A STUDY TO DETERMINE THE AFRIKAANS AND ENGLISH VOCABULARY LEVELS OF GRADE ONE AFRIKAANS MOTHER TONGUE LEARNERS IN WINDHOEK

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION (EARLY CHILDHOOD DEVELOPMENT) OF THE UNIVERSITY OF NAMIBIA

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ABSTRACT

Vocabulary is key in the development of language, cognition and academic achievement. Learners, coming from different backgrounds, vary in the amount of vocabulary that they bring to school. Low vocabulary levels may contribute to reading difficulties which, in turn, affect later reading and general school success negatively. Reading is perceived as a major challenge in Namibian schools; therefore, this study investigated the vocabulary levels, as well as the class reading levels, in both Afrikaans first language (L1) and English second language (L2) of Grade One Afrikaans mother tongue learners. The class reading levels were assessed by teachers, who used a five-point assessment scale provided by the Ministry of Education, Sport and Culture. A standardised test, the Peabody Picture Vocabulary Test (PPVT 4) was administered to determine the learners’ vocabulary levels. A quantitative research design was employed and 102 Grade One learners from three different schools in Windhoek were selected through purposive, criterion sampling. A one-sample t-test was used. It determined that there was a significant difference between the mean scores for Afrikaans Vocabulary Age and English Vocabulary Age and the chronological ages of the learners. Learners performed slightly better in the Afrikaans test than in the English test. The chronological age of the learners in the three schools were the same, but differences with regards to Afrikaans and English reading class assessment were observed. Further research is required before any final conclusions can be made about the vocabulary levels of Afrikaans speaking learners. Recommendations pertaining to further research, as well as policy monitoring and evaluation, were made.
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DEDICATION

This work is dedicated, firstly, to my wonderful and precious children, Allan, Laura-Lee, Eathon and Carol. Thank you for your love, encouragement, patience and support during the time of my studies. Secondly, I dedicate this work to all language teachers and lecturers that inspired my love for vocabulary and languages.
DECLARATIONS

I, Lorraine Hendrina Feris, declare hereby that this study is a true reflection of my own research and that this work or part thereof has not been submitted for a degree in any other institution of higher education.

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Lorraine Hendrina Feris                        April 2017

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CHAPTER 1

INTRODUCTION

This chapter describes the background and setting of the language situation in Namibia. It describes what motivated the study, how the research objectives were formulated, and introduces the reader to the Namibian education context. The problem statement, objectives, significance and limitations of the study, as well as clarifications of concepts are also discussed.

1.1 ORIENTATION OF THE STUDY

Namibia has a small population of 2.2 million people, with a large linguistic variety (Namibia Population and Housing Census, 2011). Most Namibians speak Bantu languages, such as Oshindonga and Otjiherero, as their first language (L1), while others speak Khoisan languages, such as Khoekhoegowab and various San languages. Smaller percentages of the population are native speakers of Indo-European languages, such as German and English, as well as Afrikaans. Afrikaans was the most widely understood and spoken language. It was promoted as a language of wider communication before Namibia’s independence and is still widely spoken in southern and central Namibia (Lewis, 2009; Maho, 1998). Afrikaans was also widely used in the media, together with English and German, while the indigenous languages were mainly used in the context of family and interpersonal relations, and in environmental and recreational contexts. This
effectively led to Afrikaans being seen as symbolising the oppressive apartheid ideology. (Maho 1998).

At Independence in 1990, regardless of the fact that only a very small section of the Namibian population (less than 2%) could speak, read and write English as their native language, the decision was made to institute English as the country’s official language. English was chosen as the official language for government and education, because it was not associated with any particular ethnicity, and could facilitate interaction with the outside world (Lewis, 2009). Maho (1998) proposes that English was the only possible choice of an official language in a future independent Namibia as it could unite the Namibian population into one nation. English, which was regarded as politically neutral, even though it had been a former colonial language, was considered the only possible unifying language for Namibia.

This decision was well supported in the hope that the language would unify the people of Namibia (Tötemeyer, 2010). Although the Namibian constitution makes provision for the use of other languages for educational, legislative, administrative and judicial purposes under certain circumstances, English has been predominant since Independence, to the extent that the other languages are rarely used for official purposes (Tötemeyer, 2010).

The language policy of schools in Namibia states that from Grade One to Grade Three learners should receive education in their mother tongues. The mother tongue becomes a subject from Grade Four onwards while English takes over as the medium of instruction
The multilingual nature of Namibian schools obviously complicates the task of educators, especially in the first three Grades, and has resulted in the ineffective implementation of the mother tongue as medium of instruction. There are schools that are unable to provide instruction in the mother tongue because they lack the necessary materials and human resources in order to implement mother tongue instruction. It becomes difficult in selecting one mother tongue as the medium of instruction for various reasons. Learners with diverse mother tongues are found in one classroom, learners are staying in areas where their mother tongue is not offered as medium of instruction or there are insufficient numbers of learners. It might have been the parents’ decision, either by collectively introducing a different medium of instruction in a school, or by enrolling their child in a school with a different medium of instruction. In an attempt to overcome these challenges, some schools have opted for English as medium of instruction from Grade One, and this may have resulted in the neglect of the mother tongue (Wolfaardt, 2004), thus depriving learners of the opportunity to learn through their mother tongues, as stipulated in the language policy (Ministry of Basic Education, Sport and Culture, 2003). Numerous schools also do not offer Namibian indigenous languages as subjects for study from Grade Four to Grade Twelve.

In a multilingual situation, such as that of Namibia, an important factor for the education of children is the context in which language and literacy acquisition occurs (Baker, 2007). Learning a L2 depends on learning its vocabulary, and learning foreign language vocabulary, such as that of English, is a complex process, because learning vocabulary is
not merely understanding the meaning of words, but also knowing how to spell and pronounce them (Griffiths, 2003). Vocabulary is a basic component of language proficiency. Graves (2009) states that the importance of vocabulary is central to English language teaching, and strong vocabulary is needed to develop other skills, such as listening, speaking, reading and writing.

Mastering vocabulary is not just important, but one of the most crucial tasks in a foreign language environment (Weitzman & Snow, 1998, as cited in Romanik, 2007). Vocabulary knowledge is inseparable from reading comprehension; thus, improving learners’ vocabulary means improving their capacity to learn more. The larger a learner’s vocabulary knowledge, the better access that learner would have to different sources of information. Comprehension is the ultimate goal of reading. Good comprehension leads to reading enjoyment, and reading enjoyment leads to more time invested in reading. More time invested in reading leads to increased comprehension, as learners can understand more and be understood better by others (Graves, 2009). Wolfaart (2004) indicates that a high proportion of learners were confused by the L2 (English) in which they were taught. She is, furthermore, of the opinion that learners want to succeed at school and in English in particular, but do not understand their subjects well enough because of the language problem.

Baumann (2005) suggests 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
(2012) 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 enroll their children in English Medium instruction classes as from Grade One, 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 in 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. Thus, parents are 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.

1.2. STATEMENT OF THE PROBLEM

Vocabulary is seen as one of the most essential elements that contribute significantly to reading (Nation, 2002). Hart and Risley (2003) state that early vocabulary acquisition plays an important role in the development of decoding skills, reading comprehension and ultimately school success. Research has shown that L2 readers rely heavily on vocabulary knowledge. It is also widely accepted that communicating adequately and efficiently in another language is strongly dependent on a good command of vocabulary.
items. Language learners with insufficient knowledge of vocabulary are generally impeded in their academic activities (Nation, 2002).

According to a UNICEF survey (2003) on the reading skills of Grade Six learners in Africa, only 7.6% of all Namibian Grade Six learners could read well, while another 25.9% possessed minimum reading competency (UNICEF, 2003). This suggests that two-thirds of Namibian Grade Six learners could hardly read or could not read at all. Evidence that reading levels in Namibian schools are insufficient can also be found from the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ II, and III) reports of Grade Six learners. According to the SACMEQ III report, Namibia’s average reading score was 496.6. This result falls below the set expectation of 500 (Mukuwa, 2010). Furthermore, the Directorate of National Examination and Assessment Reports on the Grade Ten and Twelve examinations state that candidates do not know how to read with understanding (Ministry of Education, 2012). It was also reported that the Grade Ten learners were failing to answer most of the comprehension questions correctly as they lacked the vocabulary to understand what they were being asked (EMIS, 2009).

Research suggests that there is a strong link between vocabulary and reading (Nation, 2002). Young learners vary in the amount of vocabulary that they bring to school, and low vocabulary levels may contribute to reading difficulties which, in turn, affects later reading and general school success negatively. Since very little research to date was done on the vocabulary levels of Grade One learners in Namibia, the present study
sought to investigate these levels in both Afrikaans (L1) and English (L2) of Grade One Afrikaans mother tongue learners.

1.3 OBJECTIVES OF THE STUDY

The overall aim of this study was to determine the vocabulary levels in both English and Afrikaans of Grade One Afrikaans mother tongue learners in Windhoek. The specific objectives are:

1. To determine the vocabulary levels for both Afrikaans (L1) and English (L2) of Grade One Afrikaans mother tongue learners.

2. To determine the reading competency for both Afrikaans (L1) and English (L2) of Grade One Afrikaans mother tongue learners.

3. To compare the vocabulary age and reading competency of the above learners with regards to sex and school type.

1.4 SIGNIFICANCE OF THE STUDY

The findings from this research could create an awareness and understanding of parents and teachers regarding the importance of, and connection between, early vocabulary acquisition and the initial reading of learners. The findings of this study could be shared with institutions that are responsible for training language teachers, especially language departments, to become aware of the importance of increasing learners’ vocabulary.
Additionally, these findings could shed light on why Namibian learners fail to make progress in reading as the existing vocabulary that children have in Grade One, for both Afrikaans (L1) and English (L2), will be made known to the Ministry of Education. It may highlight the current relationship between vocabulary and reading, and the effects this has on children’s academic success throughout their educational journey. Lastly, the results of this study could assist parents to make more informed decisions regarding the language instruction of their children in initial Grades, in order to address the reading problem in Namibian schools.

1.5 LIMITATION OF THE STUDY

The study was conducted at only three schools in Windhoek, in the Khomas Region of Namibia. Therefore, the results cannot be generalised to other regions. The Peabody Picture Vocabulary Test (PPVT 4) was used to assess the vocabulary levels of Grade One mother tongue learners in both Afrikaans (L1) and English (L2). The (PPVT 4) is a norm-referenced test developed for English speakers in the USA. This test measures both receptive and expressive vocabulary for standard American English, but was translated into Afrikaans before the test was administered to the learners in Namibia. 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 4) is not
standardised for Namibia. However, the researcher is of the opinion that this should not have made a significant difference since the test items used at the Grade One level reflected normal body and household picture items that should also be quite familiar to the Namibian learners.

The researcher could not assess respondents’ reading performance herself. The assessments by teachers were chosen as they were in contact with the learners throughout the year. However, since different schools and teachers were involved, differences in assessment may have occurred due to the subjective nature of reading assessment. This was partly mitigated by the fact that all teachers used the same five-point scale for reading assessment, as provided by the Ministry of Education. This added to the reliability and validity of the assessment.

1.6 CLARIFICATION OF CONCEPTS AND TERMS

The following terms will be used frequently and, therefore, need to be defined in the context of this study.

**Mother Tongue** refers to the first language which a child acquires at home (Ministry of Basic Education, Sport and Culture, 2003).

**First language (L1)** refers to a person’s language acquired first. In multilingual communities, however, where a child may gradually shift from the main use of one language to the main use of another (e.g. because of the influence of a school language),
first language may refer to the language the child feels most comfortable using (Richards & Schmidt, 2010).

