, only four of them were able to tell what they saw in the picture while the rest 19 were unable to do so. The table above shows that the majority of the children could not comprehend.

4.3 How teachers' competencies affects acquisition of reading skills

In order to establish the effects of teacher competencies on acquisition of reading skills of grade one learners with hearing impairments, data was collected from teachers of grade one learners with hearing impairments.

4.3.1 Whether child's reading abilities improved when teacher was conversant with New Break Through to Literacy (NBTL)

Teachers were asked to indicate whether they were conversant with New Break Through to Literacy (NBTL) and whether through their being conversant with NBTL pupils were able to achieve reading skills. Table 4.12 shows the results.

Table 4.12: Whether Pupil's reading skills improved when the teacher was conversant with NBTL

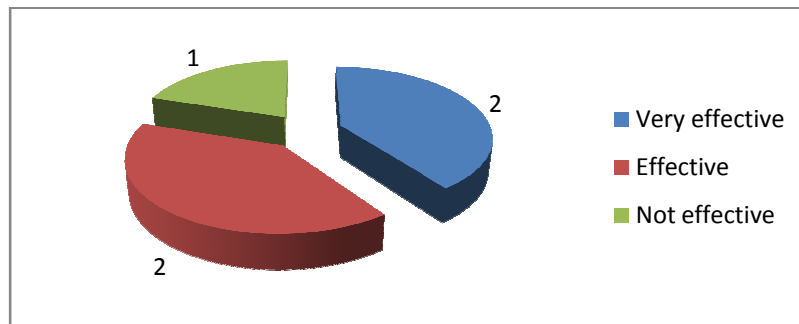
Whether the teacher was conversant with NBTL	Recognises own name		Reads 1-syllable word		Reads 2-syllable words		Reads 3-syllable words		Reads sentences	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Yes	6	2	1	7	1	7	1	7	1	7
No	2	-	-	2	-	2	-	2	-	2
Total	8	2	1	9	1	9	1	9	1	9

The table shows that majority of teachers indicated that their pupils could not read 1-syllable word (7), read 2-syllable words (7), read 3-syllable words (7) and could not read sentences and yet these teachers said that they were conversant with NBTL. However, six teachers indicated that they were conversant with NBTL and that their pupils could recognise their names. The above table shows that being conversant with NBTL had an effect on pupil's performance in reading abilities. The table further shows that teachers who were conversant with NBTL (6), their pupils were able to recognise their names. This is an indication that reading was only achieved by pupils who had teachers that were conversant with NBTL.

4.3.2 Teacher rating of the effectiveness of NBTL

Teachers were asked to rate the effectiveness of the (NBTL). Their responses were as shown in Figure 4.4.

Figure 4.4: Teachers' rating of the effectiveness of NBTL



As can be seen from the figure above, two teachers said NBTL was very effective while the other two teachers said it was effective. Only one teacher indicated that NBTL was not effective.

For the respondents who indicated that NBTL was not effective, a further question was asked to them to state why. One teacher said: *“I do not use NBTL due to lack of materials to use at the unit”*. A male teacher said:

“I could not use NBTL as it was mainly in Zambian language which was a big challenge to most grade one learners with hearing impairments”.

4.3.3 Whether teachers used real books other than improvised materials by the school to teach reading skills

Teachers were asked to indicate whether they used real books other than improvised materials provided by the school to teach reading skills to the learners with hearing impairments and to state its impact on reading skills of the learners with hearing impairments. Table 4.14 shows the results.

Table 4.13: Whether pupil's reading skills improved when teacher used real books to teach reading skills

Whether the teacher used Real books to teach reading skills	Recognises own name		Reads 1-syllable word		Reads 2-syllable words		Reads 3-syllable words		Reads sentences	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Yes	5	3	1	0	1	0	1	0	1	0
No	0	2	0	9	0	9	0	9	1	8
Total	5	5	1	9	1	9	1	9	2	8

The table shows that most of the teachers did not use real books to teach reading skills to the learners with hearing impairments and that their pupils were unable to read 1-syllable word (9), read 2-syllable words (9), read 3-syllable words (9) and read sentences (8). Only five teachers said that they used real books to teach reading skills to the learners with hearing impairments and that their pupils were able to recognise their own names. The table also shows that the use of real books to teach reading skills to the learners with hearing impairments had a positive impact on the reading skills. The table further shows that lack of use of real books by teachers in teaching reading skills to the learners with hearing impairments negatively affected the pupils reading skills.

