Cognitive demands and second language proficiency in the Foundation Phase: A neuro-linguistic perspective and multilingualism

by

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DECLARATION

Herewith I, Lynette Ruth September, declare that this master's dissertation titled:

"Cognitive demands and Second Language Proficiency in the Foundation Phase. A neuro – linguistic perspective and multilingualism"

is my own work and that acknowledgment has been given to all sources of reference.

……

Lynette Ruth September
November 2010

Dedication

I dedicate this dissertation to the memory of my late father, William Isaacs. He was always a voice of encouragement in my life and a rock of stability. By contributing to the lives of others, you fathered and mentored; your legacy lives on. You provided integrity, dignity and competence. I will love, esteem and appreciate you forever.

The changing nature of South Africa requires the distribution of all human, physical and educational resources. The establishment of the new order demands fresh visions and offers the opportunity or innovative changes.

Nkabinde I

Abstract

This study focused on multilingualism as the primary linguistic cognitive object of investigation. An integrative approach focused on second language linguistics in order to acquire a background in the cognitive foundations of language and research methodology and theoretical models for the study of phenomena, such as language planning in multicultural societies and language and ethnic diversity. To design cognitive reading methods, a literature survey was conducted regarding the latest developments in the theories pertaining to cognitive formulas of the second language learner. A quantitative experimental study was conducted, data gathered was scrutinised and a cognitive reading programme was experimentally administered to twenty primary school learners. The responses were coded, the data captured and statistically computed. Conclusions indicated that cognitive reading materials were practical, valid and reliable. Cognitive formulas hold the potential of contributing to the understanding of cognitive reading development in second language proficiency in the Foundation Phase of schooling.

Key terms

diversity; multilingualism; bilingualism; second language acquisition; reading proficiency; cognitive formulas; neuro-linguistic; memory facets; linguistic components; literacy constructs

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ABBREVIATIONS

L1	First Language learners
L2	Second language learners
ESL	English second language learners
SLA	Second language acquisition
EC	Eastern Cape
NCS	National Curriculum Statement
BICS	Basic Interpersonal Communicative Skills
CALP	Cognitive Academic Language Proficiency
SES	Socio-economic Status
LOLT	Language of Learning and Teaching
LO's	Learning outcomes
LA	Langage Acquisition
LAD	Language Acquisition Device
ECD	Early Childhood Development
CRP	Cognitive Reading Programme
STM	Short Term Memory
NAEYC	National Association for the Education of Young Children

CHAPTER ONE

INTRODUCTORY ORIENTATION

The international comparative assessment studies started
pointing out that SA'S pupil performance was not on a
par with other developing countries. The results of these
studies and our own national systematic assessments
confirmed unacceptable levels of pupil performance
in Literacy. At the same time, the private sector raised
a flag about a serious lack of skills nationally. This sent
shock waves through the system -a necessary
precondition for change.
Business Day (2009:12)

1.1. INTRODUCTION

De Witt, Lessing and Lenayi (2008: 1-10) accentuate that large numbers of children are failing to learn to read. This phenomenon is highlighted by the above-mentioned statement in the Business Day (2009:12) and the authors emphasise that reading problems should cause concern for educators, as early literacy development is the foundation of reading proficiency.

The literacy performance of South African children is significantly worse than children in other parts of the world – even children whose conditions for learning are less advantageous than ours (Anderson 2005: 2). The author further states that the National Department of Education's survey in literacy carried out in 2003 showed that less than 40% of all children were literate in Grade 3 (9 years old). The Sunday Times (4 April 2010) states further that an evaluation of pupils in Grade 3 indicated that only 36% passed Literacy and 35% Numeracy. The Grade 6 learners fared even worse, with 36% passing Literacy and 27% Numeracy. Proffesor John Volmink points out that South Africa faces huge challenges in Literacy and Numeracy (Sunday Times 2010:1). Le Cordeur asserts that our education system is failing to teach our children the most important life skill: "To teach our children to read" (Rapport

2010:16). Learners left behind by Grade 6 rarely catch up. Disturbingly, this suggests that unless children read and write at the right moment, usually at six or seven years of age, they are unlikely to learn to read later on. So the question can be asked, **"**Where are we going wrong?"