**Second Language (L2)** refers to any language learned after one has learnt one’s native language. However, when contrasted with foreign language, the term refers more narrowly to a language that plays a major role in a particular country or region though it may not be the first language of many people who use it. For example, English is also a second language for many people in countries like Nigeria, India, Singapore and the Philippines, because English fulfils many important functions in those countries (including the business of education and government) and learning English is necessary to be successful within that context. (Some people in these countries however may acquire English as a first language, if it is the main language used at home.) (Richards & Schmidt, 2010).

**Medium of instruction** refers to the language through which a subject is taught (Ministry of Basic Education, Sport and Culture, 2003).

**Vocabulary** refers to all the words which exist in a language that are used by, and are familiar to a particular person (Richards & Schmidt, 2010).
Active vocabulary (expressive vocabulary) also refers to all the words that learners understand and all the words that they can use themselves in a sentence or utterance which has both propositional meaning and illocutionary force. (Richards & Schmidt, 2010).

Passive vocabulary (receptive vocabulary) refers to all the words that a learner understands when he/she reads or listens, but which he/she does not use or cannot remember in his/her own writing and speaking. Passive vocabulary includes the total number of words a person understands, either in reading or listening (Richards & Schmidt, 2010).

Chronological age refers to the age of any person measured in years, months and days from the day that that person was born (Dunn & Dunn, 2007).

Vocabulary age: In this study vocabulary age refers to a child’s oral vocabulary knowledge as measured by the PPVT 4 test. This test provides a variety of scores that indicates a child’s receptive vocabulary as compared with the vocabulary skills of children of the same chronological age (Dunn & Dunn, 2007).
1.7 STRUCTURE OF THE STUDY

In the first chapter the orientation of the study was discussed. This included the statement of the problem, objectives, significance and limitations of the study, as well as the clarification of concepts and terms. The second chapter focuses on the theoretical framework and literature review. The third chapter discusses the research methodology. The research findings are presented in the fourth chapter. Lastly, the discussion, limitations and recommendations are presented in Chapter Five.
CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

The level of vocabulary that a child has acquired during his/her early years may have an impact on several factors when he/she starts with formal schooling. It may have an influence on his/her reading abilities and overall academic performance. This chapter discusses the theoretical framework which underpins this study. It reviews literature about the definitions of vocabulary, the importance of vocabulary acquisition in the early years, estimates of school entry vocabulary levels and factors influencing vocabulary acquisition. It also reviews the relationship between vocabulary and reading, as well as vocabulary development and gender. Finally, the language policy in Namibia is discussed.

2.2 THEORETICAL FRAMEWORK

This study is based on the sociocultural theory of Lev Vygotsky (1897), who assigns great importance to external influences, for example, language, social interaction and the larger society. Vygotsky’s theory explains that language development takes place in the sociocultural context, and that learners learn as a result of their social interactions with others. He describes the child’s development as inseparable from social and cultural activities. He states that the child is completely dependent on other people, usually the parents, who initiate the child's actions by instructing him/her about what to do, how to do it, as well as what not to do, and as a result they build their vocabulary (Vygotsky,
Young children talk about things that are happening around them, and quickly build their vocabulary through their daily routines (Richards, Daller, Malvern, Maera, & Milton, 2009). A child builds vocabulary through repeating words and actions continually, and adults will attract their attention by using instructions, such as ‘wash your hands’, ‘brush your teeth’, ‘eat your food’, etc. Such repetitions of actions and naming of things that they hear daily add to their vocabulary and enhance understanding when they speak with others and adults at home (De Witt, 2009). Learners imitate the language used by their parents, or what is frequently spoken by their parents and teachers. Thus, in spending time interacting with more competent peers and adults, learners will acquire more new words and expressions which they can add to their own vocabulary.

The theory also suggests that learning takes place within the Zone of Proximal Development (ZPD). The ZPD is the level at which learning takes place, and can be explained in terms of task difficulty level. For example, if a task is very simple for an individual learner, no help is needed from the teacher. The learner regulates his/her own behaviour, and little new knowledge is constructed in this zone. If the task requires thinking just above the learner’s level of current mastery, that learner can learn with help from a knowledgeable other, for example a teacher, ‘expert’ or peers. When a task is too difficult for the learner to perform at all, the teacher should intervene and clarify or simplify the task, so that learning can take place within the ZPD of the child (Trawick-Smith, 2008).
In the ZPD, children can achieve the task set before them, initially with some adult assistance, and then gradually on their own. For example, if a six-year old is reading a book and becomes stuck on a word, the mother, who has a higher level of education, may use her advanced education in interactions with her child. Independent reading is the ultimate goal, but what if the child is close to figuring out the word on his/her own? This would be a situation within the ZPD and a moment when an adult might be most effective in promoting literacy. The mother may give a hint or ask an interesting question to guide the child in solving his/her own problem, for example, asking what word in the story would start with that sound. To Vygotsky, such interactions are most powerful in promoting learning. The ZPD is thus a period of problem-solving when a task is just beyond a child’s level of mastery. This is a time when an indirect prompt or question can help children solve the problem independently (Trawick-Smith, 2008).

When teachers use language and encourage children to do the same, they are enhancing thought, as well as speech (Trawick-Smith, 2008).

Scaffolding refers to the assistance that adults and more competent peers provide during learning experiences, and is essential for English language learners (Trawick-Smith, 2008). Scaffolding is a special kind of help, a temporary assistance, where learners are assisted to progress towards new skills, concepts and levels of understanding. The teacher helps the learners to understand how to do something in order for them to do a task independently by means of their own thinking and actions at a later stage (Trawick-Smith, 2008). This support can take the form of questions, hints, clues, reminders, encouragement, breaking down the problem into steps, providing examples or anything
else that allows the learner to master concepts and ideas to solve the problem, which they cannot understand independently on their own (Santrock, 2011). When scaffolding, adults offer direct solutions to problems, indirectly guide children with hints or questions, or allow them to think completely independently, depending on what they need to learn.

Vygotsky’s (1897) view of cognitive development places greater emphasis on language and social interaction. He argues that a critical aspect of learning is scaffolding, in which adults or other children guide thinking. Adults give support or guidance for some part of a task or activity, and then gradually give over regulation of the experience to children. By doing this, adults help children become more and more independent in their thinking and actions. Vygotsky (1897) has argued that children’s thinking is highly influenced by interactions and conversations with more knowledgeable others.

2.3 DEFINITIONS OF VOCABULARY
Receptive vocabulary refers to all the words in a person’s language collection that that person can understand and respond to, even if the person cannot produce those words. It also includes spoken, written or manually signed words (Richards & Schmidt, 2010). In contrast, expressive vocabulary refers to words that a person can express or produce, for example, by speaking or writing (Richards & Schmidt, 2010). In general, receptive vocabulary appears to develop before expressive vocabulary over the course of early language development, and the receptive vocabulary is generally larger than the
expressive vocabulary. An individual's receptive vocabulary includes all the words that he/she recognises and understands upon hearing or reading them. In contrast, expressive vocabulary contains the words that he/she is able to produce (Richards & Schmidt, 2010). Words can be understood to varying degrees; therefore, the words in one's expressive or receptive vocabulary may not necessarily all be understood at the same level. Generally speaking, one can recognise and understand more words than one can actually produce, as contextual cues or similarities to other words may make an otherwise unfamiliar word understandable. Though both reading and listening are parts of reception, the size of one's receptive vocabulary may differ slightly between the two categories.

Owen (2001) defines expressive language as the ability to use vocabulary and to put words together into sentences to express yourself. It covers vocabulary, use of grammar and reasons for communication, for example, asking for things, making comments and getting attention. Owen (2001) defines receptive language as the ability to understand what is said to someone, and explains that a person’s understanding always develops ahead of expressive language. For example, a child who understands three key words in a sentence may only speak in single words.
2.4 VOCABULARY ACQUISITION IN THE EARLY YEARS

Words are the building blocks of language and without them there is no language (Graves, 2009). Vocabulary is an essential area of a child’s development because the acquisition of vocabulary is key in the development of language, cognition and academic achievement (Graves, 2009). Children are not formally taught to use spoken language. They learn language mainly through listening to others, copying sounds, words and, eventually, phrases and sentences that they hear other people use in specific repetitive contexts. Gradually, at about the age of three, they start using words, although not always correctly pronounced (Friend, 2008). At the age of four their sentence structures are correct and include prepositions. Thereafter there is a rapid increase in their vocabulary, and they are able to speak about a larger variety of topics and remember content for longer periods of time (Friend, 2008).

The vocabulary acquired during the early years of development plays a vital role in preparing children for pre-primary, primary, secondary school and beyond (De Witt, 2009). Many researchers support the view that parents and communities indeed have the main impact on children’s vocabulary and language acquisition (Gordon & Browne, 2004). This is in accordance with Vygotsky’s theory which explains that language development takes place in the sociocultural context, and that learners learn as a result of their social interactions with others. Vygotsky describes the child’s development as inseparable from social and cultural activities, and researchers urge parents to work together in preparing children for school by giving them the support they need during their pre-school years (De Witt, 2009). Such support will include involving children in
everyday-life activities, such as movement, conversation, play, drawing, singing traditional songs and storytelling around the fire. During those specific occasions, children are exposed to new vocabulary, and parents can prepare children for school and enrich their vocabulary with books and other resources (De Witt, 2009). 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).

Young children talk about things that are happening around them, and build vocabulary through continually repeating words and actions. Such repetition of actions and naming of things that they hear daily add to their vocabulary, and enhance understanding when they speak with others and adults at home (De Witt, 2009). Nation (2002) supports 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. Consequently, teachers are encouraged to use texts which are related more to the children’s environment as it will gain their attention, and the children will be willing to participate in such discussions. Children who are motivated and encouraged have a good chance to relate things to their previous experience and this puts them at an advantage (Olivier, 2000).

Through parental support, the child slowly starts to develop physically, affectively, socially, linguistically and cognitively (De Witt, 2009). Under a watchful eye,
inspiration, encouragement and loving support from the individual child’s family members, especially older siblings and the neighbourhood at large, a new world will be opened, and their experience will increase and expand (De Witt, 2009).

2.5 ESTIMATES OF SCHOOL ENTRY VOCABULARY LEVELS

Every child has gained a certain amount of vocabulary during the initial years, and they enter school with significant differences in their vocabulary size (Beck & McKeown, 2004). Researchers in vocabulary development agree that there is a period of increased development, a ‘spurt’, that occurs in vocabulary acquisition between ages two and four, in which the child’s vocabulary increases at a very rapid rate before levelling out (Huttenlocher, Haight, Bryk, Seltzer, & Lyons, 1991; Wise, Sevcik, Morris, Lovett & Wolf, 2007). This is a very sensitive period in vocabulary growth, and the amount of vocabulary that children acquire during the early years of development plays a significant role in their academic success (Huttenlocher, et al., 1991). Therefore, parents and teachers are encouraged to use texts which are related more specifically to the children’s environment, as it will gain their attention and the children will be willing to participate in those discussions (Olivier, 2000).