4.3.4 Whether teachers used the resource centres to source reading materials for teaching reading skills

As regards to the use of resource centres by the teachers to source reading materials for teaching reading skills to the learners with hearing impairments, the teachers' responses were as shown in Table 4.15.

Table 4.14: whether Pupil’s reading skills improved when teacher used the resource centre to source reading materials for teaching reading skills

Whether the teacher used the resource centre to source reading materials for teaching reading	Recognises own name		Reads 1-syllable word		Reads 2-syllable words		Reads 3-syllable words		Reads sentences	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Yes	3	5	1	0	0	0	1	0	1	0
No	0	2	2	7	3	7	0	9	3	6
Total	5	5	3	7	3	7	1	9	4	6

Table 4.15 shows that majority of the teachers did not use the resource centres to source reading materials for teaching reading skills to the learners with hearing impairments and that their pupils could not read 1-syllable word (7), read 2-syllable words (7), read 3-syllable words (9) and could not read sentences (6). The table above indicates that lack of use of resource centres to source reading materials for teaching the learners with hearing impairments impacted negatively on the learners. Only three teachers indicated that they used the resource centres to source reading materials for teaching reading skills to the learners with hearing impairments and that this had a positive impact on the reading skills of the learners.

4.3.5 Whether teachers were trained in Sign Language

Teachers were asked to indicate whether they were trained to teach Sign Language and to state its impact on reading skills of the learners with hearing impairments. Table 4.16 shows the results.

Table 4.15: Whether Pupil’s reading ability improved when teacher was trained in Sign Language

Whether teacher was trained to teach Sign Language	Recognises own name		Reads 1-syllable word		Reads 2-syllable words		Reads 3-syllable words		Reads sentences	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Yes	5	2	1	5	1	4	1	7	1	8
No	3	0	0	4	0	6	0	2	0	1
Total	8	2	1	9	1	9	1	9	1	9

The table shows that five teachers indicated that they were trained in sign language and that their learners with hearing impairments were able to recognise their own names while one teacher each said that they were trained in sign language and that their learners with hearing impairments were able to read 1-syllable word (1); 2-syllable words (1); 3-syllable words; and able to read sentences (1). However, the table shows that the majority of the teachers indicated that they were not trained in sign language and that their learners with hearing impairments were unable to recognise their names (2); read 1-syllable word (5); read 2-syllable words (4); read 3-syllable words (7); and were unable to read sentences. The table above shows that lack of training by teachers in sign language had a negative impact on the learners.

4.3.5.1 Reasons why sign language is not taught as a subject

Teachers were requested to indicate why sign language is not taught as a subject. Their responses varied; one teacher said: *“It is not taught as a subject because sign language was included in all subjects when teaching”*. Another teacher said:

“It was not taught because teachers who were trained in sign language were misplaced thus teaching did not take place as required”.

However, one male teacher said: “Sign language is not taught as a subject because it was not examinable” whereas a female teacher said:

“Sign language was not taught as a subject because there was no provision for a class specifically for the grade one learners with hearing impairments”.

4.3.5.2 Whether teachers should continue teaching reading to the grade one learners with hearing impairments English Language

Teachers were asked to indicate whether grade one learners with hearing impairments should be taught reading using English language. All the nine teachers who responded to this question agreed that teachers should continue teaching reading to grade one learners with hearing impairments in English language.

Interviews with teachers revealed the following as regards to whether teachers should continue teaching reading to the grade one learners with hearing impairments in English language. One male teacher said:

“It is appropriate because sign language goes side by side with signed English. This would greatly improve the reading abilities of the hearing impaired”.

A female teacher said that learners need to know how to read in English for them to comprehend the surrounding environment. Another female teacher said:

“I feel that the grade one learners with hearing impairments should also learn to read as other learners do, e.g. the visually impaired”.

Yet another female teacher said:

“Teachers should continue teaching reading to the grade one learners with hearing impairments so that they can know how to communicate and understand things around them”.

One male teacher reported that teaching reading to the grade one learners with hearing impairments in English will help learners to read fluently. Another male teacher said:

“It is important that the grade one learners with hearing impairments learn to read in English. This will help them develop communication, reading and writing skills. It is also important because the grade one learners with hearing impairments do not learn Zambian language at school, they only learn English”.

