INVESTIGATING THE VOCABULARY LEVELS IN BOTH OTJIHERERO (L1) AND ENGLISH (L2) OF GRADE 1 OTJIHERERO SPEAKING LEARNERS IN THE KHOMAS EDUCATION REGION.

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ABSTRACT

The vocabulary levels that children acquire during the early years of development play a significant role in their reading and overall academic success. Reading is perceived as one of the major challenges in Namibian schools. This study investigated the Otjiherero and English vocabulary levels of grade 1 Otjiherero speaking learners in the Khomas region. The researcher also investigated the differences in vocabulary levels for boys and girls. A quantitative research design was employed and participants for the study were selected through purposive criterion sampling. The sample included two schools that offered a two language curriculum, with a total of 97 participants of which 25 were from one school and 72 from the second school. The average age of the sampled learners was 7 years and 5 months. The data was collected using the Peabody Picture Vocabulary Test (PPVT) which is a standardized test. Both descriptive and inferential statistics were used to analyse the data. The main findings for the Otjiherero Vocabulary Age (OVA) and English Vocabulary Age (EVA) were that participants obtained a mean score that was far below their chronological age in both languages. Mean differences between the chronological ages and the vocabulary age for both Otjiherero and English were statistically significant ($p<0.05$). Participants performed only slightly better in the Otjiherero test than in the English test. No statistically significant differences were found with regard to variables such as school type and sex. Clear trends were established in the study, but further research is required before any final conclusions can be made about the vocabulary acquisition of Otjiherero speaking children. Recommendations were made with regard to further research as well as strategies to improve vocabulary levels of pre-school learners

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DECLARATIONS

I, Ewaldine Uaurumisa Mutjavikua – Zatjirua, hereby declare that this study is a true reflection of my own research; and that this work, or part therefore has not been submitted for a degree in any other institution of higher education.

Signed …… Date ……

CHAPTER 1

1. INTRODUCTION

This chapter describes the background and setting of the research in vocabulary acquisition. It describes what motivated the study, how the research questions emerged and introduces the reader to the Namibian context. The problem statement, objectives of the study, significance of the study, limitations of the study, and definition of concepts are also discussed.

1.1. ORIENTATION OF THE PROPOSED STUDY

Language acquisition is a natural process, whereby children are born with the ability to learn a language and that learning begins from birth and continues throughout their lives. Child psychologists explain that all children, no matter what language their parents speak, tend to acquire a language in the same way. Long before a child can speak, he or she hears sounds and learns to make meaning from it. The child's ability to imitate and pick up language patterns, rhythms and the meaning of language demonstrate these inborn tendencies (Crosser, 2010). During the early years, a child is capable of learning which phonemes are used in the languages that he or she hears and which are not used (De Witt, 2009). As time passes, the child will use those sounds or words to communicate with others. Those words will be part of his vocabulary. Crosser (2010) supported the notion that children have the inborn capacity to acquire a language naturally. Lehr (2005, p.1) described vocabulary as the "set of words within a language

that are familiar to the person". Even though children can acquire language naturally, there are also various factors that can enhance a child's vocabulary acquisition much faster such as; for example the child's daily routine at home, the parents, the environment, and the type of play a child is engaged in, pre-primary education and the socio-economic status.

The broader theoretical framework of this study falls within the Interactionist Theory of language acquisition expounded by Vygotsky. He believed that language development takes place in the sociocultural context. This can be seen in two stages, namely, the child observe communication among other people and through this observation develops the ability to communicate by him- or herself. First, the adult talks 'at' the child and later the child learns to respond and participate in the conversation (Henschel, 2012). A specific concept within this theory is the Language Acquisition Support System (LASS) which stresses the importance of daily routine to enhance vocabulary acquisition. The child's daily routine is considered to be very important in enhancing his or her vocabulary acquisition. Thus enhancement will be assisted by the type of vocabulary that the child hears and uses daily. According to De Witt (2009), daily routine vocabulary should be used concurrently around the child from the moment of waking up, bathing time, and meal time around the table and throughout the entire day until the child goes to bed. The theoretical framework is discussed in depth in chapter two.

In many studies parents are thus considered as an important factor in developing children's vocabulary as they are said to be the initial educators of their children (De Witt, 2009). Close social contact with parents and adults are extremely vital in the language development of a child. Factors such as the gestures, actions and facial expressions of the parents, when they are talking to their children, help them to understand the meaning of what they are hearing and this help with vocabulary acquisition (Thompson, 2001). Thompson (2001) and De Witt (2009) emphasised that it is usually by talking regularly to parents that children begin to gain vocabulary and master the language. It seems that the more supportive and encouraging this contact is, the better and faster the child will increase his or her vocabulary acquisition.

Another factor that can enhance vocabulary acquisition is the type of environment in which the child is growing up, as it plays a vital role in the child's vocabulary. The child's environment is seen as an important part of a child's life, since this is where a child is expected to acquire most of his/her daily vocabulary. A child learns the language and vocabulary that is spoken his/her environment, that will form the language of the parents, family, neighbourhood, region and the people around them. Amongst other things in the environment, the child's language will reflect his or her educative setting. The child will be familiar with the area or district dialects; this will be the type of language used in their community or neighbourhood and he or she will be acquainted with the typical expressions and phrases of their family and this will form his vocabulary (De Witt, 2009). Other factors that could contribute to children's vocabulary acquisition

in their environment are wide reading that takes place in an authentic extensive reading environment for example a community library. Incidental learning is also demonstrated to influence children's vocabulary acquisition through children's interest in playing educational activities in their neighbourhood.

Play was identified as yet another major builder of vocabulary. According to De Witt (2009), play significantly contributes to children's vocabulary in a relaxed and informal way of learning. While children are playing they perform activities voluntarily. These voluntary activities are for enjoyment as the child perceives them mainly as a type of play. Play has thus been reported by many child psychologists as having an important effect on the child's vocabulary, learning and development during their early years.

In addition, pre-primary education is acknowledged as a way of enhancing children's vocabulary during their initial years. The role of pre-primary education is considered by many researchers as having a major impact on children's language and vocabulary acquisition (Waldfogel, 2006, as cited in De Witt, 2009). Pre-primary education may have positive effects on children's cognitive, language, and social development as well as vocabulary acquisition, particularly among children at risk for poor outcomes. With regard to vocabulary acquisition children acquire vocabulary through songs, prayers, and storytelling by the teacher, incidental reading, and the different games that they play (Thompson, 2001). All these factors have a positive impact on children's vocabulary acquisition during the pre-primary education phase.

One of the objectives of this study was to compare the vocabulary level of boys and girls. Even though there are factors that enhance vocabulary, Browne (2005) pointed out that there are various ways in which boys and girls acquire vocabulary. Factors such as social and biological differences are highlighted as the major factors that influence these differences. Various researchers found that girls have a bigger vocabulary reservoir than boys (Browne, 2005; Spolsky, 1998; Swann, 1992).

It is reported that there is a positive relationship between reading and vocabulary, as well as the overall academic success of children. The acquisition of sufficient vocabulary is the key indicator of school success (Nation, 2002). The vocabulary acquired during the early years of development should thus not be taken lightly because of the strong link it might have on children's future performance.

1.2. STATEMENT OF THE PROBLEM

Vocabulary is one of the most essential elements that is considered to significantly contribute to reading (Nation, 2002), and reading with comprehension has been a reason for concern in Namibia. The Directorate of National Examination and Assessment Reports on the Grade 10 and 12 examinations (2012, p.9) stated that "candidates do not know how to read with understanding". It was also reported that the Grade 10 learners were failing to answer most of the comprehension questions correctly as they lack

vocabulary to understand what they are being asked. For example, the Ministry of Education (2012) examination reports identified words that the Grade 10 learners lack understanding such as "scholarship", "e-mail'', "misconceptions", "agency", "brochures", "prohibited'' and so on. This lack of vocabulary knowledge resulted in learners scoring very low marks as they could not tackle the questions asked. Further evidence that reading level in Namibian schools is low can be found from the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) reports of Grade 6 learners. Namibia's average reading score was 496.6 in SACMEQ III, and the result falls below the set norm of 500 (Mukuwa, 2010).

The lower primary phase first language syllabus requires that by the end of Grade 1 a learner should have a vocabulary range of about 2000 words in the first language on listening and speaking (Ministry of Basic Education Sport and Culture, 2005). In addition, for English as Second language, learners should know about 500 words. One of the reasons for low reading performance may be related to vocabulary acquisition in the early years, before formal instruction begins.

Research suggests that there is a strong link between vocabulary and reading (Hirsh & Nation, 1992; Nation, 2002). Some learners may come to school with little vocabulary that may contribute to reading difficulties which in turn may negatively affect later academic success. For these reasons the researcher decided to do a study to determine the vocabulary level in both Otjiherero (L1) and English (L2) for Otjiherero home

language speakers in Grade 1. No research has yet been done in Namibia to assess whether children begin school with sufficient levels of vocabulary to be successful readers. This study attempts to fill that gap in the literature.

1.3. OBJECTIVES OF THE STUDY

The objectives of this study are to:

1. Determine the vocabulary level of both Otjiherero (L1) and English (L2) for Otjiherero home language learners at selected primary schools in the Khomas region.
2. Compare Otjiherero home language learner's chronological age with their age equivalence vocabulary levels in both Otjiherero (L1) and English (L2).
3. Compare the vocabulary levels of the two languages with regard to variables such as sex and school.

1.4. SIGNIFICANCE OF THE STUDY

This study may enhance the awareness and understanding of parents and teachers on the significant role that early vocabulary acquisition has on children and their initial reading development. The findings of this study may be shared with institutions responsible for training teachers, especially in language departments in order to introduce teaching strategies that teachers can use in order to try to increase the children' vocabulary

acquisition. This study might indicate to parents, teachers and key persons in the Ministry of Education the existing vocabulary that children have in Grade 1 for both Otjiherero (L1) and English (L2). It might highlight the current relationship between vocabulary and reading and the effects these have on children's academic success throughout their educational journey. Lastly, this study may contribute to the literature, especially in Namibia, since no previous study was done to measure the vocabulary levels of Otjiherero home language speakers in Namibia.

1.5. LIMITATIONS OF THE STUDY

This study had some limitations. The study was conducted in two primary schools in the Khomas Region of Namibia. These schools offered a two language curriculum whereby, Otjiherero (L1) is being taught as the Medium of Instruction and English (L2) being taught alongside of Otjiherero. Apart from the pilot school, these were the only two schools in Windhoek that met the criteria of the study. It could have increased the reliability and validity of the study if more schools were included in the study.

In this study, the Peabody Picture Vocabulary Test (PPVT) was used to assess the vocabulary levels. This is a standardised test that has been widely used internationally and it originated from the United States of America. This test measures both receptive and expressive vocabulary for standard American English, and this may have influenced the research results. Although the standardised test is not for Namibia, the researcher

piloted the test items before the real study was conducted. The piloted group did not encounter problems with the test items and this encouraged the researcher to proceed with the test. It is possible that the vocabulary levels may be skewed to the lower end since the PPVT is not standardised for Namibia. However, the researcher is of the opinion that this should not have made a big difference since the test items used at this level (grade 1) reflect normal body and household picture items that should also be quite familiar to the Namibian learners.

1.6. CLARIFICATIONS OF CONCEPTS

Vocabulary: A person's vocabulary is the set of words within a language that are familiar to that person. Vocabulary usually develops with age, and serves as a useful and fundamental tool for communication and acquiring knowledge. Acquiring an extensive vocabulary is one of the largest challenges in learning a second language. Vocabulary refers to knowledge of words and word meanings (Dickinson & Neuman, 2006).

Receptive vocabulary: An individual's receptive vocabulary includes all the words that one recognises and understands upon hearing or reading them. Words can be understood to varying degrees, so the words in one's receptive vocabulary may not necessarily all be understood at the same level (Nation, 2002).

Expressive vocabulary: An individual’s expressive vocabulary refers to words whose meanings are known well enough that he or she would feel comfortable using them

while writing or speaking. A person's expressive vocabulary is generally smaller than the receptive or listening vocabulary (Nation, 2002).

Mother Tongue or First Language (L1): "One's home language; the first language learned by children and that is usually passed on from one generation to the next" (Cook, 2000, p.10).

English as a Second language (L2): "ESL refers to English language learning in countries where English is the main and or official language and the student's own first language is not English" (Cook, 2000, p.11).

1.7. STRUCTURE OF THE STUDY

In the first chapter the orientation of the proposed study is discussed, including the statement of the problem, objectives of the study, significance of the study, limitation of the study, and clarifications of concepts and terms. The second chapter focuses on the theoretical framework and the literature review. The third chapter discusses the research methodology. The research findings are presented in the fourth chapter. Lastly, the discussion and recommendations are presented in chapter five.

CHAPTER 2

2. LITERATURE REVIEW

2.1. INTRODUCTION

Chapter 1 outlined the overall purpose of this study, which was to investigate the vocabulary level of Grade 1 Otjiherero-speaking learners in the English and Otjiherero languages in two selected primary schools in Windhoek, Khomas region. The level of vocabulary that children acquire during the initial school grades plays a significant role in children's reading comprehension, not only in Namibia, but also worldwide (Mbaeva, 2005). Many studies have shown the impact that vocabulary level has on learners' reading. It is reported that the more vocabulary a child has acquired the better the child will be able to understand a text, whether the text contains stories or subject content (Baumann, 2005; Nation, 2002;). The amount of vocabulary that a child has acquired during the early years may have an impact on several factors when he or she starts with formal school. It might have an influence on his or her reading abilities and the overall academic performance.

The researcher conducted a thorough literature review focusing on issues related to vocabulary acquisition during the early years. In this chapter the theoretical framework is discussed, followed by a full literature review. The literature review discusses the

definition of vocabulary, estimates of vocabulary size, relationship between vocabulary and reading, vocabulary acquisition in the early years, role of pre-primary education and children's vocabulary acquisition, as well as the influence of mother tongue (L1) on second language learning (L2). Finally, the difference in vocabulary and language performance based on gender is also discussed.