Moats (2001) states that, at the age of four years, children from professional families should have a developed vocabulary of 1100 words, children from working class families should know 700 words, and children from welfare families 500 words. Moats (2001) also found that linguistically ‘rich’ Grade One learners knew 2000 words
opposed to linguistically ‘poor’ Grade One learners who knew only 500 words. In order to bridge the gap between linguistically ‘rich’ and ‘poor’ Grade One learners, children need to learn 800 and more words per year, about 2 words per day in Grade One and Grade Two. From Grade Three onwards learners need to learn on average 2000 to 3000 new words each year, about 6 to 8 new words per day (Moats, 2001). Beck and McKeown (2004) as well as Baumann (2005) agree that children between the ages of five and seven should have acquired a receptive vocabulary of between 2500 and 4500 words in their home language (L1). Weitzman & Snow (1998 as cited in Romanik, 2007) state that the estimates of children’s vocabulary when they begin school can range from 3000 to 6000 words, while Biemiller (2005) found that, on average, learners knew about 6000 words by the end of Grade Two. The literature is thus not very exact with regards to expected vocabulary levels associated with specific age categories. In Namibia, the National Curriculum for Basic Education (Ministry of Basic Education, Sport and Culture, 2005) states that a child should have a vocabulary of about 2000 receptive words in his/her mother tongue (L1) in listening and speaking by the end of Grade One, 3000 words in Grade Two, and 4000 words in Grade Three. This suggests a vocabulary growth of about 1000 words per year during the initial three Grades. In addition, for English L2, learners should know about 500 words in Grade One, 1000 words in Grade Two and 1500 in Grade Three (Ministry of Education, Sport and Culture, 2012).

Research has shown that the gap between linguistically ‘rich’ and ‘poor’ Grade One learners continues to grow wider as linguistically ‘poor’ learners will continue to lag
significantly behind more linguistically ‘rich’ learners as they move past Grade Three (Stanovich, 2000). Children, who enter kindergartens, while lacking oral language skills, have a hard time making up the gap in Grade One (Moats, 2001). Although, it would seem that a vocabulary of 2000 words by the end of Grade Two would be enough to read any short text, it is not enough to read with ease, as there are still too many unknown words (about one in every two lines).

Researchers have debated on the amount of vocabulary that a child should have by the time he/she begins school or the amount of vocabulary that an individual should have, based on his/her chronological age (Nation, 2002). The question arises as to whether Namibian Afrikaans L1 learners have gained the expected L1 and L2 vocabulary by a given age as specified by the school curriculum. Little research has been done in Namibia to investigate whether Namibian Afrikaans learners have really gained the required vocabulary as specified by the National Curriculum for Basic Education for Lower Primary learners; therefore, this research study attempted to fill that gap. Low vocabulary levels may also be a contributing factor to Namibian learners’ failure.

2.6 FACTORS INFLUENCING VOCABULARY ACQUISITION

Language experts have identified various factors that influence language learning and children’s vocabulary development. Gordon and Browne (2004), amongst others, identify the following factors as having significant influence on increasing children’s vocabulary acquisition. These factors include the family and socio-economic status,
environment, and socio-dramatic play. Each of these factors will be explained in detail, as well as how each contributes to children’s vocabulary.

2.6.1 Family and socio-economic status

Through parental support, the child slowly starts to develop physically, affectively, socially, linguistically and cognitively (De Witt, 2009). If parents support their children and create a space where the child will feel safe, loved and protected, the child will feel comfortable, encouraged and willing to learn new vocabulary (De Witt, 2009). Such an environment makes it easier for the child to learn and be exposed to different things in and around the house. Therefore, researchers urge parents to give children the necessary support they need by involving children in everyday life activities which expose them to new vocabulary (De Witt, 2009). The availability of books in the home is an important stimulating factor. Reading stories and singing songs to children develop good listening, speaking and writing skills, and enhance bonding and communication between parents and children (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).

Studies have shown that the socio-economic status (SES) of the family is positively correlated to a child’s vocabulary growth (Biemiller, 2005). Vocabulary growth is also encouraged by the amount of speech to which a child is exposed (Huttenlocher, et al., 1991). During the time of enhanced vocabulary growth, many children spend most of their time with their primary caregiver, usually the mother. The amount the mother talks
to her children is associated with SES. Women of a higher SES tend to have a higher level of education, and mothers of a higher level of education tend to talk to their children more (McLoyd, 2006). They use a more diverse vocabulary when talking to their children and this has been positively correlated with vocabulary growth (McLoyd, 2006). Their children tend to have larger, more diverse vocabulary, as their mothers engage more in conversations, and use more words when they talk to their children (Biemiller, 2005). On the contrary, parents of lower (SES) are at the highest risk for difficulty in providing children with responsive interactions because of life stresses and psychological distress (McLoyd, 2006). Children’s socio-economic backgrounds and the language use in their homes and communities can significantly influence opportunities to expand their vocabulary (Biemiller, 2005). Parental education is also a crucial factor in determining the child’s vocabulary during the early years of development. Educated parents have the opportunity to influence their children’s vocabulary 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).

Since the use of rich and varied vocabulary is an important form of parental input for children’s later language development and potentially reading competence. Therefore, we know that SES, word exposure and lexical diversity correlate positively to vocabulary development.
2.6.2 Environment

A child learns the language that is spoken in his/her environment, the language of his/her parents, family, neighbourhood and the region. Children’s language reflects their educative setting through the acquisition of vocabulary and phrases, the local speech, the daily typical expressions and the greetings that are frequently used in their surroundings (De Witt, 2009). Through language, the child becomes a part of his/her environment and its world of thoughts and views. If the child grows up in an educationally rich environment, the child will learn more about different aspects at an early age and this will motivate him/her to learn more (Olivier, 2000). Children, who are motivated and encouraged have a great chance to relate concepts to their previous experience and this puts them at an advantage (Olivier, 2000).

Research focusing on vocabulary instruction development has shown that diverse reading and diversified vocabulary curricula are key to helping learners build a large vocabulary in school (Graves, 2009). These are elements typically practised in a school environment, but the acquisition of vocabulary begins long before children are of school-going age (see 2.4) therefore, the factors that influence development during early childhood are also important. It is thus very important that children should be raised in a rich environment that is conducive to learning and that will allow them to reach their full potential.
2.6.3 Socio-dramatic play

In sociodramatic play, children try out adult-like phrases and intonations as they enact their make-believe roles. Socio-dramatic play is an important step between the concrete thought process of early childhood and the more abstract thinking of adulthood (Vygotsky, 1897). The socio-dramatic play setting is a safe and noncritical arena for exercising mental skills (Shore, 2006). Vygotsky (1897) explained these language-play connections by noting that both involve symbolic thought. This kind of play allows children to practise using symbols. For example, when children pretend that a wooden rod is a broom or make noises to represent the wind, symbols are being used: the rod stands in for a broom and the noises stand in for the wind, much like words stand for ideas (Trawick-Smith, 2008). The child freely starts with an activity that is often done at home and gets the feeling that he/she is doing something by themselves. Young children imitate people at home and it naturally involves to activity. Though these activities are often not important, the child tends to take them very seriously, and enjoys every moment. The activity associated with young children’s imitation are reported to be a way of building up and increasing their learning and vocabulary acquisition (De Witt, 2009). These voluntary activities that the child performs are for enjoyment as the child perceives them mainly as a type of play.

Pre-school age children are highly imaginative. They tell elaborated stories, interpret and reinvent their lives in their drawing and writing, and create fanciful worlds through make-believe play (Shore, 2006). For example, in language play, older children, in
particular, like rhyming and making nonsense words which eventually lead to a conversation. Similarly, in fantasy play, which involves playing out different roles, for example, playing school or house-house, 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 expression of their world. They are able to do all these things because they possess symbolic thought (Vygotsky, 1897).

For pre-schoolers’ social and language interaction is especially critical for learning, and strong connections have been discovered between socio-dramatic play and language or language-related abilities, such as reading (Trawick-Smith, 2008). The act of playing enhances intellectual growth, and those who play often become intellectually more competent (Bergen, 2006).

Researchers also consider other types of play that significantly contribute to children’s vocabulary acquisition and learning. 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) (De Witt, 2009).
Play has been reported by many child psychologists as having an important effect on children’s vocabulary, learning and development during their early years. It contributes a great deal to children’s physical, cognitive, social and personal development, and is seen as an important part of children’s lives. Thus, children should not be denied the opportunity to play with other children at home and in their neighbourhood (De Witt, 2009).

2.7 THE RELATION BETWEEN VOCABULARY AND READING

Vocabulary is seen as a core component of reading instruction, and plays an important role in word recognition, as learners who begin to read use their knowledge of words from speech to recognise words that they encounter in print (National Reading Panel, 2000).

When learners ‘sound out’ a word, their brains are working hard to connect the pronunciation of a sequence of sounds to a word in their vocabulary. If they find a match between the word on the page and a word they have learned through listening and speaking, and it makes sense to them, they will keep on reading. If a match is not created, because the word they are reading is not found in their vocabulary, comprehension is interrupted (Chall & Jacobs, 2003). Learners’ word knowledge is linked strongly to academic success, because learners who have a large vocabulary can understand new ideas and concepts more quickly than learners with a limited vocabulary. The high correlation in the research literature of word knowledge with
reading comprehension indicates that if learners do not grow their vocabulary knowledge adequately and steadily, reading comprehension will be affected (Chall & Jacobs, 2003). Vocabulary is, therefore, important for learning to read, as well as for reading to learn.

For understanding of text, learners need to be familiar with the meaning of at least 95 percent of words in any book or passage they read. Learners lacking adequate vocabulary have difficulty attaining meaning from what they read; consequently, they read less, because they find reading challenging. Without reading more challenging texts, they cannot learn the vocabulary they need in order to read further challenging texts (Chall & Jacobs, 2003). As a result, they learn fewer words because they are not reading widely enough to encounter and acquire new words. On the other hand, learners with a well-developed vocabulary read more, which advances their reading skill and extend their vocabulary (Chall & Jacobs, 2003).

Good oral vocabulary (words we use in speaking and listening) is linked directly to later success in reading, and learners who have more vocabulary knowledge in kindergarten become better readers than those who have limited vocabulary (National Institute for Literacy, 2001). Nation (2002) states 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. Insufficient vocabulary is seen by most researchers as one of the core factors that hinders children’s reading (De Witt, 2009). Laufer (1997) confirms that
reading comprehension is strongly and more powerfully connected to vocabulary knowledge than any other component of reading. Graves (2009) is of the opinion that vocabulary knowledge in kindergarten and Grade One is a significant predictor of reading comprehension in the middle and secondary Grades, and that vocabulary difficulty strongly influences the readability of text. Graves (2009) states that teaching vocabulary helps learners understand and communicate with others in English, and can improve reading comprehension for both native speakers and English language learners. 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. Therefore, these studies point to vocabulary as an essential aspect in reading comprehension.

2.8 VOCABULARY DEVELOPMENT AND GENDER

Gender is one of the most relevant factors used in second language acquisition (SLA) research to distinguish among learners. Although the majority of studies point to girls being superior to boys in language development, some studies (Jiménez, 2010; Webb, 2008) point to mixed results on gender differences with regards to vocabulary and language acquisition, and conclude that the relationship between vocabulary and gender is not yet conclusive. Sunderland (2010) claims that the relationship between vocabulary and gender may be influenced by factors such as L1, age or L2 proficiency.
Most research studies show that girls are socially and culturally more advanced than boys to develop language skills and to increase their vocabulary. According to Walsh, Shaughnessy, & Byers, (2011), girls talk earlier than boys, have larger pre-school vocabulary and use more complex sentence structures; they are ahead of boys in reading and writing. Boys are twice as likely to have a language or reading problem and three to four times more likely to stutter. Girls do better on tests of verbal memory, spelling and verbal fluency. On average, girls utter two to three times more words per day than boys, and even speak faster. Furthermore, Jiménez (2003) observed that girls were superior to boys in quantitative and qualitative terms, and specifically pointed out that female learners performed better than males in productive vocabulary. Jiménez and Moreno (2004) also pointed out that female learners performed better than males in productive vocabulary. On the other hand, Jiménez and Terrazas (2005) discovered no significant gender differences in performance in a receptive vocabulary test.