A female teacher also said: *“it is a formal language and medium of communication hence they should learn to read the print”.*

4.3.6 Whether teachers attended any Continuing Professional Development Meeting

Teachers were required to indicate whether they had ever attended any Continuing Professional Development meetings on reading for the learners with hearing impairments. Their responses were as illustrated in Table 4.17.

Table 4.16: Whether Pupil’s reading skills improved when teacher had attended CPD meetings on reading for the learners with hearing impairments

Whether teacher was trained to teach Sign Language	Recognises own name		Reads 1-syllable word		Reads 2-syllable words		Reads 3-syllable words		Reads sentences	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Yes	1	0	1	0	2	0	1	0	1	0
No	7	2	0	9	0	7	0	9	0	9
Total	8	2	1	9	2	7	1	9	1	9

The table shows that the majority of the teachers did not attend any CPD meetings and that their learners with hearing impairments could not recognise their names (7); read 1-syllable word (9); read 2-syllable words (7); read 3-syllable words (9); and were unable to read sentences (9). The table above shows that lack attending CPD meetings on reading for learners with hearing impairments impacted negatively on the learners.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0 Overview

This chapter discusses the findings of the study aimed at establishing the effects of Home and School environments on reading among grade one learners with hearing impairments in Lusaka, Zambia. The discussions are presented in relation to the study objectives.

5.1 The effects of the mode of communication at home on acquisition of reading skills of grade one learners with hearing impairments

As regards to the effects of mode of communication at home on acquisition of reading skills of grade one learners with hearing impairments the study showed that most parents never used Signed English (6) and Zambian Sign Language (5) and yet their children with hearing impairments were able to recognise their own names while seven parents also reported that they always used home signs and that their children with hearing impairments were able to recognise their own names. These findings show that use of Signed English and Zambian Sign Language had no effect on the child's reading skills. However, Home Signs impacted positively on the child reading skills as evidenced by seven parents who said that they always used home signs and that their children with hearing impairments were able to recognise their own names.

The implication of this finding is that the non-use of Zambian Sign Language and Signed English impacted negatively on the reading skills of the learners with hearing impairments. The study also showed that the use of home signs, Zambian Sign Language and Signed English had no effect on the reading skills of children with hearing impairments because most parents who reported that they always used Home Signs (7); sometimes and often used verbal language (5) and sometimes used Zambian Sign Language (3), their children with hearing impairments could not read 1-syllable word. However, Verbal Language seemed to have an effect on reading skills of the children with hearing impairments as evidenced by one parent who said that they used Verbal Language and that their child with hearing impairments was able to read 1-syllable word.

The study sought to find out whether the learners were able to read 2-syllable and 3-syllable words. In this category, the findings show that the use of home signs and Verbal Language had no effect on the reading skills of the children with hearing impairments. Similar results were also found as regards to whether learners with hearing impairments were able to read sentences. Virtually all children learn to speak effortlessly; yet not all learn to read and reading is often difficult. The above findings agree with Chamberlain (2002) who argued that reading development is contingent on a fully developed primary language, and that incomplete or inconsistent signed or spoken language may affect the development of reading proficiency. However to the contrary, Schirmer, Bailey, and Lockman (2004) argued that the best deaf readers use phonological structure in whole word recognition. However, phonological decoding for a learners with hearing impairments differs from "sounding out" words by a hearing student (Chamberlain & Mayberry, 2000). However, the researcher agrees with Chamblain (2000) because it is very difficult to teach reading to the deaf using letter sounds and syllables from which they sound out the words and build up and recognise new words respectively.

Failure by learners with hearing impairments to read proficiently could be attributed to the fact that most of these children had never attended any pre-school before entering grade one but relied on home signs as reported by most of the parents in this study. However, it should be noted that home signs do not have a consistent meaning. Symbol relationship is not considered the same over a community of signers as they are not passed on from generation to generation and are not shared by one large group (Frishberg, 1987). This makes reading difficult for the learners with hearing impairments as they come from different home environments.