2.2. THEORETICAL FRAMEWORK

This study is guided by the Language Acquisition Support System (LASS). According to Richards, Daller, Malvern, Meara and Milton (2009), the theory suggests that a child can learn to recognise words through daily routine, thus learning vocabulary. The theory further explains that a child can learn vocabulary during a steady and planned day when caregivers, friends and mothers are talking to them. Young children talk about things that are happening around them, the "here and now'' and quickly build their vocabulary through daily routines (Richards, et al., 2009). A child builds vocabulary through various things and actions taking place in his/her daily life. A young child will, for example, continually repeat words and actions such as, "giving, jumping, taking, washing, eating and fastening shoes''. Similarly adults will attract their attention to things like table manners, dressing up, making up their beds, cleanliness; household objects (cups, spoon, brush, plate, and light) and so on. Such repetition of actions and naming of things that they hear daily will add to their vocabulary and enhance their understanding when they speak with others and adults at home (De Witt, 2009).

Baumann (2005) stated that what children know and acquire during the early years of development can mostly be attributed to their parents or caregivers. These are the people the child has the most direct contact with and they are considered to significantly contribute to their children's vocabulary acquisition in less obvious ways. Several studies indicated that children gain most of their words by listening to parents or when parents communicate with other people in their company. What is being communicated in the presence of children may also influence the child's language acquisition. Children are said to learn better by imitating what is frequently spoken by their parents and this leads them to adding new words to their vocabulary. It is believed that when children acquired sufficient vocabularies from their parents, it is easier for them to grasp the meaning of a word when they encounter it in a conversation or in a text (Richards, et al., 2009).

In addition Richards, et al (2009) suggest that the input that mothers, in particular, make may influence the amount of vocabulary that a child has. Mothers are considered to contribute to their children's vocabulary acquisition in many ways such as: the mother's good language skills used when speaking to children, the amount of time that the mother spends with a child, the support and the way they encourage their children when they say something correctly (Biemiller, 2003). Children always want to do or say something for which they are acknowledged for, especially by their mothers. Children also tend to imitate the type of language commonly used by their mothers, and in that way they add new words to their vocabularies. Researchers have shown that mothers play a major role

in aiding their children's language learning and vocabulary acquisition and this role can never go unnoticed (Richards, et al., 2009).

Reading story books is another issue considered by researchers to contribute to children's vocabulary acquisition during the early years of development and throughout the primary, secondary and tertiary education. Children quickly relate stories to things happening in their real life situations, which help them to understand the text more easily and in this way they learn new vocabularies. Nation (2002) stressed that the earlier children are exposed to story books, the more likely they are to increase their cognitive development and more importantly, their vocabulary acquisition. The reading of books helps children to access new words and to grasp the meaning of the story. It may also increase children's ability to process and get meaning from the lexical, syntactic and phonological structures of the spoken language (Baumann, 2005). Sociolinguists argue that when children are read to by their parents at home in their mother tongue, it increases their vocabulary acquisition. It may also be an added advantage when they have to learn a second language.

The story books that children are read from mostly contain pictures as it draws their attention more and they can relate to what the story is about by looking at the pictures (Shana, Carpenter, Kellie & Olson, 2011). Pictures are considered by scholars to be one of the ways in which a young child can acquire vocabulary faster during the early years of development. Pictures can be remembered better than words because children receive

a better understanding of what they see rather than what they hear (Shana, et. al, 2011). In addition researchers support the idea that pictures help children to get the meaning of something and can help with sentence construction. Finally, studies that have been carried out around the world concur with the LASS concept which elaborates on pictures being an integral aspect of the way in which a child can acquire vocabulary (Richards, et al., 2009 & Shana, et. al, 2011). These are some of the aspects which researchers consider to assist in vocabulary acquisition either in the child's mother tongue (L1) and / or second language (L2).

2.3. DEFINITIONS OF VOCABULARY

Lehr (2005, p.1) defined vocabulary as "knowledge of words and word meanings''. A person's vocabulary is also described as "the set of words within a language that are familiar to the person''. Lehr and Osborn (2005) added that a child's vocabulary should be a set of words which an individual should be able to understand so that they can comprehend the word and its meaning when he/she encounters it either in a text or conversation. There are two types of vocabulary that differentiate to what extent a child knows a word, namely expressive and receptive vocabulary. Gormly and Brodzinsky (1998, as cited in De Witt, 2009) described expressive vocabulary as those words that a young child can actively use in his/her speech. On the other hand, a child's receptive vocabulary consists of the words that the child understands when he/ she hears or reads them, but does not necessarily use it actively. The child's receptive vocabulary exceeds

his/her expressive vocabulary and may contain several words to which they can allocate some meaning, even though the child might not know their full definition and connotation (Kamil & Hiebert, 2000, as cited in Lehr, 2005).

2.4. ESTIMATES OF VOCABULARY SIZE

Many studies have focused on individual differences in children's rates of vocabulary acquisition. There are significant differences in learners' vocabulary size when they start school, as every child has gained a certain amount of vocabulary during the initial years (Beck & Mckeown, 2004). Researchers have debated on the amount of vocabulary that a child should have by the time they begin school or the amount of vocabulary that an individual should have, based on their chronological age (Nation, 2002). Beck and McKeown (2004) and Baumann (2005) strongly agree in their studies that children between 5 and 7 years should acquire a receptive vocabulary of between 2500 and 4500 words in their home language (L1). However, Weitzman and Snow (1998 as cited in Romanik, 2007) state that the estimates of children's vocabulary when they begin school can range from 3000 to 6 000 words. The vocabulary differences between these two researchers range from 500 to 1500 words for children beginning Grade 1. In Namibia, the National Curriculum for Basic Education (Ministry of Basic Education, Sport and Culture, 2005) states that a child should have a vocabulary range of about 2000 receptive words in his or her mother tongue (L1) in listening and speaking by the end of Grade 1. In addition, for English as a second language, learners should know about 500 words.

The document however does not indicate the mechanism used to measure the vocabulary levels. The question arises as to how we can know if Namibian Otjiherero L1 children have in fact gained the expected L1 and L2 vocabulary by a given age as specified by the school curriculum. No research has been done in Namibia to investigate whether Namibian Otjiherero children have really gained the required vocabulary as specified by the National Curriculum for Basic Education for Lower primary learners and thus, this research attempted to fill that gap.

It seems that academics have also not reached consensus on the number of new words children are capable of learning each day. For example, Anderson and Nagy (1992) have estimated that the basic number of words a child can acquire daily may range between five to ten, while Biemiller (2003) explained that a child may only be able to learn three words per day at the most. The number of words that a child may learn per day have differed from studies done around the world, and ranges from three to ten words that can be learned. This may remain a debatable issue for some years to come.

Champion, Hyter, McCabe, and Stewart (2003, as cited in Allison, et al., 2011) concluded from a study that they conducted on children's vocabulary size, that for three to five year old children, the size of their vocabulary is not only important in predicting their general achievement and reading performance but also contributes to their phonological awareness. The researchers suggested that vocabulary size is a key predictor of reading acquisition and should be taken seriously. The child's receptive and

expressive vocabularies are very influential and might play a major role in his or her reading skills. Therefore, vocabulary in general is reported to have a strong link to children's reading abilities as will be explained in the next section.

2.5. VOCABULARY AND READING

2.5.1. The Relationship between Vocabulary and Reading

Over the years many researchers have acknowledged the clear relationship between vocabulary and reading comprehension (Baumann, 2005; Biemiller, 2003; Cook, 2009; Jalongo & Sobolak, 2011; Nation, 2002). Shen (2008) explains that the interest and relationship between vocabulary and reading comprehension have a long history in the research of English Second Language (ESL), English Foreign Language (EFL) and other languages. Vocabulary has a positive connection and a positive impact on learners' reading comprehension (Laufer, 1996). Baumann (2005) described the link between vocabulary and reading comprehension as logical. For example, to get meaning from the text that learners are reading, they need both many words in their vocabularies and the ability to use different strategies to establish meanings of the new words when they encounter them in the text.

According to Laufer (1996), vocabulary includes all the words children know that enables them to access their background knowledge and to express ideas and

communicate effectively. The International Academy of Education (2003) states that cultural knowledge affects reading comprehension. The more experiences and exposure a learner has, the more developed his background knowledge will be. Thus, a learner with more exposure to books and other media, who listens to stories, goes out to different places such as cinema, theatre and so on will have a larger reservoir of background knowledge and will thereby acquire more vocabulary and learn new words and this will help him/her in the process of reading comprehension (Laufer, 1996).

It is further stated that the amount of vocabulary that a child has acquired has a significant influence on the child's writing skills (Nation, 2002). In this sense vocabulary has been shown to be an important predictor of quality writing of compositions. Nation (2002) stated that when children have the necessary vocabulary it makes it easier for them to write on a given topic or article as they have sufficient words. Neumann and Dickinson (2006) argue that there is a need for learners to know a certain number of words in order for them to write a text, as vocabulary information is helpful to the learner's written comprehension.

Umbel and Oller (1995, as cited in Cummins, 2006) conducted research to measure the receptive vocabulary of 274 Grade 6 Primary School Spanish learners of English as a Foreign Language (EFL) after a total of 629 hours of instruction. The main purpose of the study was to investigate to what degree the measures of receptive vocabulary size are linked to the quality of composition writing and reading comprehension skills. The

study carried out two vocabulary tests, namely, the composition writing test and vocabulary level test. The research showed that there was a strong positive correlation between receptive vocabulary size and reading comprehension. The correlation of vocabulary to quality essay was slightly lower, yet still important. It is concluded by most scholars that the larger the child's vocabulary, the better his or her writing abilities will be (Hirsh & Nation, 1992).

Nation (2002) concluded that the link between vocabulary and reading is inseparable, and that teachers and parents should be aware of the importance of children's vocabulary to try to avoid reading difficulties caused by insufficient vocabulary. He urges parents, caregivers and educators to collaborate in preparing children for formal school and to bear in mind the positive impact that vocabulary has on children's academic success throughout their educational journey at all levels and, in particular, the impact it has on children's reading skills. In most parts of the world including Africa, insufficient vocabulary is seen by most researchers as one of the core factors that hinders children's reading (De Witt, 2009). According to Laufer (1996, p.12) "it has been steadily confirmed that reading comprehension is strongly and more powerfully connected to vocabulary knowledge than any other component of reading". Therefore, these studies point to vocabulary as an assisting aspect in reading comprehension.

2.5.2 How Vocabulary Aids Reading

Reading is complex as it involves processes such as phonemic awareness, decoding letters and words, fluency and comprehension. Phonemic awareness is very important in learning to read. When a child has acquired sufficient vocabulary and know his or her phonemes it will significantly have a positive impact on the reading skills (Nation, 2002).

Children's information processing system in terms of working memory limits their capacity for processing text. When lower level processes such as decoding functions automatically, it frees up space for higher level functioning such as fluency and comprehension. Less skilled readers need to employ decoding more often than skilled readers and therefore rely on working memory for decoding rather than for comprehending the text. Good readers also employ decoding when they encounter unfamiliar words (Schunk, 2009).

In order for children to achieve fluency in their reading skills they should have gained adequate vocabulary, as this relationship between vocabulary and reading is inseparable. Fluent readers are able to read orally with speed, correctness, and proper expression of words, the use of intonation, accuracy and perfect pronunciation of words. Fluency is one of several critical aspects necessary for reading comprehension (Nation, 2002 & Biemiller, 2003). When a child can read a text fluently it enables him or her to

comprehend the passage and understand the story and can answer questions based on the story. Those learners who cannot read fluently will encounter problems with understanding the text.

Reading is thus enhanced by a rich vocabulary since it gives the child speedy access to word meaning and this enhances comprehension. Comprehension is influenced by the context: Good readers rely on context to identify words. The reading context at any level is made up of existing information (familiar vocabulary) with some empty slots (unfamiliar vocabulary). The more familiar vocabulary the learner finds in the text, the better he or she will be able to deduce the meaning of unfamiliar vocabulary (the empty slots) (Schunk, 2009). Therefore, the converse is also true that reading enhances vocabulary.

2.6. VOCABULARY ACQUISITION IN THE EARLY YEARS

In recent years vocabulary acquisition has become an increasingly interesting topic of discussion for researchers, teachers, curriculum designers, theorists and others involved in either first or second language learning. The vocabulary acquired during the early years of development plays a vital role in preparing children for pre- primary, primary and secondary school and beyond (De Witt, 2009). Language experts have identified various factors that influence language learning and children's vocabulary development. Gordon and Browne (2004), amongst others, identified the following factors as having

an adequate influence at increasing children's vocabulary acquisition. These factors may include the family and community, the environment, types of play, and socio-economic status. Each of these factors will be explained in detail and how it contributes to children's vocabulary.

2.6.1.1. Family and community

More than a thousand research projects carried out in the past fifty years globally support the view that parents and communities are indeed having the main impact on children's vocabulary and language acquisition (Gordon & Browne, 2004). This is in accordance with the theoretical framework (LASS) of the study, which emphasises that parents are considered as the initial educators of their own children and other children from the community at large. Through parental support the child slowly starts to develop physically, affectively, socially, linguistically and cognitively (De Witt, 2009). Derbyshire (1990, as cited in De Witt, 2009) described that under a watchful eye, inspiration, encouragement and loving support which an individual child gets from his/ her family members especially older siblings, and the neighbourhood at large, a new world will be opened to him or her and their experience will increase and expand. It is always stated that if parents support their children and create a decent space where a child will feel safe, loved and protected it makes it easier for a child to learn and be exposed to different things around the house. They will feel comfortable, encouraged and willing to learn new vocabularies (De Jongh, 1995, as cited in De Witt, 2009). The

vocabulary learned by children throughout their initial years of growth will serve as "a good predictor of their performance during the formal school phase" (De Witt, 2009, p.62).

Researchers urge parents to work together in preparing children for school by giving them the necessary support they need during the pre-school years. These will include involving children in everyday life activities such as movement, conversation, play, drawings, singing traditional songs and storytelling around the fire. These are things that the elderly people in the community have been doing in the past and children are encouraged and inspired to also learn the different cultural activities performed by parents. They are exposed to new vocabularies during those specific occasions (De Witt, 2009).

De Witt (2009) emphasised that parents can prepare children for school and enrich their vocabulary with books and other resources. The availability of books in the home is an important stimulating factor but parents must be willing to read stories to their children to develop good listening, speaking and writing skills. These reading rituals enhance bonding and communication between parents and children (De Witt, 2009). Thus, in addition to books and facilities, children also need their parent's personal interest in their reading activities (Olivier, 2000).