Stennes, Burch, Sen, & Bauer (2005; 2007) also found that girls had a more developed vocabulary and were more involved in reading than boys at 18 months. A study of 2-year-old twin that examined genetic and environmental origins showed that girls scored higher on verbal ability, measured by productive vocabulary (Galsworthy, Diomme, Dale, & Plomin, 2000). In a study on birth order, (Galsworthy, et al., 2000) also found that at 20 months, girls outperformed boys on all vocabulary competence measures on vocabulary comprehension and vocabulary production.
To the contrary, Boyle (1987) determined that boys are superior to girls in the comprehension of heard vocabulary. Similarly, Scarcella, and Zimmerman (1998) found that men performed better than women in a test of academic vocabulary recognition, understanding and use.

From the above it is clear that many studies have been devoted to researching gender differences in several areas of language acquisition. The results of these studies indicate, to some extent, contradictory findings, as some highlight the advantage of males over females, others emphasise girls being better language learners than boys, and others show that gender is irrelevant in second or foreign language acquisition. Therefore, the researcher also compared the vocabulary levels between boys and girls in the current study to see if comparisons were similar to the results found by other research studies.

2.9 THE LANGUAGE POLICY IN NAMIBIA

At Independence, in March 1990, Namibia chose English as its official language, replacing Afrikaans, the lingua franca of the country prior to its independence. The National Institute for Education Development (NIED), one of the directorates of the Ministry of Basic Education, Sport and Culture, was entrusted with the task of reforming and developing the curriculum. They were also responsible to integrate the new national language policy with English as the official language. The present Namibian language policy for schools states that learners should receive instruction in their mother tongue during the first three years of their primary school education. It also makes provision for
another medium of instruction, normally English, to be used, if the parents or other compelling circumstances require it. From Grade Four onwards the official language in Namibia, English becomes the medium of instruction and the mother tongue can be offered from Grade Four as a subject only (Ministry of Basic Education and Culture, 2003).

The increasing number of learners from different mother tongue backgrounds, especially in urban areas, a lack of teachers for different languages and the lack of necessary resources, such as books, are some of the contributing factors that favour the use of English as a medium of instruction, deviating from the Mother Tongue Policy. Secondly, many Namibians uncritically accept the belief that maximum proficiency in a second or foreign language, such as English, is achieved by being exposed to that language as a medium of instruction for as long as possible (Harlech-Jones, 1998). Acceptance of this belief of maximum exposure to English results in parents refraining from enrolling their children in mother tongue medium Grade One classes. This results in the question of which language should be used as medium of instruction from Grade One to Grade Three. In order to solve this problem and other problems experienced as a result of the extensive language diversity, some schools opt for English as medium of instruction from Grade One (Wolfaardt, 2004). Although Namibia attempted to introduce the second language gradually by offering it as a subject for the first three years of schooling, the period of exposure to English in an academic context is limited (Heugh, 1995). Expecting English L2 learners to become competent users of the language (as
medium of instruction or learning) in three to four years is unrealistic and irresponsible (Heugh, 1995).

### 2.10 SUMMARY

In this chapter consideration was given to the theoretical framework, definitions of vocabulary, the arguments regarding the importance of vocabulary in language acquisition and reading, expected vocabulary levels, factors that influence vocabulary, as well as vocabulary development and gender. Lastly, an overview of the language policy in Namibia was given. From the literature review it became clear that low vocabulary levels contribute to reading difficulties which, in turn, affects later reading and general school success negatively. Since very little research to date was done on the vocabulary levels of Grade One learners in Namibia, the present study sought to investigate these levels in both Afrikaans (L1) and English (L2) of Grade One Afrikaans mother tongue learners. The next chapter will explain the methodology that was employed to conduct this research.
CHAPTER 3

METHODOLOGY

3.1 INTRODUCTION

The methodology that the researcher used to conduct this study was directed by a quantitative approach. The purpose of this study was to determine the vocabulary age in both Afrikaans (L1) and English (L2) for Afrikaans speaking learners at selected primary schools in the Khomas region, and to answer the researcher’s objectives regarding the amount of vocabulary of Grade One learners. The study also aimed to assess both Afrikaans (L1) and English (L2) class reading levels.

The research design, population, sample and sampling procedures, research instruments, collection procedures and data analysis are discussed in this chapter. In addition, the procedures that were used to collect data and to analyse the data are also described.

3.2 RESEARCH DESIGN

The research design forms the foundation of any research process. The researcher employed a quantitative approach to this research, which is defined as the collection and analysis of numerical data, to describe, explain, predict and test or control the relationships between the variables of interest (Gay, Mills, & Airasian, 2009). This quantitative research study employed a descriptive and correlational design. The researcher used the Peabody Picture Vocabulary Test, (PPVT 4), a standardised test
(Dunn & Dunn, 2007), to collect and analyse data to determine the vocabulary age of Grade One Afrikaans mother tongue learners in both Afrikaans (L1) and English (L2).

3.3 POPULATION

The target population comprised Afrikaans mother tongue Grade One learners from schools in Windhoek that offer Afrikaans (L1) and English (L2) as the medium of instruction. Only learners who fulfilled the criterion of being Afrikaans mother tongue speakers formed part of the study. Nine schools fulfilled this criterion, and in these schools there were about (N=511) Afrikaans mother tongue Grade One learners.

3.4 SAMPLE AND SAMPLING PROCEDURE

Purposive sampling was used to select three schools that had the largest number of Afrikaans speaking Grade One learners. A purposive sample is a non-representative subdivision of some larger population, and is created to serve a very specific need or purpose (Babbie & Mouton, 2001). In this study, the researcher used purposive sampling because those being interviewed fitted a specific purpose or description. Due to a shortage of Afrikaans speaking Grade One learners, the results of the pilot testing were later included in the sample. At the time that the research was carried out, there was one school situated in Windhoek Central that had three classes of Afrikaans speaking Grade One learners, while the other two schools, with two Afrikaans speaking Grade One
classes each, were situated in Khomasdal. It was not possible to select schools from one suburb only; however, since the major criterion was schools that offered Afrikaans (L1), it was decided to proceed with these three schools which would also allow for a more balanced and reliable sample. A total of 102 Afrikaans mother tongue learners in the participating schools were selected for the test. It was critically important to have a large number of purposefully selected learners for the test in order to be confident that the results are representative.

49 learners from the school situated in Windhoek Central and another 53 from the two schools which were situated in Khomasdal were purposively selected. The rationale behind this purposive sampling procedure was that the researcher was looking specifically for Afrikaans mother-tongue speakers, as well as according every learner, who fulfilled the selection criteria, an equal opportunity to be selected. The sample consisted of a total of 102 learners. An attempt was made to include equal numbers of boys and girls in order for their vocabulary levels to be compared. Other background variables such as age, socio-economic status, and home literacy environment were not specifically controlled for, but it could be expected that these would be more or less similar since learners came from the same grade, and similar socio-economic areas.
3.5 RESEARCH INSTRUMENTS

Data were collected by using the Peabody Picture Vocabulary Test (PPVT 4), which is an individually administered, norm-referenced instrument that assesses receptive and expressive vocabulary and word retrieval for learners and adults aged from 2 years 6 months through to 90 years and older (Dunn & Dunn, 2007). The (PPVT 4) consists of two forms, the Receptive Vocabulary Test (RVT) and the Expressive Vocabulary Test (EVT). The researcher used the (RVT) as learners normally have a higher receptive vocabulary compared to their expressive vocabulary. This test consists of 190 items arranged in order of increasing difficulty. These items of the (PPVT 4) contain high-frequency, commonly used words, such as the names of primary colours and common household objects. Each test item contains four coloured pictures. The researcher would say one word or phrase that represents one of the four pictures and the learner would be required to identify (by pointing to) the correct picture on the item. The words or phrases of the (PPVT 4) are in English and the researcher translated these words or phrases into Afrikaans for the Afrikaans part of the study. These translations were verified by two language experts in an effort to increase the validity and reliability of the research instrument. Translations were only done for those items that were applicable to this particular research (items 37 to 84).
3.6 RESEARCH PROCEDURE

Prior to the assessment testing, the researcher calculated the chronological age of the learners to ensure that the test was commenced with the correct item according to the learners’ age. The test was administered in a quiet, well-lit room. It is important to point out that at the beginning of the test clear instructions were given to the learners. Furthermore, the researcher put the learners at ease, conveying a warm, relaxed attitude, and allowing them to become comfortable with the surroundings before commencing with the test. All learners were tested in English first, and two weeks later learners were tested in Afrikaans. This was done so that, when showing the pictures in English, there would be a reduced recall memory of the Afrikaans items.

The (RVT) was administered as instructed in the (PPVT 4) test manual (Dunn & Dunn, 2007). The items in each set are ordered in difficulty and grouped into sets of four pictures on a page that constitute one test item; each picture is numbered. The test administrator says a word describing one of the four pictures, and asks the individual to point to, or say, the number of the picture which corresponds to 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 determines at which test item each participant will start. In the event that a participant struggles to identify the words in his/her chronological age set, the researcher will restart from the previous age set. This procedure continues until the learner is able to identify words within an age set. This lower age set becomes the starting point for that particular learner. Each participant is tested until he/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/her ceiling set, the test administrator stops 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 to determine a raw score for each child. This score can then be converted to the child’s ‘vocabulary age’ (age equivalence). Prior to the administration of the tests, learners were thoroughly informed of how the test would be carried out. The participants were also informed about the anonymity with which the final results of the tests would be dealt.

In addition to the vocabulary test, the reading competence of learners for both languages was also recorded, based on their teachers’ assessments. Teachers used a five-point assessment scale to determine the learners’ reading competence in both Afrikaans (L1) and English (L2), as required by the Ministry of Education, Sport and Culture. Learners who obtained a ‘C’ symbol, which is a score of 2.7 and above, are considered to have achieved the basic reading competencies. This implies that a learner has mastered the basic competencies of reading satisfactorily in known situations and contexts, and can thus be promoted to the next Grade.

### 3.7 PILOT STUDY

According to Babbie and Mouton (2001), a trial study, carried out before a research design is finalised, assists in testing the feasibility, reliability and validity of the proposed study design. The school that was selected for the pilot study was in
Windhoek, and offered Afrikaans as a mother tongue from Grade One to Three. The researcher ensured that the (PPVT 4) was piloted before the actual study was conducted to ensure that the tests were relevant to the sample, and that the (PPVT 4) was given to learners who exhibited similar characteristics to the sample. The learners’ vocabulary performances in the pilot study were measured on the (RVT) in both English and Afrikaans. The results of the pilot test were used for the main research due to the limited number of Afrikaans speaking Grade One learners.

3.8 DATA COLLECTION PROCEDURES

In order to conduct the research, permission was first obtained from the Director of the Khomas Educational region. Thereafter, permission from the principals of the schools that were included in the study was obtained. After permission was granted from all the principals and dates were confirmed, the administration of the (PPVT 4) began. Data collection started on 25 September 2013 and continued until 18 October 2013. 49 learners were tested at the school situated in the Windhoek Central area, and another 20 Afrikaans speaking learners were tested at the second school in Khomasdal. At the third school, also situated in Khomasdal, the remaining 33 learners were tested. In order to have a sample of at least 100 Afrikaans speaking learners, the pilot test results, which comprised results of 10 learners at the second school, were later included in the sample.
The researcher was allowed to work with the learners throughout each day of data collection.

3.9 DATA ANALYSIS

The performance of the learners was analysed by using descriptive statistics, such as frequency tables and mean scores, as well as inferential statistics, such as the t-test. The scores of the participants are represented in frequency tables and, graphically, in bar graphs.