Furthermore, this study revealed that most parents did not teach their children how to read. This could be because they did not have knowledge on sign language thus, making it difficult for them to teach their children how to read. This study also showed that most parents did not read stories and did not spell words to their children with hearing impairments. This was all because of lack of knowledge in sign language and as a result learners with hearing impairments are likely to have problems with every aspect of the reading process because lack of communication between them and their parents has great impact on their education (Rutter, & Yule, .1975). It is

therefore important that parents of these children are availed some knowledge in sign language if they were to help improve reading skills of their children.

5.2 Mode of communication at school as a factor on learning of reading skills by grade one learners with hearing impairments

The findings on the mode of communication at school as a factor on learning of reading skills by grade one learners with hearing impairments were that the learners with hearing impairments were able to recognise their own names. However, the study also revealed that some teachers used Zambian Sign Language but their pupils could not read 1-syllable word, 2-syllable words, 3-syllable words, and sentences. The above revelations are an indication that the medium of instruction at school had an effect on pupils reading skills. This is evident because most of the learners with hearing impairments, especially those from hearing parents enter school without language; these use home signs. This finding is in line with Conrad (1979) who states that most learners with hearing impairments enter school with no communication mode useful than crude gestures. This makes reading difficult for them. The above finding also agrees with Quigley (1984) who also points out that a teacher of the deaf face a lot of problems with their learners in reading. He further argues that by the beginning of the reading stage, all or most of the multiple processes involved in reading are likely not to be developed to the same level by the learners with hearing impairments as hearing children. Much of this may be a result of lack of appropriate environment and development procedures of children with hearing impairments in infancy and early childhood.

The other item depicted a girl child drawing a chair; only six out of 23 children got the answer correct while the rest failed to state what they saw in the picture. The last item was that which depicted the sun shining. The findings of this study showed that out of 23 children, only four of them were able to tell what they saw in the picture while the rest 19 were unable to do so. The above findings illustrate that majority of the learners with hearing impairments exhibited poor reading comprehension skills. This could be due to the fact that the mode of communication used in Zambian schools is not Zambian sign language. Zambian sign Language also known as manual approach is seen as the natural, barrier –free language of the children with hearing

impairments. This is the first language of the children with hearing impairments and hearing born of hearing impaired parents. The manual method encourages the use of Zambian sign language from as early an age as possible, thus recognizing the importance of the critical period in language acquisition (Brazeltion and Greenpan, 2000; Fisher, 1995). Thus in order for natural sign language development to occur (with the same stages of language development as spoken languages); parents need to 'sign' to their children with hearing impairments as early an age as possible. In this regard, contact with hearing impaired adult role models is recommended.

5.3 How teacher competence affects acquisition of reading skills

The study showed that most teachers reported that they were conversant with NBTL. However, the BASAT test with the children revealed that despite the teachers' claims, their learners with hearing impairments could not read 1-3 syllable words. Of the ten teachers in this study, only six of them reported that their learners with hearing impairments were at least only able to read their names. The above revelation is an indication that although most teachers were conversant with NBTL, their competence did not at all help the learners' reading skills. This finding might have an implication on the type of training these teachers undergo

As regards to whether teachers of the hearing impaired used NBTL in teaching the learners with hearing impairments as a way of enhancing the learners' reading skills, the findings of the study showed that most of the teachers did not use NBTL for various reasons. For instance one of the teachers in an interview openly said *'I do not use NBTL due to lack of materials in Sign Language to use at the school.* Another teacher reported that he could not use NBTL because it was mainly in Zambian languages which he believed was a very big challenge to most of the grade one learners with hearing impairments considering the varied home language that the learners use at their respective homes. It would therefore help if the teaching of NBTL was done in one common language; in this case Zambian Sign language if the learners were to grasp and improve their reading skills. It is no wonder that most learners were unable to read 1-syllable, 2-syllable and 3-syllable words and read sentences

Further, the study showed that most teachers used improvised materials; they did not use real books. This results into learners not improving their reading skills. However, despite the above

picture, one could say that the teaching methods that teachers use to teach the learners with hearing impairments had an impact on them.

As regards to the effectiveness of NBTL, the findings showed that most of the teachers were of the view that the programme was on course. Only one teacher was of the view that NBTL was not effective attributing its failure to the fact that the programme lacked teaching and learning materials and that it was mainly in Zambian languages which he thought was a big challenge to many of the learners with hearing impairments.