2.6.2. The Environment

A child learns the language that is spoken in his environment, that is, the language of his parents, family, neighbourhood and the region. Children's language also reflects their educative setting (De Witt, 2009). This means that they acquire vocabulary and phrases, the local speech, the daily typical expressions and the greetings that are frequently used in their surroundings. Once the child has acquired these phrases and expressions and can use it to construct his/her own sentences, this means that he/she has become familiar with the language of his or her environment. Engelbrecht (2002, as cited in De Witt, 2009) described that through language the child becomes a part of his/her environment and its world of thoughts and views. She stated that a child without language is a lost child with no identity. If a child does not receive sufficient intellectual motivation, vocabulary and language acquisition through his/her environment, during the early childhood years, then the best efforts on the part of the school during the first couple of years will be to no avail (Wiechers & Jacob, 1998). However, if the child grows up in an educationally rich environment, he/she will learn more about different aspects at an early age and this will motivate him/her to learn more. Many researchers (Baumann, 2005; De Witt, 2009; Nation, 2002) support the view that what children already know and relate to their knowledge, attracts their attention more when they come across it in a conversation or text. So teachers are encouraged to use texts which are more related to the children's environment as it will gain their attention and the children will be willing to participate in those discussions. Children who are motivated and encouraged have a great chance to relate things to their previous experience and this puts them at an

advantage (Olivier, 2000). Children should be raised in an environment that is welcoming and helpful in order for them to reach their full potential.

2.6.3. The Child at Play

Wherever children are they play and such play forms the basis of their childhood. Gordon and Browne (2004) stated that children should be allocated "work" or "daily tasks" to enhance their responsibility and to feel valued and appreciated at home. Whatever is allocated as their daily tasks reflects their development. De Witt (2009) explained that children should be assigned to daily activities such as, for example, watering the garden, feeding dogs and so on. What a young child imitates from people at home naturally progresses to activity (work). Though these activities are often not important, the child tends to take it very seriously and enjoy every moment of it. The child freely starts with an activity that is often done at home and gets the feeling that he or she is doing something by themselves. The results of the activity coming from the young children's imitation are reported to be a way of building up and increasing their learning and vocabulary acquisition (Stoep & Louw, 1995, as cited in De Witt, 2009). These voluntary activities that the child performs are for enjoyment as the child perceives them mainly as a type of play. Play has been reported by many child psychologists as having an important effect on the child's vocabulary, learning and development during their early years. Play contributes a great deal to the child's physical, cognitive, social and personal development (Mayetsky, 1998 as cited in De

Witt 2009). There are few, if any, aspects of the child's development that cannot be associated with some form of play and young children do not differentiate between play, learning and work (Mayetsky, 1998 as cited in DeWitt, 2009).

Mayetsky (1998, as cited in De Witt 2009) added a few types of play that researchers consider to significantly contribute to the children's vocabulary acquisition and learning, in general. These are unconcerned play (playing while the child occupies him/herself by looking at anything that captures his/her attention); spectator play (the child speaks to other children, asks them questions and offers advice, but does not participate in the play); associative play (the child plays with another child, they communicate with each other and lend toys to each other); cooperative play (the child plays in a group that is organised to accomplish a goal, for example, making something or playing a formal game); and ritual play (the child repeats sounds or words that rhyme, with overstated tone and body movements). Garvey (2000, as cited in De Witt, 2009) added the following types of play, namely, language play, whereby older children, in particular, like rhyming and making nonsense words which eventually leads to a conversation; and fantasy play which involves playing out different roles in, for example, the house or doctor's office. In this type of play children create a theme and then develop it into a story, which is then acted out in a little play. Through fantasy play children demonstrate their experience and expressions of their world. Mayetsky concluded that play is an important part of children's lives and urges that they should not be denied the opportunity to play with other children at home and in their neighbourhoods or

elsewhere. Therefore, parents and educators are encouraged to let children play with other children to explore and be exposed to things in the world.

2.6.4. Impact of Socio-Economic Status on Vocabulary Acquisition

Many studies conducted in various parts of the world have shown that socio-economic status (SES) has a great influence on children's vocabulary acquisition level (Biemiller, 2003; Nation, 2002). SES can be measured in terms of parents' income, education and occupation (Nation, 2002). Beck and Mckeown (2004) define a person's income as referring to "the wages, salaries, rent or profit that an individual receives as an earning for performing a specific task or duty". Income is also said to come in different forms such as pension, social security payments, workers compensation or any other government, public, private or other financial assistance. Beck and Mckeown (2004) found that children's vocabulary from high and middle socio-economic status will differ from the low socio-economic status children. They explained that parents' income is considered to have a great impact on children's vocabulary acquisition, as parents from low socio-economic status do not have sufficient income to buy reading books, developmental toys and other educational things that can develop children's vocabulary at an accelerated speed.

The second major socio-economic factor that influences children's vocabulary acquisition is the parents' "educational history" (Nation, 2002). Parental education is a very crucial factor in determining the child's vocabulary during the early years of development. Educated parents have the opportunity to influence their children's vocabularies in various ways. These parents read stories more often to their children encourage them to ask questions and participate in conversations; they are able to watch television and have developmental toys available; all of which contribute to learning (Nation, 2002).

Occupation is described as the third socio-economic factor that may have an influence on children's vocabulary acquisition (Nation, 2002). It is reported that parental occupation might have an effect on children's vocabulary acquisition, due to the fact that what parents do influences their children's learning. Parents with high ranking positions have a way of talking and encouraging their children to study so that they can be successful in life (Nation, 2002). For example, if a parent is a lawyer, he or she may talk about what happened at a court hearing that day. In their conversation they will tend to use vocabulary such as "client", "defence", "guilty", "the lawyer", "denied bail"," next case" and so on. These vocabularies that the child hears on a daily basis at home will increase their vocabulary size.

A study was conducted by Horton-Ikard and Weismer (2005, as cited in Dunn & Dunn, 2007) to test the receptive and expressive vocabulary of African-American children from low SES homes and middle SES homes. They used the Peabody Picture Vocabulary Test (PPVT) which is a standardised test (Dunn & Dunn, 2007). The researchers concluded that from the total sample of primary school learners that were tested, learners from low SES homes performed significantly below the mean of the PPVT normative group whereas the children from middle SES homes performed above the mean of the normative group. The researchers concluded by stating that this study seems to highlight the important role of receptive and expressive vocabulary, and that it is appropriate to examine children's vocabulary.

Allison, Robinson, Hennington and Bettagere (2011) also conducted a study on receptive vocabulary using the Peabody Picture Vocabulary Test. The main purpose of their research was to determine how the African-American pre-primary school learners of low income socio-economic backgrounds perform in receptive vocabulary. They examined how the sample compared with the normative mean of the PPVT (Dunn & Dunn, 2007). The study included 30 pre-primary learners consisting of 15 boys and 15 girls. The overall performance of the sample was significantly lower than that of the PPVT normative mean ($p < 0.01$). The difference between the samples' mean and the PPV normative mean was consistent with previous studies carried out around the world, which showed that children with low-income SES backgrounds performed below the normative mean on receptive vocabulary tests such as the PPVT. Hence, most studies

carried out around the world indicate that children from low SES are faced with many challenges, particularly among children at risk for poor outcome and these challenges may be recognised and tried to be rectified during the pre-primary school years if possible.

The amount of vocabulary that children acquire during the early years of development plays a significant role in their academic success. Therefore, it is so important that the parents and the community at large ensure effective ways that may enhance the children's vocabulary through these crucial stages of their lives.

2.7. ROLE OF PRE-PRIMARY EDUCATION AND CHILDREN'S VOCABULARY ACQUISITION

The main purpose of pre-primary education as pointed out by De Witt (2009) is to assist the child's physical, linguistic, social-emotional, mental and literacy skills, as well as, his/her health. These literacy skills include vocabulary acquisition. Magnuson, Derbyshire and Waldfogel (2006) carried out a study and found that children who attended pre-primary school increase their vocabulary level, reading and mathematics scores in the foundation phase. They maintained that attendance at pre-primary school will equip a child for formal school as children need to develop a number of early literacy skills before formal school, such as picture reading, matching, letter sound awareness, retelling a story, visual discrimination, visual literacy and auditory discrimination, being able to write their names, pattern recognition, phonic awareness and spatial orientation. The authors added that if children acquire all these skills then

their vocabulary level will increase and this will lead to better academic performance in formal schools. Hendrick (1998, as cited in Bibi & Ali, 2012), conducted a study to determine whether or not pre-primary education has a positive influence on a learner's performance in school. This study looked at the performance of primary school learners in mathematics and English (L2) from the district of Peshawar, Pakistan. The study included 110 learners drawn from three semi-government schools and two private schools. It was found that there is a significant difference in the academic performance between learners with pre-primary education and those without it. These outcomes are not surprising to various researchers as several studies conducted worldwide have shown that pre-primary education has a significant impact on the academic performance of children.

De Witt (2009) urges educationalists and policy makers to implement pre-primary education as a prerequisite for any child to enter Grade 1. Pre-primary education is the first step in a child's educational journey and parents should take the opportunity to enrol their children in pre-primary schools as a way of preparing them for formal school (Dickinson & Neuman, 2006). Most early childhood experts are of the view that attendance in a high quality pre-primary programme will increase the child's vocabulary as he/she would have acquired sufficient vocabulary to work as a reading aid.

Currently pre-primary education in Namibia is not compulsory and during this study the researcher found learners that had not attended pre-primary school at all. The Ministry

of Education is in the process of introducing compulsory pre-primary education in the country. The Ministry of Education wants to ensure that every child will get the opportunity to attend pre-primary education and in so doing gain sufficient vocabulary before proceeding to Grade 1. This implementation of compulsory pre-primary education is in accordance with research that was done around the world that emphasise the importance of pre-primary education and the link with reading and children's academic performance.

2.8. THE INFLUENCE OF MOTHER TONGUE (L1) ON SECOND LANGUAGE LEARNING (L2)

In the process of learning one language a child acquires a set of skills such as phonological awareness, decoding, fluency and metalinguistic knowledge that can be used when learning any another language (Cummins, 2006; Klein, 2003). It is reported that the child's conceptual knowledge and vocabulary development in one language helps to make input in other languages easier. If for instance a child already understands the concepts of 'book" and "toy" in his or her own language, all they have to do is to acquire the label for those terms in English

The relationship between L1 and L2 is important because if the two languages come from the same family the transfer from L1 to L2 is smoother. Baker (2007) explained that Dutch and English comes from the same family root. If for instance a Dutch child

wants to learn English or vice versa the process of learning of the two languages might be easier because of the language transfer. Similarly, Zhanming (2014) found in his study that when a Czech child learns English and Russian, they will more likely transfer bound morphemes to Russian, but less likely to English. Otjiherero and English do not come from the same family and have different language bases. Thus the relationship between aspects such as pronunciation, orthography and phonology is less obvious which makes the transfer from Otjiherero to English more complex (Mohling & Kavari, 2009). For example the word "water" which is "omeva" in Otjiherero has no correlation in pronunciation and spelling, unlike the Afrikaans language where it is spelt exactly the same, but only differs slightly in pronunciation.

This supported by Macharia (2013) who conducted a study in Kenya on the influence of Kikuyu L1 phonology on English L2 orthography. He summarised his findings by saying that in order for L1 to influence L2 there must be some correlations between the two languages.

Baumann (2005) suggests that if a child has gained enough vocabulary in his or her mother tongue (L1) it enables the child to comprehend many things, for example, give meanings and descriptions, and being able to understand imaginative ways of describing something by referring to it in their mother tongue. Researchers found that if a child has acquired sufficient vocabulary in the mother tongue with a strong foundation laid in that

specific mother tongue, it will assist in second language learning and learning in general. A study conducted by Matafwali (2010) concurs with the above statement stating that when children lack proficiency in the initial language of literacy, they may experience significant difficulties developing literacy skills in the second language (English).

However, several parents in Namibia prefer to enrol their children in English Medium instruction classes as from Grade 1, rather than the mother tongue. They claim that the child already speaks the mother tongue and they do not see the need of being taught their mother tongue (Mbaeva, 2005; Mostert et al., 2012). Parents further explained that English is the official language in Namibia and a language used internationally, and therefore the mother tongue would not be useful for them in their future lives. Mbaeva (2005) as well as Mostert et al. (2012) concluded that parents approach in this matter is disadvantaging their own children since they may not realise the impact that a lack of vocabulary in the mother tongue may have on their children throughout their academic lives.

In their research, Kohert and Derbyshire (2004, as cited in De Witt, 2009) state that the ability to transfer skills, from children's mother tongue (L1) to their second language is not something that happens automatically, but through a process and it takes a while to acquire the skill of language transformation from one language to another. Therefore, direct support, motivation and encouragement from everyone who is directly involved with a child's daily life activities, such as parents, siblings, caretakers and especially

support from teachers are required in order for the child to learn to identify the necessary techniques or skills from their mother tongue that could possibly be applied in their second language.

In addition, literature states that in order for learners to obtain adequate vocabulary results in their second language they should have gained sufficient words in their mother tongue as this vocabulary enables children to easily learn and acquire vocabulary in any second language (De Witt, 2009). Other, researchers such as Biemiller (2003) and Baumann (2005) described that children's initial vocabulary size forecasts their general educational achievement in schools and especially their reading skills. Utmost effort is needed to develop children's mother tongue more effectively from Grade 1 because the vocabulary acquired at an early stage has an influence on children's reading abilities (Baumann, 2005).

2.9. GENDER-BASED DIFFERENCES IN VOCABULARY AND LANGUAGE PERFORMANCE

Several studies have been carried out that indicate that there are various causes for language differences between girls and boys. Spolsky (1998) explained that the causes for language differences between boys and girls tend to be social rather than biological. He looked at different social factors that are considered to have an impact on children's language and vocabulary acquisition such as the father's interaction with boys and girls;

leisure activities for boys and girls; and the amount of quality time that mothers spend with their children. Each of these will be explained in more detail below.

The father's interaction with boys and girls has an impact on language development and vocabulary acquisition in general. Fathers tend to offer boys more opportunities to develop their physical skills and girls are offered chances of developing their speech during their social and bonding time and in this way gender differences are already created at home (Spolsky, 1998). Studies have shown that fathers tend to play physically with their boys, for example, playing soccer, hide and seek and wrestling and these activities require less communication, resulting in them talking less to the boys and not contributing so much to building their vocabulary acquisition during the early years of development. On the other hand, fathers have a habit of communicating more socially and verbally with girls, which might contribute to this gender differences in language acquisition. Researchers have shown that girls tend to play more developmental games with their fathers such as building puzzles, colouring books and asking problem solving questions and all these games result in girls learning new words through these conversations (De Witt, 2009).