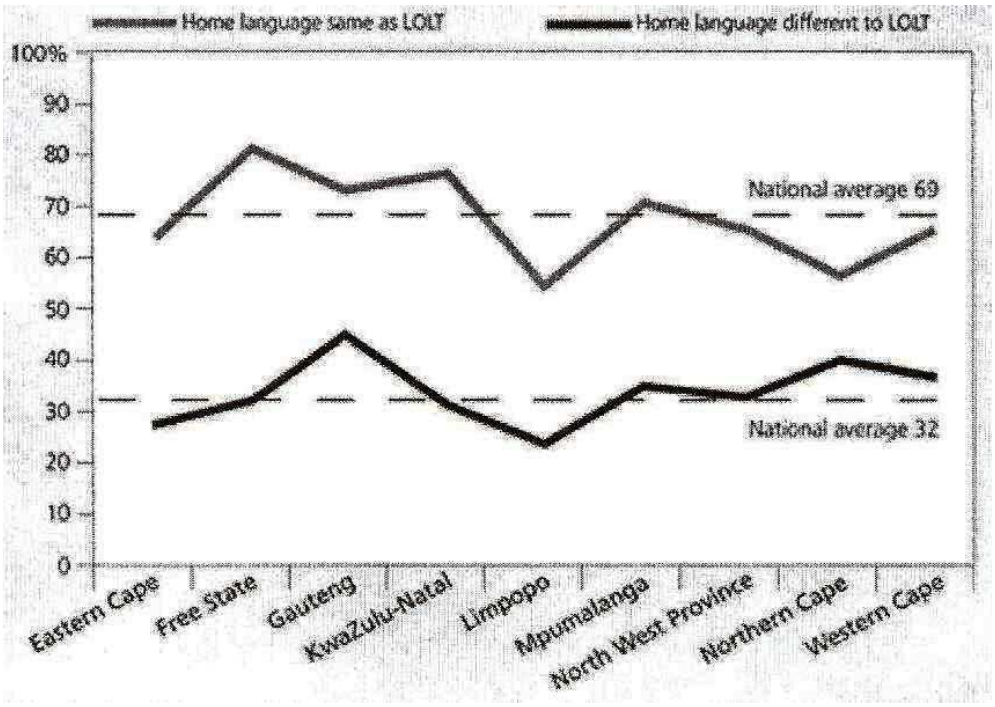
In South Africa, many children learn to read and write in a second language making it more difficult to acquire literacy skills in the early stages of formal education. Although the national language in education policy is sound, poor literacy outcomes suggest that the practice in South Africa's classrooms has some way to go. It is clear that urgent intervention is required if the economy is to gain workers with the necessary academic and social skills which only come through literacy (Anderson 2005:1-4). Regarding recognition of indigenous languages, 11 languages (including English, Afrikaans and Sign Language) are recognised as official languages and all have equal status.

South Africa has a population of 42 million people (Smit 2002:17). The Constitution of South Africa (1996) recognises that the country's cultural diversity is "a national asset and that multilingualism, the development of the African languages and respect for all languages in the country must be promoted as part of building a non racial South African nation" (Bloch & Mahalela 1998: 20). English is only one of the eleven official languages in South Africa. Approximately only 9% of the 40 million people of South Africa speak English as a first or home language (South African Department of Education 1996: 4 - 6). However, English is the most often used language of most institutions in the country (Sharski 1997: 52).

Lemmer (2002:38) points out that literacy is a crucial means of gaining access to important knowledge and skills and thus determines academic achievement. The author states further that not all learners will arrive at school with the kinds of literacy skills that help them succeed academically. Second language learners will need more time, more assistance, and expanded opportunities from educators at school to acquire the kinds of literacy experiences that are crucial for later academic success. Thus, language diversity has a powerful influence on the outcomes of schooling in a multicultural society. Attrition rates among linguistically diverse school populations worldwide show that learners with a limited proficiency in the language of learning are most at risk of underachievement (Lemmer 2002:38). Figure 1.1 illustrates the

difference between the achievement of learners who study through their second language and those who study in their mother tongue in South Africa.