After testing, a raw score was obtained for each learner for both the Afrikaans and English tests. The raw score was converted to the age equivalent vocabulary or ‘vocabulary age’ of the specific learner by using the conversion tables. The age-equivalent scores were further analysed for the whole group in both English and Afrikaans in the following manner: First, the mean vocabulary age for each of the two languages was determined for the whole sample, after which these means were compared with the learners’ mean chronological age. Furthermore, a one sample t-test was used to determine if the mean differences between chronological age and vocabulary age were statistically significant or not. In addition to this, the mean scores in vocabulary for both boys and girls in both languages were also determined. The t-test was used to determine if the mean score differences were statistically significant for boys and girls. The t-test was administered to determine differences in the mean scores of the schools and also to establish if these differences could be considered statistically significant.
The reading competency scores of learners were recorded for both Afrikaans (L1) and English (L2), based on the class assessments conducted by teachers. Mean scores were calculated for the total sample, as well as for each of the comparison groupings (gender and school type). Lastly, an ANOVA test was used to determine if the mean score differences were statistically significant or not. The analyses were carried out with the Statistical Package for the Social Sciences (SPSS) version 21.

3.10 ETHICAL CONSIDERATIONS

Ethics are considered to deal with beliefs about what is right or wrong, proper or improper, good or bad. According to Hamilton and Corbett-Whittier (2013), ethics refer to the norms of conduct that distinguish between acceptable and unacceptable behaviour. Prior to the research, the researcher obtained written permission for the intended research from The Director of The University of Namibia Post Graduate Studies Committee, as well as from the Regional Director in the Khomas Region, and from the school principals and teachers of the schools identified. This was done in writing where the aim of the research was explained clearly (see Appendix C and D). Throughout the study research participants were continuously guaranteed confidentiality. No person other than the researcher had access to the learners’ information. The learners were also guaranteed anonymity, as pseudonyms were used for schools, as well as for the learners, so that no information could be linked to the
research participants’ identity. The researcher established a good rapport and a high level of trust with the principals and teachers.

Finally, a sense of caring and fairness was presented at all times. Learners were informed that participation was voluntary and withdrawal at any point was allowed. No one was forced to participate in the study and the learners were not hurt or reprimanded if they were unable or unwilling to participate in the study. Care was also taken that learners were not given the impression that they might have performed well or not well.

### 3.11 SUMMARY

This chapter focused on the research design and methodology of the study, which include the description of 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

PRESENTATION OF RESEARCH RESULTS

4.1 INTRODUCTION

The present study aimed to determine the vocabulary age in both Afrikaans (L1) and English (L2) for Afrikaans speaking learners at selected primary schools in the Khomas region. For this research three schools and a total of 102 learners fulfilling the criteria were sampled to ensure the inclusion of only Afrikaans speaking learners.

In this chapter the results of the study are logically presented, according to the research objectives. Firstly, demographic information, as well as frequency tables showing the chronological age of the total sample, secondly, the results on the vocabulary ages for both Afrikaans (L1) and English (L2) for all the learners who participated in the sample and, thirdly, the results for both Afrikaans and English reading competency assessment are presented. Thereafter, the results based on the correlation study, as well as the results based on gender and schools are reported.

4.2 DEMOGRAPHICAL INFORMATION FOR THE TOTAL SAMPLE

The present study aimed to determine the vocabulary age in both Afrikaans (L1) and English (L2) for Afrikaans speaking learners at selected primary schools in the Khomas region. For this research, three schools that offered Afrikaans as a first language were
selected. One school that had three classes of Afrikaans speaking Grade One learners was situated in Windhoek Central. The other two schools with two Afrikaans speaking Grade One classes each were in Khomasdal. A total of 102 learners were selected for the test. 49 learners were selected from the school situated in Windhoek Central. Another 20 learners were selected from the second school in Khomasdal, and from the third school, also situated in Khomasdal, 33 learners were selected. The gender distribution of the sample consisted of 61 boys and 41 girls. Only one boy was between the ages of 6.50 and 6.99 years. 37 boys and 23 girls were between the ages of 7.00 and 7.49 years. 23 boys and 17 girls were between the ages of 7.50 and 7.99 years. Only one girl was between the ages of 8.00 and 8.49 years.

For the purpose of this study ages are given in years and fractions of years. For example, 5 years and six months will be given as 5.5 years, whereas 6 years and three months will be given as 6.25 years. For convenience a conversion Table is added (see Table 1).

**Table 1: Conversion of months into fractions of a year**

<table>
<thead>
<tr>
<th>Months</th>
<th>Fractions of a year</th>
<th>Months</th>
<th>Fractions of a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.08</td>
<td>7</td>
<td>0.58</td>
</tr>
<tr>
<td>2</td>
<td>0.17</td>
<td>8</td>
<td>0.67</td>
</tr>
<tr>
<td>3</td>
<td>0.25</td>
<td>9</td>
<td>0.75</td>
</tr>
<tr>
<td>4</td>
<td>0.33</td>
<td>10</td>
<td>0.83</td>
</tr>
<tr>
<td>5</td>
<td>0.42</td>
<td>11</td>
<td>0.92</td>
</tr>
<tr>
<td>6</td>
<td>0.50</td>
<td>12</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Table 2 shows the chronological ages of all the boys and girls who participated in this study. The youngest learner was six years and 11 months (6.92) old, and the oldest learner was eight years (8.00) old.

**Table 2: Chronological age of learners in the total sample**

<table>
<thead>
<tr>
<th>Age categories</th>
<th>F</th>
<th>%</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.50-6.99 years</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>7.00-7.49 years</td>
<td>60</td>
<td>59</td>
<td>37</td>
<td>23</td>
</tr>
<tr>
<td>7.50-7.99 years</td>
<td>40</td>
<td>39</td>
<td>23</td>
<td>17</td>
</tr>
<tr>
<td>8.00-8.49 years</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>102</td>
<td>100</td>
<td>61</td>
<td>41</td>
</tr>
</tbody>
</table>

Of the 102 learners, 59% fell in the age category of 7.00 to 7.49 years, while 39% of learners fell in the age category of 7.50 to 7.99 years. Only 1% of the learners fell in the age category of 8.00 to 8.49 years. The mean chronological age for the total sample, as well as for boys and for girls, was 7.4 years.
4.3 RESULTS ON THE VOCABULARY AGE FOR AFRIKAANS (L1) AND ENGLISH (L2)

The total sample of 102 learners was grouped into age categories based on the vocabulary age obtained for both Afrikaans (L1) and English (L2).

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

<table>
<thead>
<tr>
<th>Vocabulary Ages</th>
<th>F Afrikaans</th>
<th>F English</th>
<th>% Afrikaans</th>
<th>% English</th>
<th>Cum.% Afrikaans</th>
<th>Cum.% English</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0 - 3.49</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1.0</td>
<td>0</td>
<td>1.0</td>
</tr>
<tr>
<td>3.5 – 3.99</td>
<td>1</td>
<td>2</td>
<td>1.0</td>
<td>2.0</td>
<td>1.0</td>
<td>2.9</td>
</tr>
<tr>
<td>4.0 - 4.49</td>
<td>12</td>
<td>24</td>
<td>11.8</td>
<td>23.5</td>
<td>12.7</td>
<td>26.5</td>
</tr>
<tr>
<td>4.5 – 4.99</td>
<td>8</td>
<td>19</td>
<td>7.8</td>
<td>18.6</td>
<td>20.6</td>
<td>45.1</td>
</tr>
<tr>
<td>5.0 - 5.49</td>
<td>32</td>
<td>28</td>
<td>31.4</td>
<td>27.5</td>
<td>52.0</td>
<td>72.5</td>
</tr>
<tr>
<td>5.5 – 5.99</td>
<td>24</td>
<td>11</td>
<td>23.5</td>
<td>10.8</td>
<td>75.5</td>
<td>83.3</td>
</tr>
<tr>
<td>6.0 – 6.49</td>
<td>14</td>
<td>12</td>
<td>13.7</td>
<td>11.8</td>
<td>89.2</td>
<td>95.1</td>
</tr>
<tr>
<td>6.5 – 6.99</td>
<td>9</td>
<td>4</td>
<td>8.8</td>
<td>3.9</td>
<td>98.0</td>
<td>99.0</td>
</tr>
<tr>
<td>7.0 – 7.49</td>
<td>1</td>
<td>1</td>
<td>1.0</td>
<td>1.0</td>
<td>99.0</td>
<td>100</td>
</tr>
<tr>
<td>7.5 – 800</td>
<td>1</td>
<td>0</td>
<td>1.0</td>
<td>0</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>102</td>
<td>102</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 presents the frequencies for the Afrikaans (L1) and English (L2) vocabulary ages for the total sample. Of the 102 learners who performed the vocabulary test for Afrikaans, 12.7% had a vocabulary level that fell in the age category of 4 years to 4.5 years. Contrastingly, for the English vocabulary, 26.5% of the learners fell in this same
age category. This is an indication that more learners had insufficient vocabulary in English than in Afrikaans.

Table 3 also indicates that 24% of the learners had a vocabulary age in the category 5.5 years to 5.9 years for Afrikaans, as to 11% of learners for the English vocabulary. The cumulative percentage shows that 76% of learners had an Afrikaans vocabulary level of less than 6 years, and this percentage increased to 83% for English.

Table 3 clearly shows that 98% of the learners had a vocabulary age in Afrikaans below the age of 7 years, and for English it was 99%. The frequency results shows that high percentages of learners obtained low vocabulary levels in both Afrikaans (L1) and English (L2). Frequencies also clearly show that more learners mastered Afrikaans (L1) vocabulary than English (L2) vocabulary. For each of the languages there was only one learner with a chronological age between 7 years and 7.5 years, and another learner between 7.5 years and 8 years. Thus, in each language only two learners of the total sample of 102 learners functioned at their expected chronological age of 7.4 years.

Apart from frequencies, the mean vocabulary ages for both languages for the total sample were also calculated and analysed. Of the 102 learners who participated in this study, the average chronological age was 7.4 years. Based on the PPVT test results, the average vocabulary age for Afrikaans (L1) was 5.5 years and 5.1 years for English (L2). For Afrikaans (L1), learners’ vocabulary age was almost two years (1.9 years) below their chronological age and for English (L2), their vocabulary age was 2.3 years below their chronological age levels. Thus, learners performed below the expected vocabulary
levels in their mother tongue, Afrikaans (L1), as well as in their second language, English (L2). It was clear that after eight months in Grade One, learners had not reached their vocabulary age in both their mother tongue, Afrikaans (L1) and English (L2). The results also show that learners had better vocabulary in their mother tongue, Afrikaans (L1) than in English (L2), which is their second language.