Secondly, leisure activities for boys and girls also differ. Reading is perceived as one of the leisure activities preferred by most girls. Browne (2005) explained that because girls enjoy reading in their spare time, they are likely to increase their vocabularies. Furthermore, girls are said to read more books, mainly literature, and produce longer and

more decent pieces of writing than boys do and these positive results come from effortless social reading (Browne, 2005). As a result of this, more boys than girls encounter difficulties with reading and writing and this might be due to a lack of adequate vocabulary acquisition in the initial years.

Finally, the amount of quality time that mothers spend with their children is considered as another factor that influence children's vocabulary acquisition. Mother-Child conversations in different social classes and communicative settings influence the child's vocabulary. When mothers are socially interacting with their children they tend to discuss various subjects whereby children open up and start posing questions which need answers, (De Witt, 2009). The type of language style and vocabulary that mothers use when talking to their sons and daughters may differ and this has an impact on boys' and girls' language learning.

Various studies (De Witt, 2009; Mbaeva, 2005; Spolsky, 1998) done around the world show that boys and girls have different ways of acquiring a language. Children learn language socially depending on the environment and the type of culture that they are being raised up in. From most of these studies it seems that girls are socially and culturally more advantaged than boys to develop language skills and to increase their vocabularies. However, this may be different in the Namibian context. For example, in the Otjiherero culture boys and girls are exposed to different things in the environment that might benefit boys more than girls. They have different roles and responsibilities as

young children and throughout adolescence and these social activities that they do, influence the type of vocabulary that they acquire (Mbaeva, 2005). In this culture boys and men are involved in many ceremonial activities such as: Red Flag day, White Flag day and Green Flag day where they do the traditional rituals of talking to the ancestors. In this way they are acquiring additional vocabulary as they are being exposed to new words. Boys are allowed to go the holy fire with their fathers every morning and before sunset. They get the opportunity to hear the type of vocabulary that is used around the holy fire while the girls do not have this privilege. If the man responsible for lighting the holy fire is not at home, only then can an elderly woman or his wife go to the holy fire, but she is not allowed to perform any ritual activities that are usually done by men.

In addition, young boys also have the opportunity to acquire a wider vocabulary than girls as they attend circumcision ceremonies and participate in field work with older boys, while girls are not allowed to partake in these activities. All these have an impact on their vocabulary acquisition. Socially, girls are required to do the domestic duties with their mothers at home giving them lack of exposure to different things happening in their culture. Furthermore, in the Otjiherero culture, women are discouraged from giving speeches at formal ceremonies such as weddings, funerals and the formal way of notifying other family members when a woman is pregnant. This is usually done by men (Mbaeva, 2005).

Apart from the social factors that lead to differences in language performance between girls and boys, there are also biological factors that can influence this difference. Swann (1992) refers to the lateralisation of the brain which can result in girls to have a greater verbal ability than boys, whilst boys are said to have a greater spatial ability than girls. The inborn capacity of how the brain processes information differently between girls and boys contribute to this gender difference. It is reported that girls and boys seem to have different procedures that they use when processing language (Swann, 1992). Girls use both sides of the brain for language processing, while these functions appear to be limited to the left side in boys. Due to biological differences in boys and girls, girls are reported to experience the cognitive changes that affect language acquisition at an early stage, while boys exhibit these changes far later, at about twenty to twenty-four months of age. Swann's (1992) view is supported by researchers from the National Institute for Mental Health, North-Western University and the University of Haifa (North-western University, 2008). These researchers measured brain activity in 40 boys and 40 girls ranging from nine to fifteen years, and tested their performance in spelling tasks and writing tasks by using functional magnetic resonance imaging. The researchers concluded that girls are significantly better in language activities of the brain than boys. Other researchers from the Institute of Psychiatry in London, the University of Oxford and the University of Missouri-Columbia in the U.S support the National Institute of Mental Health's findings that girls and boys seem to process language differently (Asadollahfam, Salimi & Pashazadeh, 2012).

Morisset, Barnard and Booth (1995, as cited in Dunn & Dunn, 2007) stated that about 13% of the research studies that they carried out in Sweden, showed that boys outperformed girls in receptive vocabulary. In their study they found that even though young girls obtained better scores in most language categories, boys were reported to perform better on listening comprehension and vocabulary tests. Dunn and Dunn (2007) added that this difference has a developmental, rather than a cognitive explanation, whereby boys' general delay in their knowledge of expressive speech might have benefited them in terms of listening skills and vocabulary activities. In their research they found that although girls perform better in the initial developmental years, differences in language skills between girls and boys did not continue in later years or into adulthood. Findings with regard to gender differences in vocabulary and language development seem to be inconclusive. This research also looks at gender differences and in this way adds to the existing knowledge.

This chapter focused on the literature as it relates to this study. In the following chapter the researcher will describe the research methods and procedures that where followed to gather data for the study.

CHAPTER 3

3. METHODOLOGY

The methodology that the researcher used to conduct this study was directed by the quantitative approach. As stated in previous sections, the purpose of this study was to determine the receptive (passive) vocabulary levels of both Otjiherero (L1) and English (L2) of Grade 1 Otjiherero speaking learners in the Khomas Education Region. This investigation is geared towards answering the researcher's questions regarding the amount of vocabulary that Grade1 learners have. The research design, population, sampling techniques, research instruments, data collection procedures and data analysis are discussed in this section. The procedures that were used to collect and analyse the data are also discussed and elaborated on in detail in this section.

3.1. RESEARCH DESIGN

The researcher used a quantitative research design where data was collected using the Peabody Picture Vocabulary Test (PPVT) which is a standardised test. Quantitative research is defined as the collection and analysis of numerical data to describe, explain, predict or control phenomena of interest (Gay, Mills, & Airasian, 2009). In this study the researcher collected and analysed data to describe the vocabulary level of Otjiherero home language speakers in both Otjiherero (L1) and English (L2) in Grade 1.

3.2. POPULATION AND SAMPLE

All schools in the Khomas region, offering Otjiherero as medium of instruction in Grade 1 formed the population of the study. In the Khomas region there were two schools with a total of three Grade 1 classes fulfilling the criteria. The Ministry statistics enabled the researcher to find schools that offer Otjiherero as medium of instruction in Grade 1. Purposeful criterion sampling was used to select the two schools to form the sample of the study. From the two sampled schools 100 learners were selected purposefully to ensure inclusion of Otjiherero home language speakers enrolled in the Otjiherero stream in Grade 1. Learner information such as age, sex, and home language is recorded on the school census statistics and every class teacher has this information which made it possible for the researcher to select learners that fulfilled the criteria. Although, 100 learners were tested, three learners were eliminated from the sample as their ages were not consistent with the average Grade 1 learner and were considered outliers. Two learners were nine years old and one learner was ten years old. In Namibia learners enter school in the year that they turn seven. The final sample, thus, consisted of 97 learners. Of these 97 learners, fifty seven were males and forty were females. School A had forty two boys and thirty girls, while school B had ten girls and fifteen boys.

3.3. RESEARCH INSTRUMENT

The researcher used the Peabody Picture Vocabulary Test (PPVT) to collect data. The PPVT has been used widely and it originated from the United States of America (Dunn & Dunn, 2007). The PPVT age norms can be used to test young children from as early as two and a half years through ninety years and older. This test measures both the receptive and expressive vocabulary for standard American English. For this study, the researcher measured only the receptive vocabulary of the participants. The reason for this is because receptive vocabulary is the large vocabulary and can be tested more accurately in younger children. The English test was administered as is currently available in the PPVT. The same test was translated into Otjiherero and after verification by a language expert it was used for the Otjiherero test.

The PPVT consist of two equal tests, form A and form B and they are identical in format and organisation. Since these two forms are similar the researcher could choose any of the two randomly. The researcher opted to use form A and tested the participants using the same test for English and for Otjiherero. For its administration, the researcher presented the PPVT pictures/items to each learner individually. The PPVT consists of a total number of 120 test items that are equally distributed across 10 item set; each set contains 12 items of increasing difficulty. Four pictures on a page constitute one test item and each picture is numbered. The test administrator states a word describing one of the four pictures and asks the individual to point to or say the number of the picture

that describes the word. Each test item is tabbed in such a way that it indicates to the researcher the age appropriate starting point, as participants are tested based on their chronological age. Their chronological age thus determines at which test item each participant will commence. When the participants are struggling to identify the words in their chronological age set that they are being tested on, then the researcher reverts to the previous age set and commences from there. This procedure will continue until the learner is able to identify words within an age set. This lower age set becomes the commencement point for the particular learner. Since the test items reflect normal body and household picture items the researcher was of the opinion that all items should also be quite familiar to the Namibian learners in this study.

Each participant is tested until he or she reaches the ceiling set. A ceiling set is the highest set of items administered containing eight or more errors made by the learner. When the participant reaches his or her ceiling set the test administrator discontinues testing. Once a participant has been tested the researcher can do the scoring and interpretation of the scores on the PPVT form. There are clear instructions that are available to determine a raw score for each child. This score can then be converted to the child's "vocabulary age" (age equivalence).

For this study the test was administered in English and Otjiherero to all learners in the sample. The PPVT was first administered in English to all learners and after that in Otjiherero. This order was followed to minimise any memory transfer as it was

expected that their vocabulary in Otjiherero (L1) would be more than that of English (L2). If the test was first administered in Otjiherero which is the participant's mother tongue (L1) there was a possibility that the learners could remember the test items and might transfer it to English. In addition the researcher decided to minimise that memory transfer by putting a gap of about two weeks between the English test and the Otjiherero test to have more reliable research results.

3.4. VALIDITY AND RELIABILITY

The term validity refers to the truth (or falsity) of propositions generated by research (McMillan & Schumacher, 2001). In other words, this is the extent to which people can believe and trust the claims one makes in one's research. Validity thus informs us as to whether a test is testing what it claims to test. A vocabulary test should test vocabulary and not something else. The PPVT has substantial evidence that supports the validity of this assessment. One of the variables that are considered when determining the validity is its correlation with other instruments of similar nature. For example it is expected that an instrument that measures vocabulary should correlate well with other instruments that measure vocabulary. Studies show that the PPVT correlates well with the Expressive Vocabulary Test – Second Edition (.80 to .84) as well as with the Clinical Evaluation of Language Fundamentals - Fourth Edition (.67 to .75) (Dunn & Dunn, 2007).

In addition to validity the PPVT is considered to have high internal consistency or reliability. The test-retest reliability by age is given as 0.94 (M = .94) and the split-half reliability by age is given as 0.93 (M = .93) (Dunn & Dunn, 2007).

3.5. PILOT STUDY

Before collecting data, the research instrument was piloted in order for the researcher to become acquainted with the Peabody Picture Vocabulary Test (PPVT) and to assess whether the test was clear and unambiguous and to ensure that the participants could recognise the items/pictures without difficulties. The pilot study confirmed that the learners were familiar with all the test items. MacLean (1994) contends that piloting involves testing to check the following: clarity of the interview questions, eliminating or minimising ambiguity and difficulties in wording and gaining feedback on the type of questions.

The researcher selected a school in the Khomas region for the pilot study. The initial idea was to pilot a school that offered Otjiherero as a medium of instruction and English as a second language, but since the two schools of the main study were the only schools in the Khomas region that met these criteria, a school was selected that offered English as a medium of instruction and Otjiherero as a subject alongside English. The researcher ensured that the participants that took part in the pilot study were Otjiherero speaking learners and speak Otjiherero as a home language. The differences in the two language curriculum offered at the pilot study school did not affect the test results as the pilot

testing results were not used in the main research. In the pilot study the participants did not encounter any problems with the picture items that they had to identify and it seemed that all items were clear. The test was first administered in English to all learners to minimise memory transfer as it was expected that the learner's vocabulary in English (L2) which is the learner's second language would be less than that of their home language, Otjiherero, in spite of the medium of instruction being English.

3.6. DATA COLLECTION PROCEDURES

In order for the researcher to start with data collection, permission was firstly obtained from the Director for the Khomas education region. The next step was to obtain permission from the three principals and class teachers of the Grade 1 learners of the schools where the pilot and main study were conducted. The researcher made appointments prior to the testing, to arrange for suitable dates with the participants' class teachers. After permission was granted from all the principals and class teachers, test dates were set for the administration of the PPVT.

Before the administration of the test, the consent of parents, school principals and teachers were sought and they were briefed about the purpose of the test as the participants were minor children. The participants were thoroughly informed on how the Peabody Picture Vocabulary Test (PPVT) would be conducted and that the test was administered voluntarily. The test was given verbally and it took about 20 to 30 minutes

per child. No reading was required by the individual and scoring was rapid and objective. Data collection procedures commenced from the 1st of October 2012 and it continued until early November 2012.

The researcher was allocated an empty room free of distraction that was used as the testing area. The PPVT were explained and demonstrated to the participants individually. Some sample items were first used to ease the participants and make them feel comfortable and not to fear the researcher. This method was used to reduce any testing anxiety that participants might feel or that could affect the participant's level of performance. Before the testing started it was very important for the researcher to calculate the participant's date of birth in order to obtain their chronological age. This age calculation had to show the participant's age in years and months and the chronological age was used to determine at which level the individual participant will begin the test.

3.7. DATA ANALYSIS

Varied methods were used to analyse the data. After the data was analysed it was presented as frequencies, percentages and mean scores for both English and Otjiherero. This gave the researcher information on the vocabulary level of learners. The one sample t-test was used to determine whether mean scores of the two groups were significantly different at a selected probability level. The normal t-test was used to

compare the vocabulary scores for males and females. The frequency tables were constructed. The calculations for the mean scores and the t-test were carried out by a statistician using the Statistical Package for the Social Sciences (SPSS).

3.8. ETHICAL CONSIDERATION

Most educational data gathering involves at least a small invasion of personal privacy, and therefore "the procedures for gaining access are based on the enduring expectation that permissions are needed" (Stake, 1995). In line with the above argument, and before starting with data collection, the researcher sought permission from the Ministry of Education, principals and teachers of the schools. The parents of the learners were informed about the purpose of the study. The most important thing to consider when conducting research is to inform the participants on how the research will be conducted or carried out and how they will be involved so that they can make informed decisions. The researcher made it clear that the rights of participants in the research were respected and protected.