Figure 1.1. Difference between Learners who study through their second language and learners who study in their mother tongue in South Africa



Source: Heugh (2006:2) Human Sciences Research Council Cape-Town

The figure also indicates Grade 6 Language achievements by provinces where the home language is the same as the language of learning and teaching (LOLT); and where the home language is different from the LOLT.

Lemmer (2002:38) observes that learners differ, not only in outwardly evident characteristics such as ethnicity, age, gender, and language background, but also in their communicative needs, their levels of proficiency in a second language, their attitudes towards it, and their cognitive styles. The author states further that a challenge in the multicultural school is to meet the needs of learners from linguistically diverse backgrounds who have a limited English proficiency. While language minority learners may be labelled by their lack of English-speaking skills, they are in fact a very diverse group. When language minority learners enter an English medium school, they bring with them a wealth of cognitive, social and linguistic skills, which

have been developed, in their first language. However, educators are often under the impression that, if this prior knowledge is not stored in English, it does not exist at all (Miramontes, Nadeau & Commins 1997:20). Educators perceive these learners as having no language and of suffering from impoverished thinking skills and schools may fail to address the needs of language minority learners.

Miramontes, Nadeau and Commins (1997:20) maintain that as a result these learners' access to academic knowledge is delayed and they are hindered from full participation in school, contributing to a sense of social alienation. Understanding language minority learners and meeting their needs presents an enormous challenge to schools. School policies and practices should be developed that tap the knowledge and skills that learners possess in their first language while providing them with appropriate instruction in English (Lemmer 2002:39).

Educators should know how language is acquired, the acquisition of a second language and the impact of linguistic diversity on the teaching/learning situation. According to Hurlock (1978:162), the acquisition of language is an extremely involved process, which illustrates the incredible complexity and unlimited potential of the human organism better than any other single accomplishment.

Therefore, language educators have a responsibility to adapt their classroom practice to meet the needs of the learners who are learning through a medium of a second language. Literacy is not only a cognitive skill to be learned, it is a complex socio psycholinguistic activity (NCREL 1999:2). The close relationship between language, culture and cognition during home socialisation should be recognised by educators and early socialisation should be recognised by educators during instruction. Educators should also be able to understand how a child's school performance is related to different levels of language skills.

Achievement depends on effective reading in all learning areas from the early stages of the primary school. Effective reading instruction in the Foundation Phase is important, because no learning area can be mastered without reading abilities. Comprehensive reading is at the heart of education, and the basis upon which all others are built as well as the key to the rest of the curriculum. According to Thomas (1991:103 cited in Meij 1995:1), reading is a

fundamental skill, which children must master if they are to make progress in other subjects. Without being able to read, learners will experience difficulties with writing and mathematics and their thought processes and social development will be hampered. Therefore, educators need to become extremely sophisticated and diagnostic in their approach to reading instruction (SEDL's reading resources: Undated).

For future comprehensive reading, learners are expected to work independently of educators, which requires them to read worksheets, written directions and reference materials on their own. Learners who find reading and writing difficult are disadvantaged in all areas of the curriculum (Hannon, 1995:5-6). The causes of reading disabilities in a first language have been researched and certain successful strategies have been created to assist learners with most reading problems in the first language.

The question that arises from the above exposition is:
Why do so many learners experience reading acquisition problems in a second language?

1.2. ANALYSIS OF THE PROBLEM

In this section attention is given to the researcher's awareness of the problem. The initial research question is investigated through a literature study and refined to a final research question that determines the scope to this research.

1.2.1. AWARENESS OF THE PROBLEM

In this study the challenges faced in this regard are explored with particular reference to a primary school in Aliwal North, Eastern Cape. As a cluster facilitator for the Foundation Phase of six schools within the Sterkspruit District, Aliwal North Circuit and as Foundation Phase Head of a school administered by the Department of Education, the researcher is constantly confronted by problems experienced by both educators and learners. The teaching of reading in this situation presents an intense emotional battle in 'school wars', as discovered during school based and cluster moderation. The researcher realised that there are learners who have not achieved the prescribed reading outcomes at the end of each grade, irrespective of the time devoted to reading in this phase.