Table 4: T-test for Equality of Means for both Afrikaans (L1) and English (L2)

<table>
<thead>
<tr>
<th>Languages</th>
<th>N</th>
<th>T</th>
<th>Df</th>
<th>Sig.</th>
<th>MCA</th>
<th>MVA</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrikaans</td>
<td>102</td>
<td>-24.981</td>
<td>101</td>
<td>0.000</td>
<td>7.4</td>
<td>5.5</td>
<td>1.9</td>
</tr>
<tr>
<td>English</td>
<td>102</td>
<td>-29.425</td>
<td>101</td>
<td>0.000</td>
<td>7.4</td>
<td>5.1</td>
<td>2.3</td>
</tr>
</tbody>
</table>

**NOTE:** MCA=MEAN CHRONOLOGICAL AGE
MVA= MEAN VOCABULARY AGE

A one-sample t-test was run to determine whether the mean differences between the chronological age and the vocabulary age for both Afrikaans (L1) and English (L2) could be considered statistically significant or not. Based on the t-test, the researcher concluded that the mean differences for both languages were statistically significant (p < 0.01). It can thus be concluded that it is a real difference and not based on chance or the specific sample. The difference between learners’ chronological age and their vocabulary age for both languages was not only statistically significant but also quite extensive.
In conclusion, learners who participated in this study had insufficient vocabulary, and did not meet their vocabulary age categories in both their mother tongue, as well as their second language. Effectively, based on the results, it was assumed that this difference would be applicable to all the Grade One Afrikaans speaking learners in schools with English as medium of instruction. It can thus be assumed that the difference would occur with a different sample having the same criteria, i.e. Afrikaans speaking learners with Afrikaans as medium of instruction and English as the second language. It was also evident from the mean scores that their Afrikaans (L1) vocabulary was better developed than their English (L2) vocabulary. Thus, the researcher concluded that this difference between their Afrikaans (L1) and English (L2) was a real difference and did not occur by chance.

4.4 RESULTS FOR BOTH AFRIKAANS AND ENGLISH READING CLASS ASSESSMENT

The reading competencies of learners for both languages were also recorded, based on teachers’ assessments. Teachers used a five-point assessment scale to rate learners’ reading abilities in both Afrikaans (L1) and English (L2), as required by the Ministry of Education, Sport and Culture (see Table 5).
Table 5: Assessment scale used by Grade 1 teachers to determine reading competencies

<table>
<thead>
<tr>
<th>5- Point Scale</th>
<th>Explanation of Basic Reading Competency levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = 4.7 – 5</td>
<td>Achieved basic reading competencies exceptionally well</td>
</tr>
<tr>
<td>B = 3.7 – 4.6</td>
<td>Achieved basic reading competencies very well</td>
</tr>
<tr>
<td>C = 2.7 – 3.6</td>
<td>Achieved basic reading competencies</td>
</tr>
<tr>
<td>D = 1.7 – 2.6</td>
<td>Partly achieved reading competencies</td>
</tr>
<tr>
<td>E = 0 – 1.6</td>
<td>Did not achieve the majority of basic reading competencies</td>
</tr>
</tbody>
</table>

Learners, who obtained a score of 2.7 and above had achieved the basic reading competencies. This implies that a learner has mastered the basic competencies of reading satisfactorily in known situations and contexts, and can thus be promoted to the next Grade.

Table 6: Frequencies for both Afrikaans (L1) and English (L2) reading competency assessment for the total sample

<table>
<thead>
<tr>
<th>Assessment points 0-5 points</th>
<th>N Afrikaans</th>
<th>% Afrikaans</th>
<th>N English</th>
<th>% English</th>
<th>Cumulative % Afrikaans</th>
<th>Cumulative % English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>3</td>
<td>2.9</td>
<td>1</td>
<td>1.0</td>
<td>2.9</td>
<td>1.0</td>
</tr>
<tr>
<td>1.6 - 2.0</td>
<td>1</td>
<td>1.0</td>
<td>2</td>
<td>2.0</td>
<td>3.9</td>
<td>2.9</td>
</tr>
<tr>
<td>2.1-2.5</td>
<td>6</td>
<td>5.9</td>
<td>10</td>
<td>9.8</td>
<td>9.8</td>
<td>12.7</td>
</tr>
<tr>
<td>2.6 -3.0</td>
<td>14</td>
<td>13.7</td>
<td>12</td>
<td>11.8</td>
<td>23.5</td>
<td>24.5</td>
</tr>
<tr>
<td>3.1-3.5</td>
<td>19</td>
<td>18.6</td>
<td>26</td>
<td>25.5</td>
<td>42.2</td>
<td>50.0</td>
</tr>
<tr>
<td>3.6 - 4.0</td>
<td>21</td>
<td>20.6</td>
<td>19</td>
<td>18.6</td>
<td>62.7</td>
<td>68.6</td>
</tr>
<tr>
<td>4.1- 4.5</td>
<td>22</td>
<td>21.6</td>
<td>19</td>
<td>18.6</td>
<td>84.3</td>
<td>87.3</td>
</tr>
<tr>
<td>4.6 - 5.0</td>
<td>16</td>
<td>15.7</td>
<td>13</td>
<td>12.7</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>102</strong></td>
<td><strong>100.0</strong></td>
<td><strong>102</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

N=102

Average Afrikaans reading competency assessment for the total sample = 3.5

Average English reading competency assessment for the total sample = 3.4
Table 6 indicates the results for both the Afrikaans and English reading competency assessment. These results show, for example, that a relatively small percentage (9.8% for Afrikaans and 12.7% for English) of learners had scores of 2.5 and below for reading. Those learners did not obtain the minimum requirements to progress to the next level. On the high end of the scale, 37% of the learners scored 4.1 and above for Afrikaans (L1) and 31% for English. Based on the teachers’ assessment Table, it is clear that learners, on average, had achieved the basic reading competencies for both Afrikaans and English.

It was further determined that for the total sample for Afrikaans reading competency assessment, the average was 3.5, and for the English reading competency assessment the average was 3.4. The average for Afrikaans reading competency assessment was 3.4 for the boys and 3.7 for the girls. For English reading competency assessment the average was 3.3 for the boys and 3.5 for the girls. Based on average scores, the sample reached the expected competency levels in reading for both Afrikaans (L1) and English (L2).

4.5 RESULTS BASED ON THE CORRELATION STUDY

The Pearson’s Product Moment Correlation was used to determine the correlations between the vocabulary levels in Afrikaans and English and the reading competency assessment in Afrikaans and English. To interpret the magnitude of correlations, the researcher applied Cohen's (1992) guideline which states that $r = 0.10$ is small, $r = 0.30$ is medium and $r = 0.50$ is large.
Table 7: The correlations between vocabulary levels and reading competency assessment

<table>
<thead>
<tr>
<th></th>
<th>Vocabulary age: Afrikaans</th>
<th>Vocabulary age: English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrikaans reading competency assessment</td>
<td>0.186</td>
<td>0.320 (p = 0.001)</td>
</tr>
<tr>
<td>English reading competency assessment</td>
<td>0.112</td>
<td>0.369 (p = 0.001)</td>
</tr>
<tr>
<td>Vocabulary age Afrikaans</td>
<td></td>
<td>0.444 (p = 0.001)</td>
</tr>
<tr>
<td>Vocabulary age English</td>
<td></td>
<td>0.444</td>
</tr>
</tbody>
</table>

There was a positive and medium correlation ($r = 0.320; p < 0.01$) between Afrikaans reading competence and English vocabulary age. This means that learners with higher levels of English vocabulary showed higher scores in Afrikaans reading competence; similarly, this shows that with an increase in English vocabulary there was also an increase in Afrikaans reading competence.

There was also a positive and medium correlation ($r = 0.369; p < 0.05$) between English reading competence and the English vocabulary age. Again learners with higher levels of English vocabulary showed higher scores in the English reading competency assessment.

There was a positive and medium correlation ($r = 0.444; p < 0.01$) between the Afrikaans (L1) and English (L2) vocabulary age levels. It shows that with an increase in vocabulary levels in Afrikaans (L1), there is also an increase in vocabulary levels of English (L2). This correlation is also statistically significant, which means it can be generalised to the population under investigation. This also means that it can be
expected, to some extent, that learners with higher levels of vocabulary in Afrikaans also have higher levels of vocabulary in English.

There was a small, but positive correlation ($r = 0.186; p < 0.05$) between Afrikaans vocabulary age levels and Afrikaans reading competence. Although this correlation is small, it still shows to some extent that with an increase in Afrikaans vocabulary there is an increase in Afrikaans reading competence.

There was also a small, but positive correlation ($r = 0.112; p < 0.05$) between Afrikaans vocabulary age levels and English reading competence. Although this correlation is small, it still shows to some extent that, with an increase in Afrikaans vocabulary, there is an increase in English reading competence.

### 4.6 RESULTS BASED ON GENDER

The data were further analysed to see if there were any differences in the vocabulary levels of both Afrikaans (L1) and English (L2) with regards to gender. To record the vocabulary levels of boys and girls, the same age categories as for the total sample were used.
Table 8: The t-test for equality of means for both sexes in Afrikaans (L1) and English (L2)

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean chronological age</th>
<th>Mean Afrikaans vocabulary age</th>
<th>Mean English vocabulary age</th>
<th>Mean Afrikaans reading competency assessment</th>
<th>Mean English reading competency assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>61</td>
<td>7.4</td>
<td>5.5</td>
<td>5.0</td>
<td>3.4</td>
<td>3.3</td>
</tr>
<tr>
<td>Girls</td>
<td>41</td>
<td>7.4</td>
<td>5.5</td>
<td>5.1</td>
<td>3.7</td>
<td>3.5</td>
</tr>
<tr>
<td>Mean difference</td>
<td></td>
<td>0.0</td>
<td>0.1</td>
<td>0.3</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>P Value</td>
<td></td>
<td>p&gt;0.05</td>
<td>p&gt;0.05</td>
<td>p&gt;0.05</td>
<td>p&gt;0.05</td>
<td></td>
</tr>
</tbody>
</table>

The mean chronological age for the total sample was 7.4. For the Afrikaans reading competency assessment, the boys showed a mean value of 3.4, while the girls showed a mean value of 3.7. The mean difference was 0.3 points (p > 0.05). For the English reading competency assessment, the boys showed a mean value of 3.3, and the girls showed a mean value of 3.5. The mean difference was 0.2 points (p > 0.05). Girls performed slightly better than boys in both Afrikaans and English reading. These differences were not statistically significant (p > 0.05). The mean vocabulary age in Afrikaans was 5.5 years for both boys and girls, and for the vocabulary age in English it was 5.0 for the boys and 5.1 for the girls. This difference is negligible and it was also not statistically significant (p > 0.05). Therefore, it cannot be claimed that one of the sexes had a better vocabulary than the other (see Table 8).
4.7 RESULTS BASED ON SCHOOLS

Further data analyses were done to see if there were any differences with regards to vocabulary levels and reading competency assessment scores based on the schools that were included in the sample. For this purpose, an ANOVA test for equivalence of means for the three schools was done. Comparisons were made between the three schools with regards to the vocabulary levels, as well as the reading competency assessment scores, but only those that yielded statistically significant differences are reported. Schools are referred to as A, B or C. School A, situated in Central Windhoek, had three classes of Afrikaans speaking Grade One learners. Schools B and C, situated in Khomasdal, had two classes each of Afrikaans speaking Grade One learners. With regards to Afrikaans vocabulary levels, a significant difference of 0.46 years (5 months) was observed between School A and School B, with School A indicating better vocabulary levels in Afrikaans (L1). There was also a difference of 1.03 years (1 year and 1 month) between School A and School C, with school A indicating a better vocabulary level in Afrikaans (L1) than school C. School A outperformed the other two schools and thus appeared to be the better school with regards to vocabulary levels in Afrikaans (L1). These differences were also found to be statistically significant (p< 0.05).

For the English vocabulary levels, another significant difference of 0.9 years (11 months) was observed between School A and School C. School A outperformed School C, and again appeared to be the better school with regards to vocabulary levels in
English. Another difference between School B and C of 0.6 years (8 months) was observed, with School B being the better school. This difference was not statistically significant. The difference in the English (L2) vocabulary levels between the schools was substantially smaller than the difference in Afrikaans vocabulary (see Table 9).