An issue that was also researched on in this study was that of the use of the resource centre by teachers to source for reading materials for teaching reading skills to the learners with hearing impairments. Sadly enough, the study showed that the majority of the teachers did not use the resource centre to source reading materials for teaching reading skills to the learners with hearing impairments. The finding indicates that lack of use of resource centres to source reading materials for teaching the learners with hearing impairments in reading skills impacted negatively on the learners. However, the study showed that the three teachers used the resource centres to source reading materials for teaching reading skills to the learners with hearing impairments and brought about a positive result.

As regards training in sign language, the study showed that trained teachers impacted positively on the teaching of reading skills of the learners with hearing impairments. The learners of such teachers were able to recognise their own names, read 1-syllable word; 2-syllable words; 3-syllable words; and able to read sentences. However, it is sad to learn that most of the teachers who taught sign language were not trained. This impacted negatively on the reading skills of the learners with hearing impairments. They could not recognise their own names, read 1-syllable word; 2-syllable words; 3-syllable words; and could not read sentences. The lack of training in sign language by most teachers could be another factor that affects the learning of reading skills among the learners with hearing impairments.

As to whether sign language should be taught as a subject, the findings of this study revealed that sign language was side-lined. Among the many reasons given by the teacher respondent for this scenario was that sign language was included in all subjects when teaching. Further it was found

that sign language could not be taught as a subject because teachers who were trained in sign language were misplaced thus, teaching did not take place as required. For instance one teacher in this study said *“sign language was not taught as a subject because there was no provision for a class specifically for the grade one learners with hearing impairments”*. The other reason given was that sign language was not examinable as such it was not given the status it deserves.

As regards to whether the learners with hearing impairments should be taught reading skills in English language, it was interesting to note that all the respondents, teachers and parents were of the view that reading skills should be taught in English. One male teacher lamented thus: *“It is appropriate because sign language goes side by side with signed English. This would greatly improve the reading abilities of the hearing impaired”*. A female teacher was of the view that grade one learners with hearing impairments should also learn to read as other learners do, e.g. the visually impaired. Yet another female teacher was of the view that teachers should teach reading skills in English language to the grade one learners with hearing impairments so that the learners can learn how to communicate and understand things around them. Further, it was found that some teachers were of the view that teaching reading to the grade one learners with hearing impairments in English language would help learners to read fluently.

Another interesting finding was that the respondents were of the view that it was important that the grade one learners with hearing impairments learn to read in English language as this was going to help them develop, communication, reading and writing skills. It was also important because the grade one learners with hearing impairments did not learn Zambian language at school; they only learn English. The above findings conform to those of Quigley and Paul's (1984) who claim that individual studies of reading achievement, and studies of specific aspects of the reading process all indicate that most learners with hearing impairments have difficulties with reading English language. Though literature shows that learners with hearing impairments have problems with English language, educators have continued instructing our learners with hearing impairments using signed English in our schools. Unfortunately, signed English is not a language but a code and a semantic representation of English devised by Bornstein (1973) to cover the syntax and vocabulary commonly used with children with hearing impairments. Signs are used in English word order with fourteen sign markers added to represent a portion of the

English inflectional system. However, this approach has also posed a lot of challenges on learners with hearing impairments because most of them fail to follow the rules of this manual code of English.

With regard to whether teachers under study had attended any Continuing Professional Development (CPD) meetings, it was revealed that the majority of them did not attend any CPD meetings. They also reported that their learners with hearing impairments could not recognise their names; read 1-syllable word; read 2-syllable words; read 3-syllable words; and were unable to read sentences. The above finding shows that lack of exposure to CPD meetings on reading skills for learners with hearing impairments impacted negatively on the learners because it is through these meetings that teachers are exposed to new ideas and techniques of teaching reading skills to the learners with hearing impairments.

Generally, Signed English is slower than natural speech or Zambian sign language. It has a larger vocabulary and this makes it more difficult for the learners to grasp as it cannot faithfully show every aspect of spoken English. Most importantly, Signed English is not a language in itself but merely a representation of the English language. As a result, it is very difficult for a child with hearing impairment to comprehend it. This being the case, grade one learners with hearing impairments, with traditionally different background, find it difficult to switch from their traditional sign language to Signed English.