Aliwal North (Maletswai) situated in the Eastern Cape Province is a culturally diverse population comprised by 30 756 Black, 3 389 Coloured, 3 131 White and 30 Indians inhabitants. Population statistics indicates that 82.4% of the total population in Aliwal North represents Black Africans, 9.1% Coloureds and 0.1 Indians or Asians, whereas 8.4% represents Whites (Statistics South-Africa 2008). The 2008 population survey further evidenced that two major African languages are spoken as home languages in the Eastern Cape, namely IsiXhosa and Sesotho. The other two common home languages spoken in this province are Afrikaans and English.

Since 1994, a new educational dilemma arose where second language learners found themselves in schools that were previously exclusively for homogenous groups. In our multilingual context, formal teaching is often conducted in a language that may not be the home language of the learner. Children who are taught to read and write in their home language are able to lay a strong literacy foundation, which, besides enhancing their own ability to comprehend and to express themselves, forms the basis of all learning (Anderson 2005:1-4).

In the Eastern Cape learners are academically delayed, most of them suffering from the effects of environmental, socio-economic or educational deprivation that has a negative impact on literacy acquisition at the start of formal schooling (De Witt & Booysen 1995:138). The Eastern Cape is the second poorest province in South Africa. Learning to read is critical to disadvantaged children's success in school. Children from disadvantaged socio-economic backgrounds also face general linguistic deprivation. Learners in disadvantaged communities have few or no real encounters with or experience in using English (the second language).

There is frequently a lack of resources like educational books, magazines and newspapers, radio and television in the home, as well as the practice of communicative styles that are consonant with those in the school. This kind of dissonance between home and school further diminishes the chance of school success (Lemmer 1996:18).

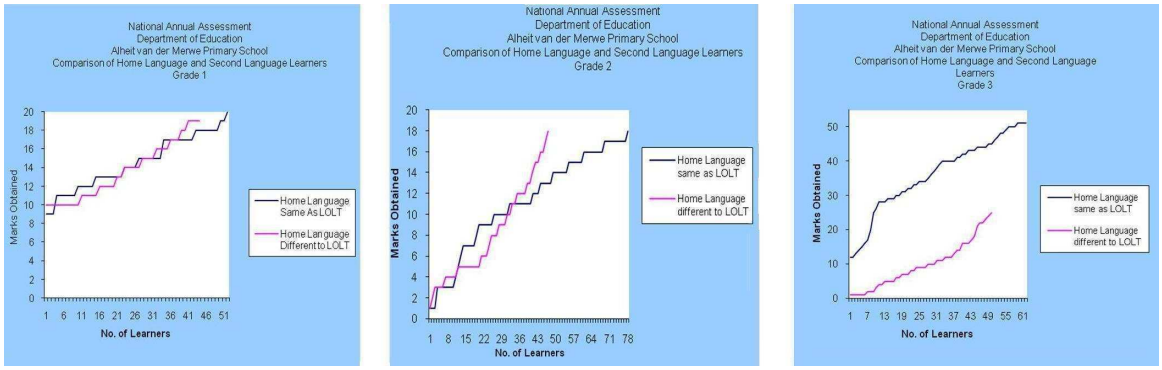
Many South African learners grow up in homes where parents are not literate. Not only are these children far less likely to have access to books, but they also are not immersed in a culture of reading where literacy is modelled as a meaningful activity from an early age.

It is the researcher's observation as a Foundation Phase educator that the learner's lethargy is also the result of his or her early departure from home in the mornings. Moreover, disadvantaged learners are confronted with many domestic chores, such as cleaning, cooking and caring for infants or for the elderly, which often causes late coming or absenteeism. These children's learning time is thus often interrupted for domestic tasks. Other matters that affect the children are the financial position of the family that may result in the lack of electricity and a lack of food and adequate clothing (Du Plessis, Naude & Viljoen 2003:22). These authors further state that learners are also often unable to concentrate, develop a negative self-concept and start blaming the school and educators for the suffering that they have to endure to become literate. The abuse of alcohol, domestic violence, poverty, unemployment and overcrowded homes are also prevalent in these communities and do not aid in establishing a favourable learning environment.

Lack of confidence to read or to express themselves fluently creates a problem with the result that the majority of learners are not able to read, write, listen and speak English or understand a comprehension text. They also find it difficult to listen attentively, write constructively or express themselves appropriately.