Table 9: Mean differences of comparison variables between schools

<table>
<thead>
<tr>
<th>Comparison variables</th>
<th>Between schools</th>
<th>Mean difference in years/months</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrikaans vocabulary</td>
<td>A-B</td>
<td>0.46 yrs. (5 months)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>A-C</td>
<td>1.03 yrs. (1 yr. 1 month)</td>
<td>0.000</td>
</tr>
<tr>
<td>English vocabulary</td>
<td>A-C</td>
<td>0.9 yrs. (11 months)</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>B-C</td>
<td>0.6 yrs. (8 months)</td>
<td>0.246</td>
</tr>
</tbody>
</table>

Schools were also compared with regards to class reading assessment in both languages (see Table 10). The mean value for the total sample in Afrikaans reading competence was 3.5, while the mean scores per school were 3.6, 4.3 and 3.0 for schools A, B and C respectively. School B thus outperformed the other two schools in Afrikaans reading. The mean difference between schools A and B was 0.7 points; between school A and C it was 0.6 points and between schools B and C it was 1.3 points (see Table 11). These differences were relatively big and also statistically significant (p<0.05). The mean value for the total sample in English reading competence was 3.4, while the mean scores per school were 3.5, 4.3 and 2.8 for schools A, B and C respectively (see Table 10). School B thus also outperformed the other two schools in English reading. The mean difference between schools A and B was 0.8 points, between school A and C it was 0.7 points and
between schools B and C it was 1.5 points (see Table 11). These differences were, once again, relatively big and also statistically significant (p<0.05).

Table 10: Mean class reading assessment of the three schools in both languages

<table>
<thead>
<tr>
<th>Schools</th>
<th>Afrikaans reading assessment</th>
<th>English reading assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample</td>
<td>3.5</td>
<td>3.4</td>
</tr>
<tr>
<td>School A</td>
<td>3.6</td>
<td>3.5</td>
</tr>
<tr>
<td>School B</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>School C</td>
<td>3.0</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Table 11: Mean differences of comparison variables between schools

<table>
<thead>
<tr>
<th>Comparison Variables</th>
<th>Between schools</th>
<th>Mean difference in points</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrikaans Reading</td>
<td>A-B</td>
<td>0.7 (points)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>A-C</td>
<td>0.6 (points)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>B-C</td>
<td>1.3 (points)</td>
<td>0.000</td>
</tr>
<tr>
<td>English Reading</td>
<td>A-B</td>
<td>0.8 (points)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>A-C</td>
<td>0.7 (points)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>B-C</td>
<td>1.5 (points)</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The chronological age of the learners in all three schools were exactly the same, but they differed with regards to Afrikaans and English vocabulary levels, as well as the Afrikaans and English reading competence assessment.
4.8 SUMMARY

This chapter presented the findings of the study in the form of frequency tables, t-tests for equality of means, and the ANOVA test for equality of means in Afrikaans and English in the three schools. Frequency tables were used in this study to show both Afrikaans (L1) and English (L2) vocabulary levels for the whole sample, as well as to show the Afrikaans (L1) and English (L2) vocabulary levels for both sexes. In the next chapter these findings will be discussed.
CHAPTER 5

DISCUSSION OF RESULTS AND RECOMMENDATIONS

5.1 INTRODUCTION

In the previous chapter the research results were presented. The purpose of this chapter is to interpret and discuss the results and to make recommendations based on the results. The discussion of results will correspond with the research objectives in Chapter 1 and the presentation of the results in Chapter 4.

The first research objective focused on the performance of the learners to determine the vocabulary age levels in both Afrikaans (L1) and English (L2) of Grade One Afrikaans mother tongue learners. The second research objective concentrated on the Afrikaans first language learners’ chronological age with their vocabulary age levels in both Afrikaans (L1) and English (L2). Thirdly, the reading competency assessment in both Afrikaans (L1) and English (L2) were compared with the vocabulary age of the learners. These findings and a comparison of the vocabulary levels of the two languages with regards to sex and school are presented in this chapter.

5.2 THE VOCABULARY AGE IN AFRIKAANS (L1) AND ENGLISH (L2)

The mean chronological age of the 102 learners who performed the vocabulary test was 7.4 years. The mean vocabulary age for Afrikaans (L1) was only 5.5 years. The learners thus achieved a mean vocabulary age in Afrikaans (L1) that was almost two years (1.9
years or 1 year and 11 months) below their chronological age. This would, for example, imply that a learner of 7 years and 5 months (7.4 years) has acquired a vocabulary that is equivalent to that which is expected of a child of 5 years and 6 months.

The mean vocabulary for English (L2) was 5.1 years. The learners achieved a mean vocabulary age in English (L2) that was two years and four months (2.3 years) below their chronological age. This implies that a 7 year and 5 months old learner has acquired a vocabulary that is equivalent to that of a child of 5 years and 4 months. In addition to this, frequency results showed that a staggering 76% of learners had an Afrikaans vocabulary level of less than 6 years, and this percentage increased to 83% for their English vocabulary. Only two learners had reached a vocabulary level of 7 years and above for Afrikaans, and one learner had reached this level for English.

As could be expected, the results also showed that learners had better vocabulary in their mother tongue, Afrikaans (L1), than in English (L2), which is their second language. Thus, the overall results showed that a high percentage of the learners had low vocabulary levels, and they were not on their appropriate vocabulary age level for English (L2), but also not for Afrikaans (L1), which is their mother tongue. It was clear that after eight months in Grade One, learners in the sample had not reached their vocabulary age levels in both their mother tongue and English.

The use of the PPVT as a research instrument, which is not standardised for Namibians, could have been a possible reason for learners’ low vocabulary levels. Though, it should not have made a big difference, since the items reflected body and household picture
items that should also have been quite familiar to the Namibian learners. But then again, Hirsch (2003) cautions that learners vary widely in the word knowledge which they bring to school, because of their socio-economic backgrounds and the language used in their homes and communities; this could have influenced their vocabulary.

Furthermore, research has shown that the gap in the vocabulary knowledge that some learners bring to the primary Grades tends to widen as learners progress through the Grades; disadvantaged learners continue to lag behind more than advantaged learners (Hirsch, 2003). Good oral vocabulary is also directly linked to later success in reading, and learners who have more vocabulary knowledge in the earlier Grades become better readers than those who have limited vocabulary (National Institute for Literacy, 2001). The literature, furthermore, points out that, on average, learners should add and learn a large number of new words (approximately 2000 to 3000 words) a year (Beck, McKeown & Kucan, 2002). Learners who begin primary school with low vocabulary levels often continue to acquire fewer words during subsequent Grades.

The results of this study also clearly show that learners’ Afrikaans (L1) vocabulary was better developed than their English (L2) vocabulary. It is better for learners to start reading in a language that they are familiar with (L1), since research clearly indicates that learners learn better in their mother tongue, as language skills are first developed in the mother tongue and then transferred to English (Avenstrup, 2001). Cummins (2000) states that poor reading skills affect all areas of teaching and learning.
It is, therefore, very important that mother tongue instruction should be encouraged in primary education.

Furthermore, Alexander (2000) states that learners who are learning through a second language face heavy linguistic and cognitive demands, and they have to work harder than learners learning in their first language. Learners whose mother tongue is not the language of instruction in school are more likely to drop out of school or fail in early Grades, as research shows that the mother tongue is the ideal language for literacy and learning throughout primary school (UNESCO, 2008).

It may be argued that learners need to master English, since the medium of instruction as from Grade Four is English. However, Krashen (2004) shows that many skills acquired in the first language can be transferred to the second language. Thus, learners who have developed good vocabulary and reading skills in their mother tongue will be able to apply those skills when learning to read English. Cummins (2000) also states that learners learn English more quickly and effectively if they maintain and developed their proficiency in the mother tongue.

Thus, learners need to have a well-developed vocabulary, especially learners who are learning English as a second language. They should learn words in a consistent sequence and in a language rich environment to bridge the gap between those who have more vocabulary knowledge and those who have a limited vocabulary (Biemiller & Slonim, 2001).
5.3. AFRIKAANS AND ENGLISH CLASS READING ASSESSMENT

A small percentage, 12% of Afrikaans and 15% of English learners, had scores of 2.5 and below for reading. These results show that those learners had not obtained the minimum requirements for progression to the next level. However, the average score for Afrikaans reading was 3.5, and for English reading it was 3.4. Both these averages were well above the minimum requirements. One can thus conclude that, based on average scores, the total sample reached the expected competency levels in class reading assessment for both Afrikaans (L1) and English (L2). Furthermore, the results also showed that 37% of the learners scored 4.1 and above for Afrikaans class reading, and 31% of the learners had this score for English class reading. Based on teachers’ class reading assessments, it appeared that learners did fairly well in reading in both languages. This finding is unexpected, taking into consideration the low vocabulary levels of learners in both languages, since the literature shows a clear relation between vocabulary and reading (Nation, 2002).

Although learners’ vocabulary levels were far below the expected norm, their reading competence seemed to be satisfactory. This could be due to motivation, gaining confidence to read during daily classroom reading activities and engaging with various literacy experiences.

The importance of rich vocabulary cannot be overemphasised, not only for reading achievement, but also for general social and economic success. The early years of a child’s life have a profound influence on that child’s language and vocabulary
development which, in turn, greatly influences school success. While the language gap does not widen once children from lower socio-economic backgrounds enter the stimulating environment of school, that gap often does not narrow. Research suggests that it may not narrow because the vocabulary instruction offered is not sufficiently intense or effective.

5.4 THE CORRELATION BETWEEN VOCABULARY AND READING

There was a low to moderate correlation ($r = 0.320$) between Afrikaans reading competency assessment and English vocabulary age ($p = 0.001$). This shows that, with an increase in English vocabulary, there was also an increase in Afrikaans reading competence. A positive and medium correlation ($r = 0.369; p < 0.05$) between English reading competence and the English vocabulary age was also observed. Again learners with higher levels of English vocabulary showed higher scores in the English reading competency assessment as well.

A positive and medium correlation ($r = 0.444; p < 0.01$) between the Afrikaans (L1) and English (L2) vocabulary age levels was observed. With an increase in vocabulary levels in Afrikaans (L1), the vocabulary levels of English (L2) also increased. This correlation is also statistically significant, which means that it can be generalised to the population under investigation. This also means that, to some extent, it can be expected that learners with higher levels of vocabulary in Afrikaans also have higher levels of vocabulary in English.
Another small, but positive, correlation ($r = 0.186; p < 0.05$) between Afrikaans vocabulary age levels and Afrikaans reading competence was observed. Although this correlation is small, it still shows that, with an increase in Afrikaans vocabulary, to some extent, there is an increase in Afrikaans reading competence. Again, a small, but positive, correlation ($r = 0.112; p < 0.05$) between Afrikaans vocabulary age levels and English reading competence was observed.

Although these correlations are small, to some extent they still show that with an increase in Afrikaans vocabulary, there is an increase in English reading competence. This is in agreement with Nation (2002), who states that the link between vocabulary and reading is inseparable, and that teaching vocabulary not only helps learners understand and communicate with others in English, but can improve reading comprehension for both native speakers and English language learners (Graves 2009).

Vocabulary is thus a core component of reading instruction, and plays an important role in word recognition (National Reading Panel, 2000). Therefore, teachers and parents should be aware of the importance of children’s vocabulary to avoid reading difficulties caused by insufficient vocabulary. Insufficient vocabulary is seen by most researchers as one of the core factors that hinders children’s reading (De Witt, 2009).