Additionally, to adhere to the ethical issues, the researcher talked to the learners (participants) and explained to them about the focus of the study. The researcher made it clear that learners' involvement in the research was voluntary. Thus, they were allowed to withdraw at any time from the research without prejudice and the researcher assured them that the researcher would, therefore, not reveal any data relating to their

PPVT performance. No real names or pseudonyms were used in the research, as the researcher used a unique identification number for each learner; which was written on the forms for each of the two languages tested. The school authorities were assured that the information provided would be stored in a secure place where only the researcher would have access to it.

3.9. SUMMARY

In this chapter the following issues were discussed and elaborated on: the research design, the population, sample and sampling procedures, research instruments, the pilot study, data collection procedures, data analysis and the ethical considerations. In the next chapter the research results will be presented.

CHAPTER 4

4. RESEARCH RESULTS

The present study attempted to determine the vocabulary age of both Otjiherero (L1) and English (L2) for Otjiherero home language learners at selected primary schools in the Khomas region. For this research two schools and 97 learners fulfilling the criteria were sampled to ensure inclusion of only Otjiherero home language speakers.

In this chapter the results are presented as follows: firstly, frequency tables are given to show the numbers of learners per age category for both Otjiherero and English. Secondly, the mean vocabulary ages of both Otjiherero (L1) and English (L2) are presented for all learners in the sample. Thirdly, both Otjiherero (L1) and English (L2) mean vocabulary ages are compared with the learners' mean chronological age. Next the results for boys and girls are presented and lastly the vocabulary results for the two schools are compared.

4.1. FREQUENCY RESULTS FOR THE TOTAL SAMPLE.

For the purpose of this study ages are given in years and fractions of years. For example 4 years and 3 months would be given as 3.25 years, and 5 years and six months would be given as 5.5 years. Table 1 indicating the fractions, are placed here for easy reference.

Table 1: Conversion table showing months as fractions of a year

Months	Fractions of a year
1	0.08
2	0.17
3	0.25
4	0.33
5	0.42
6	0.50
7	0.58
8	0.67
9	0.75
10	0.83
11	0.92
12	0.00

The table 2 shows the chronological age of all the boys and girls who took part in the study. The chronological ages for the 97 learners ranged from 6 years 5 months to 8 years 8 months. The mean age for the total sample was 7.4 years, while the mean age for boys was 7.4 and for girls7.3.

Table 2: Learners' chronological age (boys and girls)

Chronological Age	Total Number of Learners	Boys	Girls
6.5 years – 7 years	14	8	6
7 years – 7.5 years	50	29	21
7.5 years – 8 years	27	15	12
8 years – 8.5 years	3	2	1
8.5 years – 9 years	3	3	0
Total	97	57	40
Mean Chronological Age	7.4	7.4	7.3

The total sample of 97 learners was grouped into age categories based on the vocabulary age (age equivalent) obtained for both Otjiherero and English. The first category started at age 2 years and 0 month and the last category ended at age 6 years and 5 months.

Table 3: Frequencies for Otjiherero (L1) and English (L2) vocabulary levels for the total sample

Age categories	F Otji	F Eng	% Otji	% Eng	Cum % Otji	Cum % Eng
2 years -2years 5 months	3	13	3.1	13.4	3.1	13.4
2 years 6 months – 2 years 11 months	11	31	11.3	32.0	14.4	45.4
3 years -3 years 5 months	10	30	10.3	30.9	24.7	76.3
3 years - 3 years 11 months	23	12	23.7	12.4	48.5	88.7
4 years - 4 years 5 months	14	3	14.4	3.1	62.9	91.8
4 years 6 months – 4 years 11 months	8	4	8.2	4.1	71.1	95.9
5 years -5 years 5 months	17	3	17.5	3.1	88.6	99.0
5 years 6 months – 5 years 11 months	9	1	9.3	1.0	97.9	100.0
6 years - 6 years 5 months	2	0	2.1	0	100.0	0
Total	97	97	100.0	100.0	100.0	100.0

Comparing the English and Otjiherero vocabulary levels, 13.4% of learners fell in the age group of 2 years to 2 years and 5 months for English as opposed to only 3.1% for Otjiherero which are many learners for English and relatively few learners for Otjiherero. Thus 13.4% of learners had very little vocabulary in English and 3.1% had very little vocabulary for Otjiherero. Table 3 also clearly shows that 88.7% of learners had an age equivalent vocabulary in English that is below the age of 4 years and for Otjiherero it is only 48.5% of learners. Similarly 95.9% of learners had an age equivalent vocabulary below 5 years in English and for Otjiherero it amounted to 71.1% of learners. Frequency results for the total sample clearly show that many more learners had mastered Otjiherero vocabulary as opposed to English vocabulary. However, the frequency results also showed that high percentages of learners had low vocabulary levels not only for English but also for Otjiherero, which is their mother tongue. No learner obtained vocabulary levels of above 6 years and 5 months, yet the average chronological age was 7 years and 5 months (7.4 years). This means that the learners from this study had insufficient vocabularies and did not meet their age equivalent categories in both Otjiherero being their mother tongue and English Second language. It is expected that a learners' vocabulary age should match his chronological age. Figure 1 gives a graphical presentation of the number of learners per age category for English and Otjiherero vocabulary for the total sample.

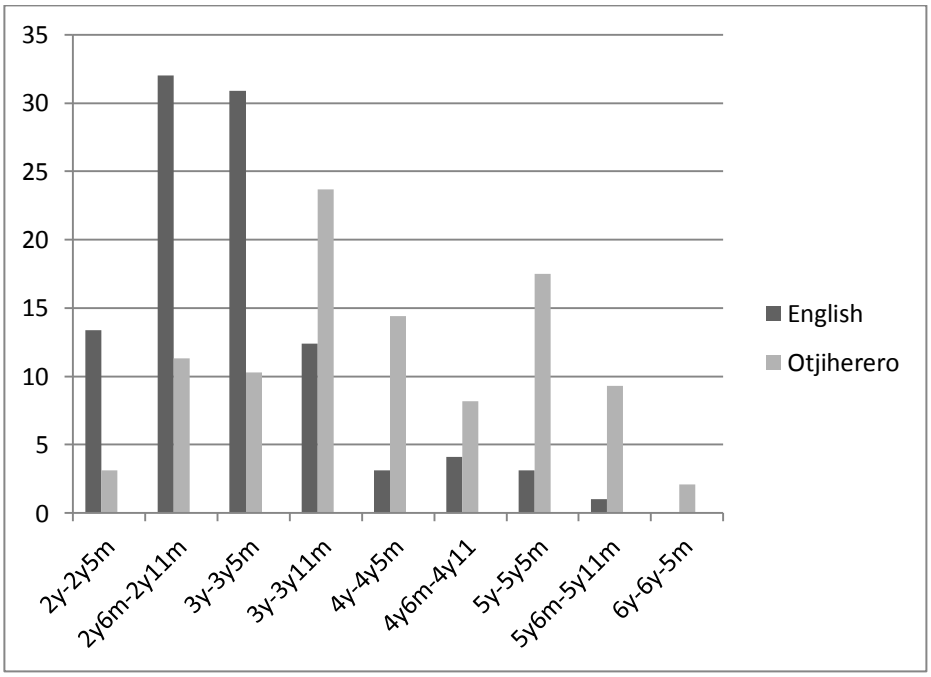

Figure 1: Graphical presentation of the number of learners per age category for English and Otjiherero vocabulary for the total sample

4.2. THE MEAN VOCABULARY AGE IN OTJIHERERO (L1) FOR THE TOTAL SAMPLE.

The average chronological age for the 97 learners in the sample was found to be 7.4 years. Based on the results of the PPVT the average vocabulary age for Otjiherero language was 4.2 years. The learners thus obtained a vocabulary mean score in Otjiherero that was 3.2 years below their chronological age. Learners thus performed substantially below the expected vocabulary level in their mother tongue (MT).

Table 4: T- test for equality of means for Otjiherero (L1)

N	T	Df	Sig. (2-tailed)	MCA	MOVA	Mean difference	Std. Error
97	-32.308	96	0.00	7.4	4.2	3.2	.09875

Note: MCA = Mean Chronological Age

MOVA= Mean Otjiherero Vocabulary Age

A one sample t-test was run to determine if the mean difference could be considered to be statistically significant. Based on the t-test (see table 4) it was concluded that there was a statistically significant difference between the mean scores of Otjiherero vocabulary age and the learner's chronological age ($p < 0.05$). This difference can thus be generalised to the Grade 1 Otjiherero speaking learners in schools with Otjiherero as a medium of instruction. We can expect this difference to occur even with a different sample. As a result the researcher concluded that this difference was a real difference and it did not occur by chance.

4.3. THE MEAN VOCABULARY AGE IN ENGLISH (L2) FOR THE TOTAL SAMPLE.

The average chronological age for the 97 learners in the sample was found to be 7.4 years. Based on the results of the PPVT the average vocabulary age for English language was 3.1 years. The learners thus obtained a vocabulary mean score in English that was 4.3 years below their chronological age. Learners thus performed extensively below the expected vocabulary level in their second language (L2).

Table 5: T-test for equality of means for English (L2)

N	T	Df	Sig. (2-tailed)	MCA	MEVA	Mean difference	Std. Error
97	-58.348	96	0.00	7.4	3.1	4.3	.07356

Note: MCA = Mean Chronological Age

MEVA= Mean English Vocabulary Age

A one sample t-test was run to determine if the mean difference could be considered to be statistically significant. Based on the t-test (see table 5) it was concluded that there was a statistically significant difference between the mean scores of English vocabulary age and the learners' chronological age ($p < 0.05$). This difference can thus be generalised to the Grade 1 Otjiherero speaking learners in schools with Otjiherero as a medium of instruction. We can expect this difference to occur even with a different sample. As a result the researcher concluded that this difference was a real difference and it did not occur by chance.

The mean vocabulary ages also showed that learners' vocabulary age was substantially below their chronological age for both Otjiherero and English. However, as was evident from the frequency results, it was also clear from the mean scores that their Otjiherero vocabulary was better developed than their English vocabulary.

4.4. FREQUENCY RESULTS FOR BOYS AND GIRLS

The same age categories, as for the total sample, were used to record the vocabulary levels of boys and girls for both Otjiherero and English (see tables 6 & 7). Information in table 6 clearly shows that for Otjiherero (L1) 1.8% of boys and 5% of girls had a vocabulary age level of less than 2 years. This is a very low vocabulary for any grade one learner and more girls than boys fell into this category.

Table 6: Otjiherero vocabulary levels for both sexes

	Boys			Girls		
Age categories	**F**	**%**	**Cum%**	**F**	**%**	**Cum%**
2 years -2 years 5 months	1	1.8	1.8	2	5.0	5.0
2 years 6 months – 2 years 11 months	7	12.3	14.0	4	10.0	15.0
3 years -3 years 5 months	6	10.5	24.6	4	10.0	25.0
3 years - 3 years 11 months	9	15.8	40.4	14	35.0	60.0
4 years -4 years 5 months	9	15.8	56.1	5	12.5	72.5
4 years 6 months – 4 years 11 months	5	8.8	64.9	3	7.5	80.0
5 years -5 years 5 months	14	24.6	89.5	3	7.5	87.5
5 years 6 months – 5 years 11 months	5	8.8	98.2	4	10.0	97.5
6 years - 6 years 5months	1	1.8	100.0	1	2.5	100.0
Total	57	100.0		40	100.0	

In addition, the same table evidently displays that for Otjiherero (L1) almost 65% of boys and 80% of girls had a vocabulary age level of less than 5 years. Substantially more girls than boys fell into this category and once again this clearly shows that high percentages of learners have not obtained expected vocabulary levels. The vocabulary level for both sexes was far below their chronological age, and both girls and boys in

this study have not reached their vocabulary age level in their mother tongue. The information in this table furthermore clearly shows that only one boy and one girl reached a vocabulary age of 6 years in Otjiherero (L1), while for English (L2) there were no learners in this category.

The information in table 7 shows that 10.5% of boys and 17.5% of girls had an English vocabulary level of less than 2 years and 6 months. These percentages are substantially higher than was the case for Otjiherero and it also shows that more girls than boys had this very low level of vocabulary in English.

Table 7: Frequencies for English vocabulary levels for both sexes

	Boys			**Girls**		
Age categories	**F**	**%**	**Cum %**	**F**	**%**	**Cum %**
2 years - 2 years 5 months	6	10.5	10.5	7	17.5	17.5
2 years 6 months – 2 years 11 months	20	35.1	45.6	11	27.5	45.0
3 years - 3 years 5 months	16	28.1	73.7	14	35.0	80.0
3 years - 3 years 11 months	8	14.0	87.7	4	10.0	90.0
4 years - 4 years 5 months	2	3.5	91.2	1	2.5	92.5
4 years 6 months – 4 years 11 months	3	5.3	96.5	1	2.5	95.0
5 years - 5 years 5 months	2	3.5	100.0	1	2.5	97.5
5 years 6 months – 5 years 11 months				1	2.5	100.0
Total	57	100.0	100.0	40	100.0	

This is a very low vocabulary for a child who is in Grade 1 and yet a relatively high percentage of boys and girls are having this low vocabulary in September of their first

school year. Cumulative percentage further shows that 45.6% of boys and 45.0% of girls obtained a vocabulary level of less than 3 years. Looking at other age categories, the difference between boys and girls were less for English than for Otjiherero; for example, 88% of boys and 90% of girls had an English vocabulary level of less than 4 years. These results evidently show that these boys and girls have not gained sufficient vocabulary in English; 96.5% of boys and 95.0% of girls obtained a vocabulary level of less than 5 years. The evidence from the table shows that there were very few learners who managed to obtain a vocabulary age level of 5 years in their second language. The highest vocabulary age for English was 5 years, as there were no learners who reached the vocabulary age level of 6 years in English (L2). These results evidently show that these boys and girls did not gain sufficient vocabulary in English. The frequency results for the sample clearly shows that learners have not gained sufficient vocabulary in both Otjiherero (L1) being their mother tongue and English second language. Figures 2 and 3 give graphical presentations of the Otjiherero and English vocabulary levels for boys and girls.