Paul and Jackson (1993) argue that when children who are deaf are exposed to both English and a signed language in the same environment; their spontaneous overwhelmingly language reflects the signed language. Paul and Jackson (1993) further claim that children with hearing impairments face a double barrier to acquiring literacy. First, most children have not achieved fluency in Standard English in any form by the beginning of instruction in reading. Secondly, many of the reading curricular currently in use with hearing children assume a knowledge of spoken English and are therefore of limited utility with children with hearing impairments as observed by (Kirk, 1990).

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.0 Overview

This chapter presents the conclusions and recommendations for the study that aimed at establishing the effects of home and school environments on reading skills among the learners with hearing impairments.

6.1 Conclusion

6.1.1 Mode of communication at home as a factor on acquisition of reading skills of grade one learners with hearing impairments

Arising from the findings and discussions of the study, it could be concluded that one of the factors affecting the acquisition of reading skills is the mode of communication at home where parents mostly used home signs which are not universal. Home signs do not have a consistent meaning-symbol relationship, and are not considered the same over a community of signers as they are not passed on from generation to generation and are not shared by one large group. This makes reading difficult for the learners with hearing impairments as they come from different home environments. Much of this may be attributed to lack of appropriate environment and development procedures with children with hearing impairments in infancy and early childhood. Reading development is contingent on a fully developed primary language, and that incomplete or inconsistent signed or spoken language may affect the development of reading proficiency. Failure by learners with hearing impairments to read proficiently could also be attributed to the fact that most of these children had never attended any pre-school before entering grade one but relied on home signs.

6.1.2 Mode of communication at school as a factor on learning of reading skills of grade one learners with hearing impairments

In terms of the mode of communication at school, the findings have shown that the mode of communication used at school has an impact on the reading skills of learners with hearing

impairments. This study has shown that teachers who taught reading skills to the learners with hearing impairments in Zambian Sign Language and American Sign Language produced positive results in this area. Their learners with hearing impairments were at least able to recognise their own names but could not read 1-syllable word, 2-syllable words, 3-syllable words, and sentences. It was further revealed that most of the learners with hearing impairments, especially those from hearing parents enter school without language and used Home Signs which gave quite a number of problems to the teachers because most learners with hearing impairments entered school with no communication mode useful than crude gestures. This study has, however, shown that use of Zambian Sign Language as medium of instruction to teach learners with hearing impairments impacted positively on learner's reading skills. Nonetheless, it should be noted that acquisition of good language skills alone is not enough, because learners with hearing impairments still need to know how to map between language and print (Meadow Et al 2001).

6.1.3 To establish how teacher competences affects the learning of reading skills

The study has shown that those teachers who used NBTL produced positive results; an indication that teacher's teaching methods has an impact on the reading skills of the learners with hearing impairments. Lack of teachers' use of real books, lack of use of resource centres to source for reading materials and lack of training in sign language by teachers impacted negatively on the reading skills of the learners with hearing impairments.

This study has also shown that sign language was side-lined. Among the reasons cited were that it was not taught because teachers who were trained in sign language were misplaced thus, teaching did not take place as required. The other reason was that Sign Language was not examinable as such; it was not given the status it deserves.

As regards to whether the learners with hearing impairments should be taught reading skills in English language, the study has shown that it was appropriate to teach reading skills in English language to the grade one learners with hearing impairments. This would help learners to communicate and understand things around them. It would also help learners to read fluently, develop communication, reading and writing skills. Equally important was that the grade one

learners with hearing impairments did not learn Zambian language at school; they only learn English in all subjects.

6.1.4 Recommendations

The study recommended the following:

1. The Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) should ensure that parents are taught basic sign language. Parents should be availed chance to attend seminars/workshops on basic sign language.
2. Teachers should develop a culture of using real books other than improvised material to improve their competences in teaching reading skills to the learners with hearing impairments.
3. MESVTEE should train more teachers in sign language to meet the current demands of teachers in special education.
4. Teachers teaching learners with hearing impairments should be encouraged to attend Continuing Professional Development meetings for them to abreast themselves with new methods of teaching reading skills to the learners with hearing impairments and also upgrade their competencies in teaching reading skills to the learners with hearing impairments.

6.1.5 Recommendation for future research

Since this study was conducted in Lusaka schools, the information collected cannot be generalised. There is, therefore, need for future researchers to conduct a national study that would encompass all school that have children with hearing impairments.