**5.5 DISCUSSION OF RESULTS BASED ON GENDER**

The data were further analysed to see if there were any differences in the vocabulary levels, as well as the reading competencies, of both Afrikaans (L1) and English (L2)
with regards to gender. The number of boys were 61 and the girls were 41. The mean chronological age for the total sample was 7.4. The mean vocabulary age in Afrikaans was 5.5 years for both boys and girls, and for the vocabulary age in English it was 5.0 for the boys and 5.1 for the girls. These differences are negligible and were also not statistically significant (p > 0.05). It cannot, therefore, be claimed that one of the sexes had better vocabulary than the other.

For the Afrikaans reading competency assessment, the boys showed a mean value of 3.4, while the girls a mean value of 3.7. The mean difference was 0.3 points (p > 0.05). For the English reading competency assessment, the boys showed a mean value of 3.3 and the girls a mean value of 3.5. The mean difference was 0.2 points (p > 0.05). These differences were not statistically significant (p > 0.05).

It became clear that the girls scored slightly higher than the boys on reading competence in both Afrikaans and English. Most of the research studies showed that girls are socially and culturally more advanced than boys and thus develop language skills and increase their vocabulary. According to (Walsh, et al., 2011), girls talk earlier than boys, have a larger pre-school vocabulary, and use more complex sentence structures. Girls do better on tests of verbal memory, spelling and verbal fluency. On average, girls utter two to three times more words per day than boys, and even speak faster, twice as many words per minute. In another study on reading achievement, girls performed better in reading than boys, especially when working on demanding tasks.
In this study, however, the results showed that both sexes performed below their chronological, vocabulary age. However, the differences between boys and girls on vocabulary levels were negligible and also not statistically significant. Therefore, the results can neither support nor refute other research findings which claim that girls perform better than boys in vocabulary and reading.

5.6 COMPARISON AMONGST THE THREE SCHOOLS

Further data analyses were done to see if there were any differences with regards to vocabulary levels and reading scores based on the schools that were included in the sample. Comparisons were made amongst the three schools with regards to the vocabulary levels, as well as the reading scores, but only those that yielded statistically significant differences are reported.

With regards to Afrikaans vocabulary levels, significant differences were observed between Schools A, B and C (p < 0.05). School A outperformed the other two schools, and, thus, appeared to be the better school with regards to vocabulary levels in Afrikaans (L1). For the English vocabulary levels, another significant difference was observed between School A and School C (p < 0.05). School A outperformed the other two schools and again appeared to be the better school with regards to vocabulary levels in English as well.

These differences may also be due to the fact that the three schools were located in different areas of Windhoek. Learners from School A generally come from homes with a
higher socio-economic status (SES). Afrikaans is the mother tongue of most of these learners, and it is used widely in these communities as well. Schools B and C are located in Khomasdal, where learners might have come from parents of both higher and lower SES. In this area, people speak different languages in the community. Learners vary widely in the word knowledge they bring to school, and studies have shown that the SES of the family is positively correlated to a child’s vocabulary growth (Biemiller, 2005). With regards to Afrikaans and English reading competency assessment, significant differences were observed between the three schools. School B outperformed the other two schools and appeared to be the better school in both Afrikaans and English reading competency assessment. These differences were also found to be statistically significant (p < 0.05). One would have expected that school A, which had the better vocabulary levels, would also have learners with the highest reading levels, since vocabulary aids reading competence. The reason for this discrepancy is not clear. This could be due to a more efficient teaching strategy used by the teacher in school B to enhance the learners’ reading; it could also be that the class reading assessment, as done by teachers in school A, was stricter than that of teachers in school B.
5.7 RECOMMENDATIONS

The following recommendation are made, based on the findings from this study.

5.7.1 As this study was conducted only at schools based in Windhoek, in the Khomas region of Namibia, the results cannot be generalised to other regions. Future studies can include a bigger sample and other regions, so that the findings may be generalised to the whole of Namibia. Only learners from the Khomas urban areas were included, and future research may consider comparing urban and rural learners’ vocabulary levels.

5.7.2 Other researchers could conduct similar research studies for other language groups, using the PPVT instruments to determine the learners’ vocabulary levels in other languages.

5.7.3 Similar studies, targeting English (L2) learners, who attend Grade One in schools employing English as Mother tongue, (L1) can also be conducted.

5.7.4 Further research could concentrate on investigating gender differences concerning vocabulary and learning strategies and the effect of the language learning context on the development of primary and secondary school learners’ receptive vocabulary size.
5.7.5 The PPVT 4 could be standardised for Namibia and translated into the other mother tongues to estimate the amount of vocabulary that a child has by the time he/she begins school, based on his/her chronological age.

5.7.6 Shortcomings which arise from the way in which the language policy is interpreted and implemented or partially implemented, should be revised, amended, and addressed.

5.7.7 Schools should adhere to the stipulation in The Language Policy for Schools in Namibia, which states that learners should be taught in their mother tongues from Grades One to Grade Three, and in English from Grade Four onwards, giving learners the opportunity to learn through their mother tongues as stipulated in the language policy.

5.7.8 Through the Ministry of Education, teachers should be made aware of the importance of children’s vocabulary to avoid reading difficulties caused by insufficient vocabulary. As insufficient vocabulary is seen as one of the core factors that hinders children’s reading, strategies to enhance the vocabulary levels of learners should be implemented to ensure academic achievement in schools.
5.7.9 Pre-primary schools should be structured in a literacy-rich environment that will help learners to feel comfortable, encouraged and willing to learn new vocabulary.

5.7 10 The Ministry should implement compulsory pre-primary education, and advise and assist parents in the importance of enrolling a child in his/her mother tongue, as there is strong support that learners who are not taught in their mother tongue at lower Grade levels may have more difficulties to master reading skills and to perform well in school.

5.7.11 Parents and teachers should encourage play activities, as for pre-schoolers, social and language interaction is especially critical for learning, and strong connections have been discovered between socio-dramatic play and language or language-related abilities, such as reading.

5.8 CONCLUSION

Vocabulary is one of the core components of reading instruction that are essential to teach learners how to read successfully (National Reading Panel, 2000). Through this study, the researcher has confirmed that there is a relationship between vocabulary and reading. The results of this study also bring attention to the importance of mother tongue instruction, as there are various opinions regarding the influence and importance of
mother tongue instruction in the formative years of a child’s life. There are various advantages to the initial use the first language, as learners may have a bigger chance to read better in their mother tongues, than to start with reading in a second language in which they have even more limited vocabulary.

The fact that learners have low vocabulary levels in both their languages substantiates the fact that learners learn English more quickly and effectively if they maintain and developed their proficiency in the mother tongue (Cummins, 2000). Further research on vocabulary and the impact it has on children’s reading abilities needs to be done in Namibia, so that Namibian schools can take advantage of the range of benefits, when implementing effective mother tongue instruction in the initial Grades.
REFERENCES


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APPENDICES

APPENDIX A Peabody Picture Vocabulary Test in English.
In order to count the errors, follow these steps:

1. Identify the number of errors in each cell of the table.
2. Sum the errors within each row.
3. Sum the errors within each column.
4. Sum the errors in each set.

Example:

<table>
<thead>
<tr>
<th>Set</th>
<th>Errors in Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set 1</td>
<td>12, 3, 4, 6</td>
</tr>
<tr>
<td>Set 2</td>
<td>13, 7, 8, 9</td>
</tr>
<tr>
<td>Set 3</td>
<td>11, 2, 6, 8</td>
</tr>
</tbody>
</table>

Total errors in Set 1: 12 + 3 + 4 + 6 = 25
Total errors in Set 2: 13 + 7 + 8 + 9 = 37
Total errors in Set 3: 11 + 2 + 6 + 8 = 27

Overall total errors: 25 + 37 + 27 = 89
APPENDIX B-Peabody Picture Vocabulary Test in Afrikaans.

<table>
<thead>
<tr>
<th>Start Age 5</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>37</td>
<td>Plaas</td>
<td>1</td>
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<td>3</td>
<td>4</td>
</tr>
<tr>
<td>38</td>
<td>Penguin</td>
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<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>39</td>
<td>Geskenk</td>
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<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>40</td>
<td>Veer</td>
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<td>2</td>
<td>3</td>
<td>4</td>
</tr>
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<tr>
<td>48</td>
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**Number of Errors**

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**Number of Errors**

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APPENDIX C Permission letter to conduct research: Khomas Education Director.

UNIVERSITY OF NAMIBIA
Private Bag 13301, 340 Mfundwe Nsita Street, Pionerspark, Windhoek, Namibia

The School of Postgraduate Studies
P.Bag13301
Windhoek, Namibia
Tel: 2063523
E-mail: cachimeemanya@unam.na

Date: 4 September 2013

TO WHOM IT MAY CONCERN

RE: RESEARCH PERMISSION LETTER

1. This letter serves to inform that student: L. H. Feris (Student number: 9614354) is a registered student in the Department of Educational Psychology and Inclusive Education at the University of Namibia. Her research proposal was reviewed and successfully met the University of Namibia requirements.

2. The purpose of this letter is to kindly notify you that the student has been granted permission to carry out postgraduate studies research. The School of Post Graduate Studies has approved the research to be carried out by the student for purposes of fulfilling the requirements of the degree being pursued.

3. The proposal adheres to ethical principles.

Thank you so much in advance and many regards.

Yours truly,

Name of Main Supervisor: Prof. M. L. Mostert
Signed:

Dr. C. N.S. Shaimemanya
Signed:

Director: School of Postgraduate Studies
APPENDIX D – Request for permission to conduct research: L.H. Feris (M. Ed).

The Regional Director of Education
Khomash Region
Dear Ms Seefeldt

RE: PERMISSION TO VISIT AND ADMINISTER RESEARCH AT LOWER PRIMARY SCHOOLS

As a registered student in the Department of Educational Psychology and Inclusive Education at the University of Namibia my research proposal was reviewed and successfully met the University of Namibia requirements, and has been granted permission to carry out postgraduate studies research.

The focus of my intended research is to determine the Afrikaans and English vocabulary levels of grade one Afrikaans Mother Tongue learners in Windhoek.

Therefore, I would like to apply for permission to visit and administer my research at the following schools in Windhoek: Pioniers Park Primary School; Elim Primary School; and, Hermann Gmeiner Primary School.

When permission is granted arrangements will be made with the principals and teachers of the selected schools for visits in October 2013. The administration of research instruments will not interfere with teaching therefore the most appropriate times will be arranged with the principals of the schools.

Thank you for considering my request

Yours sincerely,

Lorraine Feris
(M. Ed Student)

[Signature]

Prof Mostert
Ms P. February
(Supervisor) UNAM

The University of Namibia
Khomash Campus
Faculty of Education
18 –10– 2013
Private Bag 13317
Windhoek, Namibia
KHAMAS REGIONAL COUNCIL
DIRECTORATE OF EDUCATION

Tfl: (0926461)293 4220
Fax: (09 264 61) 231367
Enquiries: H. Imene
File No.: 12/2/6/1

Private Bag 13236
Windhoek
28 October 2013

Ms. L. Feris
P/Bag 13317
5 Adrew Kloppers Street
Windhoek

Dear Ms. L. Feris

SEEKING PERMISSION TO CARRY OUT RESEARCH AT LOWER PRIMARY SCHOOLS IN THE KHAMAS REGION

Your letter dated 08 October 2013 is hereby acknowledged.

Your request to conduct a research at Pioniers Park Primary, Elim Primary School and Hermann Primary School with regard to "administer research at lower primary schools to determine the Afrikaans and English vocabulary levels of grade one Afrikaans Mother Tongue learners in Windhoek" is approved with the following conditions:

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

Wish you all the best.

[Signature]

MINISTRY OF EDUCATION
PRIVATE BAG 13236, WINDHOEK

MS. A. BRANHAM
DEPUTY DIRECTOR OF EDUCATION

DEPUTY DIRECTOR
KHAMAS REGION

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