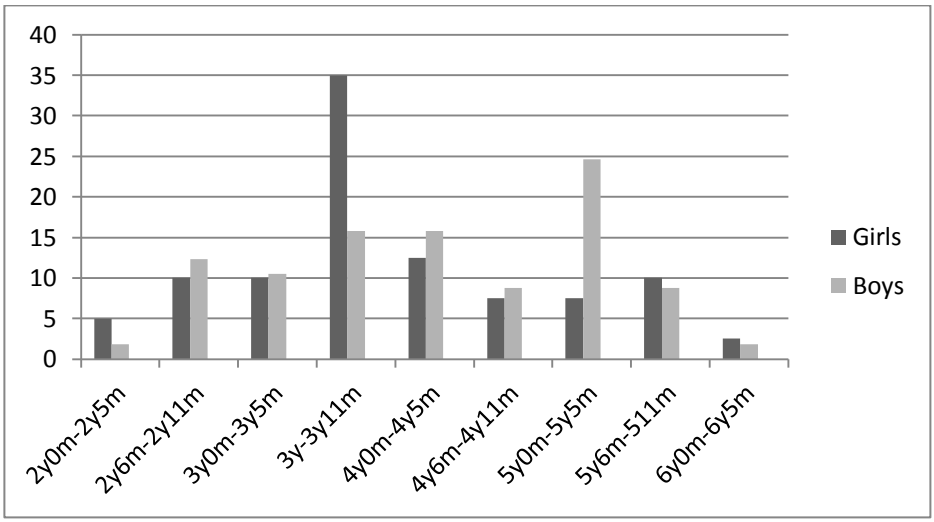

Figure 2: Graphical presentation of boys and girls Otjiherero (L1) vocabulary levels.

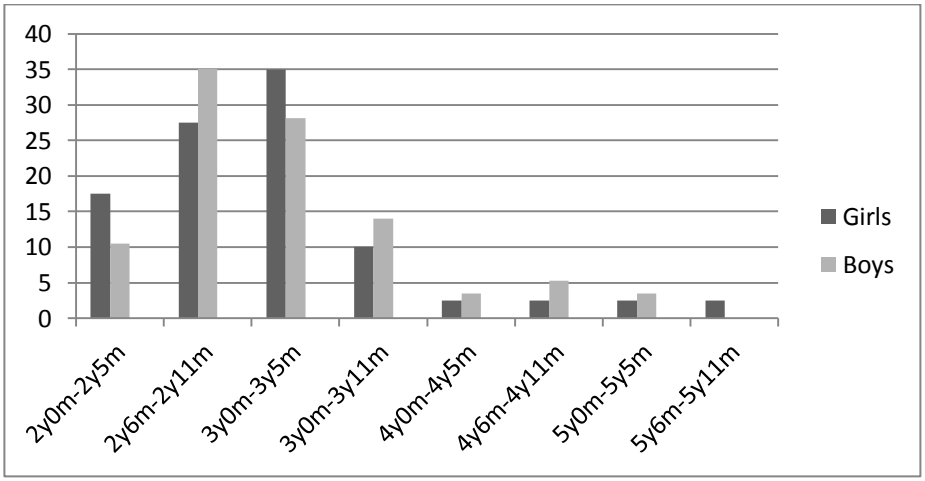

Figure 3: Graphical presentation of boys and girls English (L2) vocabulary levels.

4.5. COMPARING THE MEAN VOCABULARY LEVELS OF BOYS AND GIRLS IN BOTH LANGUAGES

Based on sex, the mean vocabulary age for boys and girls were first compared in Otjiherero and then compared in English. The mean vocabulary age in Otjiherero for boys was 4.27 years and for girls it was 4.07 years. The difference in the mean scores was only 0.2 years (less than three months) whereby boys performed slightly better than girls (see table 8). The researcher wanted to determine if this difference was statistically significant. In order to determine this, the researcher carried out a normal t-test. Levene's test for equality of variance was first administered and homogeneity of variance for the groups was such, that a normal t-test for comparison of means could be administered. Based on the t-test, it was concluded that the difference in the mean scores between the two sexes for Otjiherero was statistically not significant ($p > 0.05$). This implies that the difference cannot be considered to be a true difference but may be due to chance or the specific sample.

Table 8: The t-test for equality of means for the two sexes in Otjiherero and English

Language	Gender	N	T	Df	Sig. 2(tailed)	Mean	Mean difference
Otjiherero	**Girls**	40	-1.013	95	.584	4.07	0.20
	Boys	57	-1.014	95	.584	4.27	
English	**Girls**	40	-1.309	95	.974	2.97	0.19
	Boys	57	-1.297	95	.974	3.17	

The mean vocabulary age in English for boys was 3.17 years and for girls it was 2.97 years. The difference in the mean scores was only 0.2 years whereby boys performed slightly better than girls (see table 8). The researcher wanted to determine if this difference was statistically significant. Again, Levene's test for Equivalence of variance was run, followed by a normal t-test. Based on the t-test, it was concluded that the difference in the mean scores between the two sexes for English was statistically not significant ($p > 0.05$). This indicates that the difference cannot be considered to be a true difference but may be due to chance or the specific sample.

4.6. COMPARING THE VOCABULARY AGES OF THE TWO SCHOOLS

The researcher administered Levene's test for equality of variance to compare the mean scores of the two schools in both Otjiherero and English. Homogeneity of the variance for the schools was such, that a normal t-test for comparison of means could be administered. The researcher then administered a t-test to determine if the differences in the mean scores could be considered to be statistically significant. The vocabulary age of Otjiherero for school A was 4.15 years and for school B it was 4.40 years. Based on the t-test it was concluded that the difference in the mean scores between the two schools in Otjiherero was statistically not significant ($p > 0.05$). This implies that the difference cannot be considered to be a true difference but may be due to chance or the specific sample.

Table 9: t- test for equality of means in Otjiherero and English for the Schools

Language	School	N	T	Df	Sig.(2 tailed)	MCA	MVA	Mean Difference
Otjiherero	A	72	-1.137	98	0.30	7.4	4.15	0.13
	B	25	-1.1371	98	0.50	7.4	4.40	0.13
English	A	72	-1.610	98	0.30	7.4	3.04	0.29
	B	25	-1.610	98	0.11	7.4	3.33	0.29

Note: MCA = Mean Chronological Age

MVA = Mean Vocabulary Age

The vocabulary age of English for school A was 3.04 years and for school B it was 3.33 years. Based on the t-test it was concluded that the difference in the mean scores between the two schools in English was not statistically significant ($p > 0.05$). This means that the difference cannot be considered to be a true difference but due to chance or the specific sample.

4.7. SUMMARY

This chapter presented the findings of the study, in the form of frequency tables, the mean vocabulary age scores in tabulation form and Levene's test for the equality of variance and the t-test for the equality of means. Frequency tables were used in this study to show both Otjiherero (L1) and English (L2) vocabulary levels for the total

sample, and to show Otjiherero (L1) and English (L2) vocabulary levels for both sexes. Another frequency table was used to show the learners' chronological age. The information on the frequency tables clearly shows that no learner obtained vocabulary levels above 5 years and 11 months, yet the chronological age was 7.4 years for the total sample. Based on the t-test it was concluded that there was a statistical significant difference between the mean scores of both Otjiherero (L1) and English (L2) vocabulary age and the learners' chronological age ($p < 0.05$). Learners performed considerably below the expected vocabulary level in both Otjiherero being the learners' mother tongue and English as their Second Language. No statistically significant difference was found between the mean scores of boys and girls, in both Otjiherero and English. The Otjiherero (L1) and English (L2) vocabulary results on school levels were also found to be not statistically significant. A detailed discussion of these important findings is presented in the next chapter.

CHAPTER 5

5. DISCUSSION OF RESULTS AND RECOMMENDATIONS

5.1. INTRODUCTION

In this chapter, the interpretation of the results follows the order of the research objectives in Chapter One and the presentation of the results in Chapter Four. Three research objectives were formulated; the first research objective was to determine the vocabulary level of both Otjiherero (L1) and English (L2) for Otjiherero home language learners, while the second research objective focused on comparing the Otjiherero home language learners' chronological age with their age equivalence vocabulary levels in both Otjiherero (L1) and English (L2). The third research objective was to compare the vocabulary levels of the two languages with regard to sex and school.

5.2. THE VOCABULARY AGE OF OTJIHERERO (L1) AND ENGLISH (L2) PARTICIPANTS

The mean vocabulary age for Otjiherero (L1), which is the participant's mother tongue, was found to be 4.2 years, while the chronological age was 7.4 years. The participants thus obtained a mean vocabulary age in Otjiherero that was far below their chronological age. This means that a 7 year old child has acquired a vocabulary that is equivalent to a

4.2 year old in Otjiherero. Over the past years, researchers have found a major connection between vocabulary and reading. Studies have shown that if a child has poor vocabulary it will affect his/her reading abilities. Baumann (2005) explains that if a child has a poor vocabulary it will hinder him or her to comprehend and get meaning from the text that they are reading, as one actually needs many words and the skill to use different approaches to try and establish meanings of new words when they come across them in a text. Baumann (2005) adds that poor vocabulary tends to hinder various aspect of learning, as the child cannot grasp what they are reading and this issue can only be eliminated by vocabulary acquisition. The researcher thus concludes that the low vocabulary levels in the mother tongue that Otjiherero learners start school with, will most likely have a negative influence on their reading skills and other academic performance in their school careers.

Furthermore, the Otjiherero speaking learners were found to have started school with an English vocabulary age of only 3.1 years. This is even lower than the mother tongue vocabulary age, which is expected. However, the low vocabulary levels in Otjiherero may have indirectly influenced the learners' vocabulary levels in English. The amount of vocabulary that the child has acquired in their mother tongue may serve as a good advantage for the second language vocabulary acquisition. This has been supported by research (Baumann, 2005; De Witt, 2009; Klein, 2003) which states that if children have acquired sufficient vocabulary skills and they are able to comprehend something,

provide definitions, and understand metaphors in their mother tongue; then they will be capable to use these skills in the second language.

Despite the very low vocabulary levels in English, previous research in Namibia (Mbaeva, 2005; Mostert et al. 2012) has found that many parents prefer to let their children start their school career with English as the medium of instruction. Otjiherero learners who start school with English as medium of instruction may thus struggle even more with reading than their counterparts who start reading in Otjiherero, a language for which they have at least higher levels of vocabulary. The present research results thus favourably argue for mother tongue instruction (Otjiherero L1) whereby the first language positively influences the second language acquisition. These findings are consistent with those reached by other investigators (Baumann, 2005; Mbaeva, 2005; Biemiller, 2003; De Witt, 2009; Matafwali, 2010) that emphasise the importance of mother tongue (L1) in order to achieve success in the second language

Learners' low vocabulary age as was found in the present study may partly be as a result of the research instrument that was used. Since the PPVT is not standardised for Namibia it is possible that the vocabulary levels may be skewed to the lower end. However, this should not have made a big difference since the test items reflect normal body and household picture items that should also be quite familiar to the Namibian learners. This study's finding is similar to the findings of various other researchers that tested the receptive vocabulary of learners using the PPVT (Allison et al. 2011; Morisset

et al. 1995, as cited in Dunn & Dunn, 2007). In their findings these researchers also concluded that learners performed well below their chronological age and the normative mean group.

In addition to this, a number of studies found that children from lower SES backgrounds performed below the normative mean on receptive vocabulary tests (Allison et. al. 2011; Dunn & Dunn, 2007). The schools in which the researcher carried out the study are located in Katutura, a suburb in Windhoek that historically is regarded as having a lower socio-economic status (Iijambo, 2001). This may also have contributed to the low vocabulary levels of learners in this study.

5.3. DIFFERENCES IN VOCABULARY LEVELS OF BOYS AND GIRLS AND DIFFERENCES IN VOCABULARY LEVELS OF THE TWO SCHOOLS

In table seven and eight, the performances of both sexes in both languages were presented. The results show that both sexes performed below their chronological vocabulary age. The difference in performance between the two sexes was negligible and also not statistically significant and, therefore, this research cannot refute or confirm previous studies regarding differences in language development between boys and girls. The majority of studies carried out around the world shows that girls perform better than boys in language activities (Browne, 2005; De Witt, 2009; North-western University,

2008). From most of these studies it seems that girls are socially and culturally more advantaged than boys to develop language skills and to increase their vocabularies. However, this may be different in the Namibian context. For example, in the Otjiherero culture, until recently women were discouraged from giving speeches at formal ceremonies such as weddings and funerals. This was usually done by men (Mbaeva, 2005). This may be partly the reason why this study could not support studies which show that girls perform better than boys in language developmental activities.

RECOMMENDATIONS

Based on the findings from this study the researcher wishes to make the following recommendations:

5.4.1 Other researchers can conduct similar studies using the PPVT instruments to investigate the Otjiherero and English vocabulary levels of Otjiherero speaking learners in other regions. In this study only learners from Khomas urban areas were included. Future research may consider comparing urban and rural learners 'vocabulary levels.

5.4.2 Similar research could be carried out for other language groups. That is, the use of the PPVT for other mother tongues and English as second language.

5.4.3 Since it seems that learners' vocabulary age is below the expected levels, the Ministry of Education should implement strategies to enhance the vocabulary levels of learners in schools, as literature has shown the importance of vocabulary for reading acquisition.

5.4.4 Advice and assistance should be provided to parents and caretakers so that they can stimulate children's vocabulary acquisition. As was indicated in the theoretical framework of this study, parents are considered by most researchers to be the first people that can influence a child's vocabulary acquisition during the early childhood

years. If a child does not receive sufficient intellectual motivation in vocabulary and language acquisition through his or her home environment during the early years, then the best efforts on the part of the school during the first couple of years will be to no avail.

5.4.5 Compulsory pre-primary education should be implemented at an accelerated rate. Researchers indicate that pre-primary vocabulary size is a strong predictor of children's reading comprehension in the later school years, so the stakeholders that are involved in enforcing pre-primary education should not prolong this implementation.

5.4.6 This study would like to urge parents to ensure that children are enrolled in pre-primary schools before starting with formal schools. Since pre-primary schools have shown to enhance learners vocabulary levels.

5.4.7 Pre-primary schools should be structured in such a way that it will help learners to acquire vocabulary in an easy and interesting way.

5.4.8 Since children acquire much of their vocabularies through different playing activities, parents and teachers should encourage play activities such as memory play, fantasy play and physical play.