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Appendix 1

BASIC SKILLS ASSESSMENT TOOL (BASAT)

ENGLISH

Reading and Writing Skills – Grades 1 and 2

Name: _____

School: _____

Grade: _____

Teacher: _____

Examiner: _____

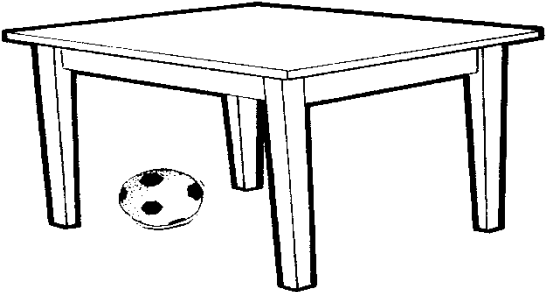
Sex: Female Male Time



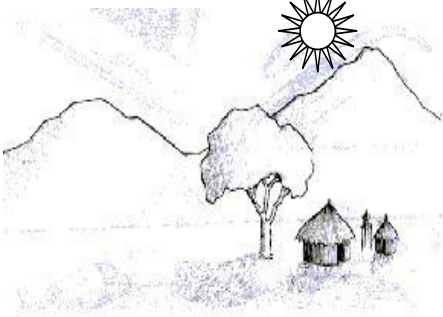
Province: _____ District: _____ begun _____ Time ended _____

	Year	Month	Day
Date			
Date of birth			
Age			

1. Has the child got any of the following impairments? Tick where appropriate	
a. Physical Disabilities	
b. Visual impairment	
c. Hearing impairment	
d. Intellectual Disability	
e. Speech/language Difficulties	

D. Reading		Yes	Needs help	No
1. Recognises own name.				
2. Reads 1-syllable words:				
a. sit	b. run			
c. old	d. spoon			
3. Reads 2-syllable words:				
a. water	b. pencil			
c. yellow	d. football			
4. Reads 3-syllable words:				
a. elephant	b. holiday			
c. happiness	d. yesterday			
5. Reads sentences:				
a. Musa and Maria are going to school.				
b. Musa is wearing a blue shirt.				
.				

G. Reading Comprehension (Tick the child's response)	
	<p>a. The ball is on the table.</p> <p>b. The ball is under the table.</p> <p>c. The ball is under the car.</p>

	<p>a. He is standing.</p> <p>b. He is walking.</p> <p>c. He is sleeping.</p>
	<p>a. She is drawing a chair.</p> <p>b. She is drawing a bed.</p> <p>c. She is making a drum.</p>
	<p>a. The sun is not shining.</p> <p>b. The sun is shining.</p> <p>c. The moon is shining.</p>

Appendix 2

THE UNIVERSITY OF ZAMBIA
SCHOOL OF EDUCATION
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY SOCIOLOGY AND SPECIAL
EDUCATION

Questionnaire for Parents

I am a Masters student doing Special Education at the University of Zambia in the school of Education carrying out a research on the effects of Home and School environments on reading among grade one learners with hearing impairments in Lusaka district. The information that will be collected from you is purely for research purpose only and will be used as such. Please kindly answer this questionnaire as sincerely as you can. Thank you.

Instructions

- Do not write your name on this questionnaire.
- Respond to all questions by ticking your response and give reasons where requested.

BIO DATA

1. Gender: (a) Male ☐ (b) Female ☐
2. What is your age range?
(a) Below 25 ☐ (b) 26-35 ☐ (c) 36-45 ☐ (d) 46-55 ☐ (e) 56+ ☐
3. What is your highest level of academic qualification?
(a) Primary ☐
(b) Junior secondary ☐
(c) Senior Secondary ☐
(d) University ☐
(e) Not been to school ☐
4. What is your highest level of professional qualification?
(a) Certificate ☐ (b) Diploma ☐ (c) Degree ☐ (d) Doctorate ☐

PARENT AND CHILD COMMUNICATION

5. Rate the extent to which you use the following modes of communication with your child who is deaf.

(Tick in appropriate box)

	4	3	2	1
Mode of communication	Always	Often	Sometimes	Never
Zambian sign language				
Signed English				
Home Signs				
Verbal language				

PARENTAL SUPPORT

6. Did your child attend pre-school?

(a) Yes ☐ (b) No ☐

7. If **Yes**, how many years has your child been in school after pre-school

(a) 4 years ☐ (b) 3 years ☐ (c) 2 years ☐ (d) 1 year ☐

8. Do you sometimes teach your child reading?

(a) Yes ☐ (b) No ☐

9. If **Yes**, what material do you use?

.....