5.4. CONCLUSION

From this research, the researcher has learnt more and found out the importance of vocabulary and the strong relationship found between vocabulary and reading. Laufer (1996) confirmed that "reading comprehension is strongly and more powerfully connected to vocabulary knowledge than any other component of reading". Vocabulary is clearly an assisting aspect in reading comprehension. The results of my study brought my attention to the fact that learners' vocabulary is below expectation and this might be one reason for reading difficulties in schools. In addition one should remember that learners might have a better chance to read better in their mother tongue (Otjiherero) than starting to read in a second language in which they have even more limited vocabulary. The researcher hopes that further research will be done in Namibia on vocabulary and the impact it has on children's reading abilities.

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APPENDIX A - Peabody Picture Vocabulary Test (Otjiherero)

Start Ages 2:6 -3: 11					**SET 1**
1. otjimbere	1	2	3	4	E
2. ombua	1	2	3	4	E
3. orutuo	1	2	3	4	E
4. ombaze	1	2	3	4	E
5. ombaka	1	2	3	4	E
6. otjipanana	1	2	3	4	E
7. orukaku	1	2	3	4	E
8. ekopi	1	2	3	4	E
9. okurya	1	2	3	4	E
10. ombesi	1	2	3	4	E
11. ongara	1	2	3	4	E
12. otjinjo	1	2	3	4	E
Number of errors :					
Start Age 4					**SET 2**
13. otjitjange tjekara	1	2	3	4	E
14. otjikuhuna	1	2	3	4	E
15. ovihumba	1	2	3	4	E
16. onduzu	1	2	3	4	E
17. otjiserandu	1	2	3	4	E
18. okutuka	1	2	3	4	E
19. ombaruru	1	2	3	4	E
20. okuresa	1	2	3	4	E
21. omunueuombaze	1	2	3	4	E
22. ekuamo	1	2	3	4	E
23. onde	1	2	3	4	E
24. okuhua	1	2	3	4	E
Number of errors :					

				SET 3	
25. okupunda	1	2	3	4	E
26. Ohiva	1	2	3	4	E
27. Okuveta	1	2	3	4	E
28. Erambe	1	2	3	4	E
29. Otjipaka	1	2	3	4	E
30. Ondarata	1	2	3	4	E
31. Uriri	1	2	3	4	E
32. Ohange	1	2	3	4	E
33. Omuriro	1	2	3	4	E
34. ondjiuo yo mbara	1	2	3	4	E
35. okarupuka	1	2	3	4	E
36. okuumba	1	2	3	4	E
Number of Errors:					

Start Age 5				**SET 4**	
37. osarama		2	3	4	E
38. okakwaya	1	2	3	4	E
39. otjijandjeua	1	2	3	4	E
40. einya	1	2	3	4	E
41. ondjiuo yo tjtjauvi	1	2	3	4	E
42. orumbarambandja	1	2	3	4	E
43. okundjanda omituka	1	2	3	4	E
44. oruharui	1	2	3	4	E
45. onete	1	2	3	4	E
46. otjituve	1	2	3	4	E
47. okurihikika	1	2	3	4	E
48. omututu	1	2	3	4	E
Number of Errors :					

Start Age 6				**SET 5**	
49. okumunina	1	2	3	4	E
50. otjinane tjomukoka	1	2	3	4	E
51. oruhito	1	2	3	4	E
52. orutavi	1	2	3	4	E
53. ondjatu yo mpapira	1	2	3	4	E
54. ondiamanda	1	2	3	4	E
55. okalenda	1	2	3	4	E
56. okakaramara	1	2	3	4	E
57. okusaava	1	2	3	4	E
58. ongu	1	2	3	4	E
59. okaundahema	1	2	3	4	E
60. otjiku	1	2	3	4	E
Number of Errors:					

Start Age 7				**SET 6**	
61. okupora	1	2	3	4	E
62. ondando	1	2	3	4	E
63. okutota	1	2	3	4	E
64. omurue womuhona	1	2	3	4	E
65. okuherura	1	2	3	4	E
66. otjisaiyena	1	2	3	4	E
67. onganga yo mayo	1	2	3	4	E
68. okutendeza	1	2	3	4	E
69. otjikoti tjohunguriva	1	2	3	4	E
70. omuzaro	1	2	3	4	E
71. otjina otjinene	1	2	3	4	E
72. otjinamianya	1	2	3	4	E
Number of Errors:					

Start Age 8				**SET 7**	
73. otjiketara	1	2	3	4	E
74. otjimbumba	1	2	3	4	E
75. otjisanekero tjouje	1	2	3	4	E
76. otjitoore	1	2	3	4	E
77. omuzike	1	2	3	4	E
78. otjihape	1	2	3	4	E
79. ekuva	1	2	3	4	E
80. ondera okakuaja	1	2	3	4	E
81. opapitira omuise	1	2	3	4	E
82. okuhana	1	2	3	4	E
83. ozombase	1	2	3	4	E
84. ovihape	1	2	3	4	E

Start Age 9				**SET 8**	
85. ohakane	1	2	3	4	E
86. omungure wo miriu	1	2	3	4	E
87. ondondu	1	2	3	4	E
88. otjiyarisiro tjo iri	1	2	3	4	E
89. okujakura	1	2	3	4	E
90. otjiunda	1	2	3	4	E
91. otjitiziro tjo zongara	1	2	3	4	E
92. otjihaba	1	2	3	4	E
93. okunjomoka	1	2	3	4	E
94. okuuruma	1	2	3	4	E
95. otjitjanaha	1	2	3	4	E
96. omutima	1	2	3	4	E
Number of Errors:					

Start Ages 10					**SET 9**
97. onguti	1	2	3	4	E
98. otjingombue	1	2	3	4	E
99. orumunino	1	2	3	4	E
100.otjispanera	1	2	3	4	E
101.otjitiziro tjo vipuka vyomomeya	1	2	3	4	E
102.okupakera	1	2	3	4	E
103.otjipuikiro	1	2	3	4	E
104. ewe enene	1	2	3	4	E
105.omuhoko wo vikoko	1	2	3	4	E
106.okaaha	1	2	3	4	E
107.okunanasana	1	2	3	4	E
Number of errors:					

Start Age 11-12					**SET 10**
109. omutuaro	1	2	3	4	E
110. omujandje wo muhunga	1	2	3	4	E
111. oruzenga	1	2	3	4	E
112. otjirekene	1	2	3	4	E
113. okupururа	1	2	3	4	E
114. otjipuka otjinamayo	1	2	3	4	E
115. omiriu vyo meya	1	2	3	4	E
116.okunjunuka	1	2	3	4	E
117. evare	1	2	3	4	E
118. okahiva	1	2	3	4	E
119. okamuramba	1	2	3	4	E
120. otjikiwi	1	2	3	4	E
Number of Errors:					

APPENDIX B - Peabody Picture Vocabulary Test (English)

PPVT-4

Peabody Picture Vocabulary Test, Fourth Edition

Lloyd M. Dunn, PhD
Douglas M. Dunn, PhD

FORM A

Name: _____ Sex: ☐F ☐M ID #: _____

Address: _____ Current Grade: _____ or Level of Education Completed: _____

City: _____ State: _____ ZIP: _____

Home Phone: _____ School/Agency: _____

Language Spoken at Home: _____ Teacher/Counselor: _____

Reason for Testing: _____ Examiner: _____

	Year	Month	Day
Test Date	____	____	____
Birth Date	____	____	____
Age* *Do not round up.	____	____	

NORMS USED: ☐ Age ☐ Grade: Fall ☐ Grade: Spring

Graphical Profile

Score Summary

RAW SCORE (From box on page 2) ☐

Standard Score (Table B.1, B.2, or B.3)		☐
Confidence Interval (Table B.1, B.2, or B.3)	☐90% ☐95%	☐ - ☐
Percentile (Table B.4)		☐
Normal Curve Equivalent (NCE) (Table B.4)		☐
Stanine (Table B.4)		☐
Growth Scale Value (GSV) (Table B.5 or B.6)		☐
☐Age Equivalent (Table B.5)		☐
☐Grade Equivalent (Table B.6)		☐

Recommendations:

Product Number 30706 (25)
30708 (100)

Administering Items

The **Training Items** must be administered first. Directions are listed on the training easel pages.

The **Start Item** is the first item in the age-appropriate item set. Start Items are listed in the right-hand column on this page, and on the tabbed easel pages.

The **Complete Set Rule** requires the administration of all 12 items in the set in order, beginning with the first item in the set.

The **Basal Set Rule** is one (1) or zero (0) errors in a set. Establish the Basal Set first. If necessary, administer earlier sets until the rule is met or until Set 1 is completed. Then test forward by sets until a Ceiling Set is obtained.

The **Ceiling Set Rule** is eight (8) or more errors in a set. Stop testing after giving ***all*** items in the Ceiling Set.

Recording Responses and Errors

- Record the examinee's response (1, 2, 3, or 4) on the record form by circling the corresponding number after the stimulus word for each item. The correct response is in red. See the example below.
- Indicate an error (incorrect or no response) by drawing an oblique line through the *E*, as shown below.

Example:

▼ Start Ages 2:6–3:11					SET 1
1. ball	1	2	(3)	4	/
2. dog	(1)	2	3	4	/
3. spoon	1	2	3	(4)	/
4. foot	1	2	(3)	4	/

- For each set, record the number of errors in the box labeled "Number of Errors."

Calculating the Total Number of Errors

Transfer the number of errors per set to the boxes below, and add up the total errors. Be sure to use the *lowest* Basal Set and the *highest* Ceiling Set. See Chapter 2 of the manual for further details.

Set 1 ____	Set 2 ____	Set 3 ____
Set 4 ____	Set 5 ____	Set 6 ____
Set 7 ____	Set 8 ____	Set 9 ____
Set 10 ____	Set 11 ____	Set 12 ____
Set 13 ____	Set 14 ____	Set 15 ____
Set 16 ____		
Set 17 ____	Set 18 ____	Set 19 ____

Total Errors (between Basal Set and Ceiling Set) ☐

Calculating the Raw Score

Record the number of the Ceiling Item, which is the last item in the Ceiling Set. For example, if the examinee's *highest* Ceiling Set was Set 6, the Ceiling Item would be 72. Subtract from the Ceiling Item the total number of errors made by the examinee (from the Basal Set through the Ceiling Set). The result is the Raw Score. See Chapter 2 of the manual for further details.

Ceiling Item _____

Total Errors – _____

Raw Score ☐

Transfer this Raw Score to the record form cover.

Start Your Administration Here

Training Items

All instructions for introducing the test and administering the Training Items are located in the easel.

Ages 2:6 Through 3:11

Training Page A

A1. boy	1	2	3	4	*E*
A2. chair	1	2	3	4	*E*
A3. puppy	1	2	3	4	*E*
A4. bike	1	2	3	4	*E*

After the examinee responds correctly and without help to two Training Items, go to Item 1, and begin testing.

Age	2:6–3:11
Start Item	1

Ages 4 Through Adult

Training Page B

B1. laughing	1	2	3	4	*E*
B2. sleeping	1	2	3	4	*E*
B3. hugging	1	2	3	4	*E*
B4. walking	1	2	3	4	*E*

After the examinee responds correctly and without help to two Training Items, go to the appropriate Start Item, and begin testing.

Age	4	5	6	7	8	9	10
Start Item	13	37	49	61	73	85	97

Age	11–12	13	14–16	17–18	19+
Start Item	109	121	133	145	157

- **Complete Set Rule:** Administer all 12 items in the set in order, starting with the first item in the set.
- **Basal Set Rule:** One (1) or zero (0) errors in a set.
- **Ceiling Set Rule:** Eight (8) or more errors in a set.

▼ Start Ages 2:6–3:11					SET 1
1. ball	1	2	3	4	E
2. dog	1	2	3	4	E
3. spoon	1	2	3	4	E
4. foot	1	2	3	4	E
5. duck	1	2	3	4	E
6. banana	1	2	3	4	E
7. shoe	1	2	3	4	E
8. cup	1	2	3	4	E
9. eating	1	2	3	4	E
10. bus	1	2	3	4	E
11. flower	1	2	3	4	E
12. mouth	1	2	3	4	E
Number of Errors					

▼ Start Age 4					SET 2
13. pencil	1	2	3	4	E
14. cookie	1	2	3	4	E
15. drum	1	2	3	4	E
16. turtle	1	2	3	4	E
17. red	1	2	3	4	E
18. jumping	1	2	3	4	E
19. carrot	1	2	3	4	E
20. reading	1	2	3	4	E
21. toe	1	2	3	4	E
22. belt	1	2	3	4	E
23. fly	1	2	3	4	E
24. painting	1	2	3	4	E
Number of Errors					

					SET 3
25. dancing	1	2	3	4	E
26. whistle	1	2	3	4	E
27. kicking	1	2	3	4	E
28. lamp	1	2	3	4	E
29. square	1	2	3	4	E
30. fence	1	2	3	4	E
31. empty	1	2	3	4	E
32. happy	1	2	3	4	E
33. fire	1	2	3	4	E
34. castle	1	2	3	4	E
35. squirrel	1	2	3	4	E
36. throwing	1	2	3	4	E
Number of Errors					

▼ Start Age 5					SET 4
37. farm	1	2	3	4	E
38. penguin	1	2	3	4	E
39. gift	1	2	3	4	E
40. feather	1	2	3	4	E
41. cobweb	1	2	3	4	E
42. elbow	1	2	3	4	E
43. juggling	1	2	3	4	E
44. fountain	1	2	3	4	E
45. net	1	2	3	4	E
46. shoulder	1	2	3	4	E
47. dressing	1	2	3	4	E
48. roof	1	2	3	4	E
Number of Errors					

▼ Start Age 6					SET 5
49. peeking	1	2	3	4	E
50. ruler	1	2	3	4	E
51. tunnel	1	2	3	4	E
52. branch	1	2	3	4	E
53. envelope	1	2	3	4	E
54. diamond	1	2	3	4	E
55. calendar	1	2	3	4	E
56. buckle	1	2	3	4	E
57. sawing	1	2	3	4	E
58. panda	1	2	3	4	E
59. vest	1	2	3	4	E
60. arrow	1	2	3	4	E
Number of Errors					

▼ Start Age 7					SET 6
61. picking	1	2	3	4	E
62. target	1	2	3	4	E
63. dripping	1	2	3	4	E
64. knight	1	2	3	4	E
65. delivering	1	2	3	4	E
66. cactus	1	2	3	4	E
67. dentist	1	2	3	4	E
68. floating	1	2	3	4	E
69. claw	1	2	3	4	E
70. uniform	1	2	3	4	E
71. gigantic	1	2	3	4	E
72. furry	1	2	3	4	E
Number of Errors					

- **Complete Set Rule:** Administer all 12 items in the set in order, starting with the first item in the set.
- **Basal Set Rule:** One (1) or zero (0) errors in a set.
- **Ceiling Set Rule:** Eight (8) or more errors in a set.

▼ Start Age 8					SET 7
73. violin	1	2	3	4	E
74. group	1	2	3	4	E
75. globe	1	2	3	4	E
76. vehicle	1	2	3	4	E
77. chef	1	2	3	4	E
78. squash	1	2	3	4	E
79. ax	1	2	3	4	E
80. flamingo	1	2	3	4	E
81. chimney	1	2	3	4	E
82. sorting	1	2	3	4	E
83. waist	1	2	3	4	E
84. vegetable	1	2	3	4	E
Number of Errors					

▼ Start Age 9					SET 8
85. hyena	1	2	3	4	E
86. plumber	1	2	3	4	E
87. river	1	2	3	4	E
88. timer	1	2	3	4	E
89. catching	1	2	3	4	E
90. trunk	1	2	3	4	E
91. vase	1	2	3	4	E
92. harp	1	2	3	4	E
93. bloom	1	2	3	4	E
94. horrified	1	2	3	4	E
95. swamp	1	2	3	4	E
96. heart	1	2	3	4	E
Number of Errors					

▼ Start Age 10					SET 9
97. pigeon	1	2	3	4	E
98. ankle	1	2	3	4	E
99. flaming	1	2	3	4	E
100. wrench	1	2	3	4	E
101. aquarium	1	2	3	4	E
102. refueling	1	2	3	4	E
103. safe	1	2	3	4	E
104. boulder	1	2	3	4	E
105. reptile	1	2	3	4	E
106. canoe	1	2	3	4	E
107. athlete	1	2	3	4	E
108. towing	1	2	3	4	E
Number of Errors					

▼ Start Ages 11–12					SET 10
109. luggage	1	2	3	4	E
110. directing	1	2	3	4	E
111. vine	1	2	3	4	E
112. digital	1	2	3	4	E
113. dissecting	1	2	3	4	E
114. predatory	1	2	3	4	E
115. hydrant	1	2	3	4	I
116. surprised	1	2	3	4	I
117. palm	1	2	3	4	L
118. clarinet	1	2	3	4	E
119. valley	1	2	3	4	E
120. kiwi	1	2	3	4	E
Number of Errors					

▼ Start Age 13					SET 11
121. interviewing	1	2	3	4	E
122. pastry	1	2	3	4	E
123. assisting	1	2	3	4	E
124. fragile	1	2	3	4	E
125. solo	1	2	3	4	E
126. snarling	1	2	3	4	E
127. puzzled	1	2	3	4	E
128. beverage	1	2	3	4	E
129. inflated	1	2	3	4	E
130. tusk	1	2	3	4	E
131. trumpet	1	2	3	4	E
132. rodent	1	2	3	4	E
Number of Errors					

▼ Start Ages 14–16					SET 12
133. inhaling	1	2	3	4	E
134. links	1	2	3	4	E
135. polluting	1	2	3	4	E
136. archaeologist	1	2	3	4	E
137. coast	1	2	3	4	E
138. injecting	1	2	3	4	E
139. fern	1	2	3	4	E
140. mammal	1	2	3	4	E
141. demolishing	1	2	3	4	E
142. isolation	1	2	3	4	E
143. clamp	1	2	3	4	E
144. dilapidated	1	2	3	4	E
Number of Errors					

- **Complete Set Rule:** Administer all 12 items in the set in order, starting with the first item in the set.
- **Basal Set Rule:** One (1) or zero (0) errors in a set.
- **Ceiling Set Rule:** Eight (8) or more errors in a set.

▼ Start Ages 17–18					SET 13
145. pedestrian	1	2	3	4	E
146. interior	1	2	3	4	E
147. garment	1	2	3	4	E
148. departing	1	2	3	4	E
149. feline	1	2	3	4	E
150. hedge	1	2	3	4	E
151. citrus	1	2	3	4	E
152. florist	1	2	3	4	E
153. hovering	1	2	3	4	E
154. aquatic	1	2	3	4	E
155. reprimanding	1	2	3	4	E
156. carpenter	1	2	3	4	E
Number of Errors					

▼ Start Ages 19–Adult					SET 14
157. primate	1	2	3	4	E
158. glider	1	2	3	4	E
159. weary	1	2	3	4	E
160. hatchet	1	2	3	4	E
161. transparent	1	2	3	4	E
162. sedan	1	2	3	4	E
163. constrained	1	2	3	4	E
164. valve	1	2	3	4	E
165. parallelogram	1	2	3	4	E
166. pillar	1	2	3	4	E
167. consuming	1	2	3	4	E
168. currency	1	2	3	4	E
Number of Errors					

					SET 15
169. hazardous	1	2	3	4	E
170. pentagon	1	2	3	4	E
171. appliance	1	2	3	4	E
172. poultry	1	2	3	4	E
173. cornea	1	2	3	4	E
174. peninsula	1	2	3	4	E
175. porcelain	1	2	3	4	E
176. detonation	1	2	3	4	E
177. cerebral	1	2	3	4	E
178. perpendicular	1	2	3	4	E
179. submerging	1	2	3	4	E
180. syringe	1	2	3	4	E
Number of Errors					

					SET 16
181. lever	1	2	3	4	E
182. apparel	1	2	3	4	E
183. talon	1	2	3	4	E
184. cultivating	1	2	3	4	E
185. wedge	1	2	3	4	E
186. ascending	1	2	3	4	E
187. depleted	1	2	3	4	E
188. sternum	1	2	3	4	E
189. maritime	1	2	3	4	E
190. incarcerating	1	2	3	4	E
191. dejected	1	2	3	4	E
192. quintet	1	2	3	4	E
Number of Errors					

Continue on page 6

- **Complete Set Rule:** Administer all 12 items in the set in order, starting with the first item in the set.
- **Basal Set Rule:** One (1) or zero (0) errors in a set.
- **Ceiling Set Rule:** Eight (8) or more errors in a set.

SET 17					
193. **incandescent** [in kuhn DES uhnt]	1	2	3	4	E
194. **confiding** [kuhn FIYD ing]	1	2	3	4	E
195. **mercantile** [MUR kuhn teel]	1	2	3	4	E
196. **upholstery** [uhp HOHL stuh ree]	1	2	3	4	E
197. **filtration** [fil TRAY shuhn]	1	2	3	4	E
198. **replenishing** [ri PLE nish ing]	1	2	3	4	E
199. **trajectory** [truh JEK tuh ree]	1	2	3	4	E
200. **perusing** [puh ROOZ ing]	1	2	3	4	E
201. **barb** [BARB]	1	2	3	4	E
202. **converging** [kuhn VUHRJ ing]	1	2	3	4	E
203. **honing** [HOHN ing]	1	2	3	4	E
204. **angler** [AN gluhr]	1	2	3	4	E

Number of Errors ____

SET 18					
205. **wildebeest** [WIL duh beest]	1	2	3	4	E
206. **coniferous** [koh NIF uh ruhs]	1	2	3	4	E
207. **timpani** [TIM puh nee]	1	2	3	4	E
208. **pilfering** [PIL fuhr ing]	1	2	3	4	E
209. **pestle** [PE suhl]	1	2	3	4	E
210. **reposing** [ri POHZ ing]	1	2	3	4	E
211. **cupola** [KYOO puh luh]	1	2	3	4	E
212. **derrick** [DER ik]	1	2	3	4	E
213. **convex** [kon VEKS]	1	2	3	4	E
214. **embossed** [im BAWST]	1	2	3	4	E
215. **torrent** [TOHR uhnt]	1	2	3	4	E
216. **dromedary** [DROM uh dayr ee]	1	2	3	4	E

Number of Errors ____

SET 19					
217. **legume** [LE gyoom]	1	2	3	4	E
218. **cairn** [KAYRN]	1	2	3	4	E
219. **arable** [AYR uh buhl]	1	2	3	4	E
220. **supine** [suu PIYN]	1	2	3	4	E
221. **vitreous** [VI tree uhs]	1	2	3	4	E
222. **lugubrious** [luu GOO bree uhs]	1	2	3	4	E
223. **caster** [KAS tuhr]	1	2	3	4	E
224. **terpsichorean** [tuhrp sik uh REE uhn]	1	2	3	4	E
225. **cenotaph** [SEN uh taf]	1	2	3	4	E
226. **calyx** [KAY liks]	1	2	3	4	E
227. **osculating** [OS kyuh layt ing]	1	2	3	4	E
228. **tonsorial** [ton SOHR ee uhl]	1	2	3	4	E

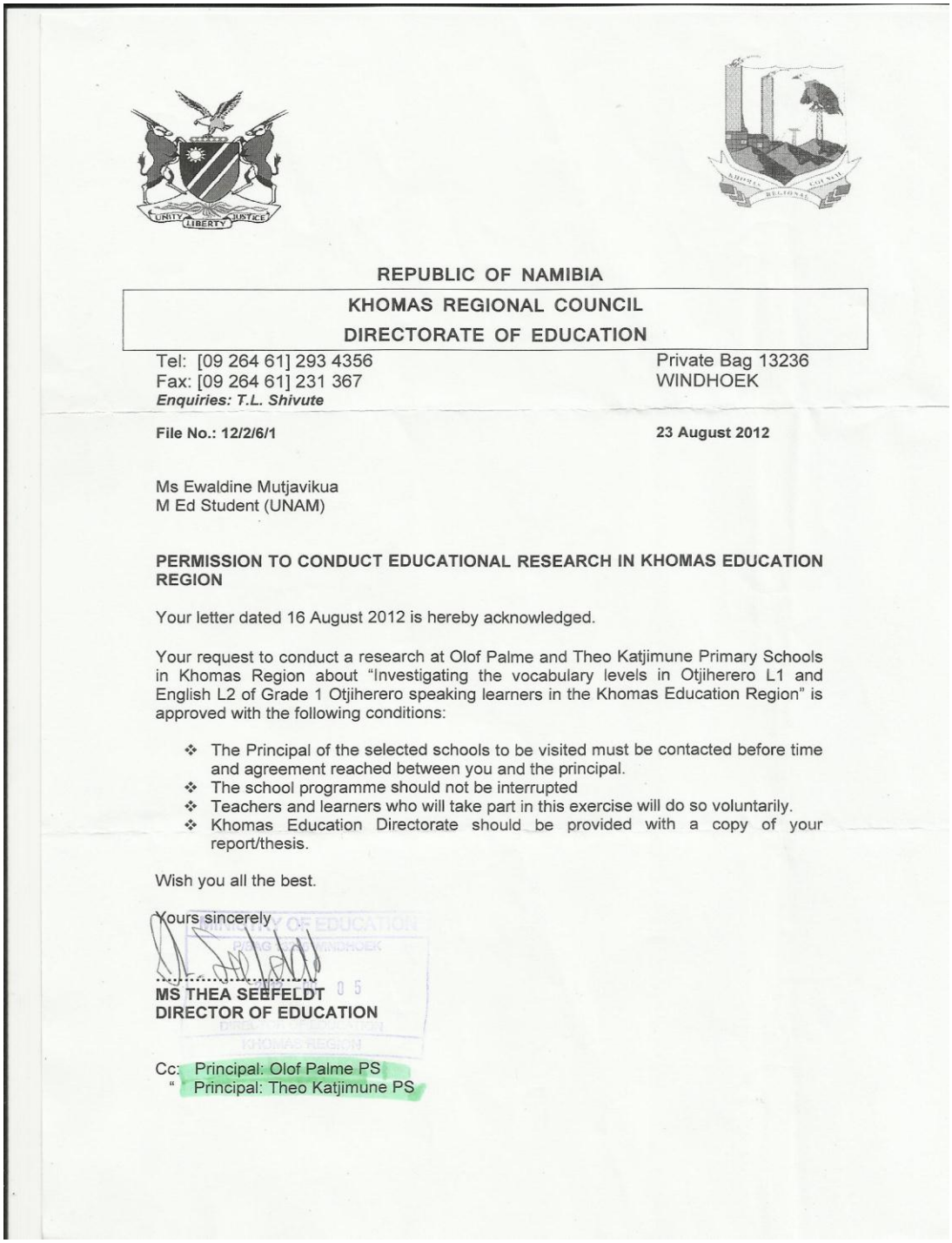
Number of Errors ____

Pronunciation Key

ay = long a	u = short u	oo as in *loot*	ee = long e	j = soft g	uh as in *shove*	iy = long i
g = hard g	oy as in *coin*	oh = long o	s = soft c	ar as in *farm*	yoo = long u	k = hard c
uhr as in *circle*	a = short a	ow as in *loud*	ir as in *cheer*	e = short e	aw as in *law*	ayr as in *chair*
i = short i	uu as in *foot*	ohr as in *shore*	o = short o			

Note: CAPS within pronunciation indicate primary stress.

APPENDIX C - Letter from Education Director



REPUBLIC OF NAMIBIA

KHOMAS REGIONAL COUNCIL
DIRECTORATE OF EDUCATION

Tel: [09 264 61] 293 4356
Fax: [09 264 61] 231 367
Enquiries: T.L. Shivute

Private Bag 13236
WINDHOEK

File No.: 12/2/6/1

23 August 2012

Ms Ewaldine Mutjavikua
M Ed Student (UNAM)

PERMISSION TO CONDUCT EDUCATIONAL RESEARCH IN KHOMAS EDUCATION REGION

Your letter dated 16 August 2012 is hereby acknowledged.

Your request to conduct a research at Olof Palme and Theo Katjimune Primary Schools in Khomas Region about "Investigating the vocabulary levels in Otjiherero L1 and English L2 of Grade 1 Otjiherero speaking learners in the Khomas Education Region" is approved with the following conditions:

- The Principal of the selected schools to be visited must be contacted before time and agreement reached between you and the principal.
- The school programme should not be interrupted
- Teachers and learners who will take part in this exercise will do so voluntarily.
- Khomas Education Directorate should be provided with a copy of your report/thesis.

Wish you all the best.

Yours sincerely

.....

MS THEA SEEFELDT
DIRECTOR OF EDUCATION

Cc: Principal: Olof Palme PS
" Principal: Theo Katjimune PS