10. How often does your child do any of the following:

(Tick in appropriate box)

	4	3	2	1
	Always	Often	Sometimes	Never
Ask to have stories read to him/her				
Ask for words to be spelled				
Make letters when painting and drawing				
Sign any story				

Appendix 3

THE UNIVERSITY OF ZAMBIA
SCHOOL OF EDUCATION
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY SOCIOLOGY AND SPECIAL
EDUCATION

Questionnaire for Teachers

I am a Masters student doing Special Education at the University of Zambia in the school of Education carrying out a research on the effects of Home and School environments on reading among grade one learners with hearing impairments in Lusaka district. The information that will be collected from you is purely for research purpose only and will be used as such. Please kindly answer this questionnaire as sincerely as you can. Thank you.

Instructions

- Do not write your name on this questionnaire.
- Respond to all questions by ticking your response and give reasons where requested.

Gender (a) Male ☐ (b) Female ☐

1. What is your age range?

(a) Below 25 ☐ (b) 26-30 ☐ (c) 31-35 ☐ (d) 35-40 ☐ (e) 41+ ☐

2. What is your highest level of academic qualification?

(a) Primary	<input type="checkbox"/>
(b) Junior secondary	<input type="checkbox"/>
(c) Senior Secondary	<input type="checkbox"/>
(d) University	<input type="checkbox"/>
(e) Not been to school	<input type="checkbox"/>

TEACHER COMPETENCIES AND QUALITIES

3. How well did your training prepare you to teach reading to the hearing impaired learners?

(a) Good preparation ☐ (b) Fair ☐ (c) Poor ☐ (d) No relevant preparation ☐

4. How long have you been teaching the hearing impaired learners?

(a) Below 5 years ☐ (b) 6-10 ☐ (c) 10-15 ☐ (d) 15+ ☐

5. How many children with hearing impairments are you responsible for teaching?

(a) (Below 4 ☐ (b) Above 4 but less than 10 ☐ (c) More than 10 ☐

6. Where are your learners placed?

(a) A separate special education Unit ☐ A special school ☐ (c) Inclusive setting ☐

TEACHER SUPPORT

7. Are you conversant with New Break Through to Literacy (NBTL)?

(a) Yes ☐ (b) No ☐

8. Do you use New Break Through to Literacy (NBTL) to teach reading to grade one learners with hearing impairments?

(a) Yes ☐ (b) No ☐

9. If Yes to question 8 above, how do you rate the effectiveness of New Break through to Literacy (NBTL)?

(a) Very Effective ☐ (b) Effective ☐ (c) Not Effective ☐

10. If **No** to question 8 above. Explain why you do not use New Break through to Literacy (NBTL)?

11. Do you use real books to teach reading to grade one learners with hearing impairments or improvised materials?

.....

12. Have you attended any professional development meeting (CPD) on reading for children with hearing impairments?

(a) Yes ☐ (b) No ☐

13. Do you sometimes use resource centres to source reading materials for children with hearing impairments?

(a) Yes ☐ (b) No ☐

14. If yes, how do you rate the usefulness of resource centres in terms of reading materials for the teachers of the hearing impaired?

(a) I don't know ☐ (b) Not useful ☐ (c) Useful ☐ (d) Very useful ☐

MEDIUM OF INSTRUCTION FOR TEACHING READING TO HEARING IMPAIRED CHILDREN

15. Where you trained in Sign language?

(a) Yes ☐

(b) No ☐

16. Do you teach Sign language as a subject?

(a) Yes ☐

No ☐

17. If Sign language is not taught as a subject, give reasons for your answer.

.....
.....

18. What is the medium of instruction used for the Deaf at your school?

(a) American Sign Language

(b) (b) Zambian Sign language

(c) (c) Signed English

(d) (d) Not Sure

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

19. How do you rate the reading levels?

(a) I don't know ☐

(b) Not useful ☐

(c) Useful ☐

(d) Very useful ☐

20. Do you think the teachers should continue teaching reading in English language to hearing impaired children?

(a) Yes ☐

(b) No ☐

21. Give reasons for your answer in question 20.