The National Annual Assessment for Literacy implemented by the Department of Education showed that the second language learner often meets great difficulties and sometimes failure. The evaluation in the Alheit van der Merwe school has shown that second language learners are performing poorly – their literacy levels are below the required levels for their age and their grades (Alheit Van Der Merwe 2008: 1-3). This is indicated in Figure 1.4.

Figure 1.4. The difference between learners who study through their second language and learners who study in their mother tongue in Eastern Cape, Aliwal North



Source: Department of Education, Alheit Van der Merwe School (2008)

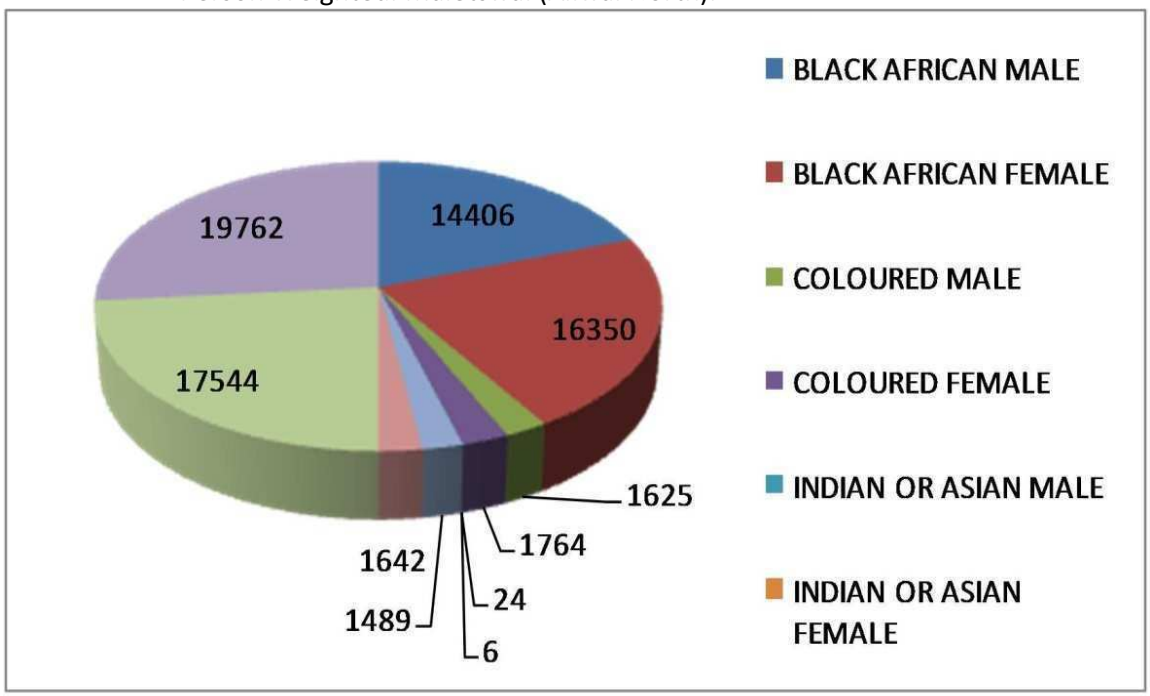
Alheit Van der Merwe has 885 learners in total: 467 male learners and 418 female learners; 453 African Blacks. 430 Coloureds and two Indians. According to the Official final post establishment: educators for 2008, this school's learner's weight is 871.27 and the total school weight is 938.134 (Alheit Van Der Merwe Primary 2008: 1). Thus, Alheit Van Der Merwe can be described as a multicultural and multilingual school. The demographics of the school are illustrated in Figures 1.5 – 1.8. The difference between the achievement of learners who study through their second language and learners who study through home language at Alheit Van Der Merwe school as thus tabulated for easy reference.

The following indicates percentage differences in language achievements per grade at Alheit Van Der Merwe school where the home language is the same as the language of learning and teaching (LOLT) and where the home language is different from the LOLT (Alheit Van Der Merwe 2008:1):

Language achievement where home language is same as LOLT:
Grade1 (79 %); Grade 2 (60 %); Grade 3 (65 %).

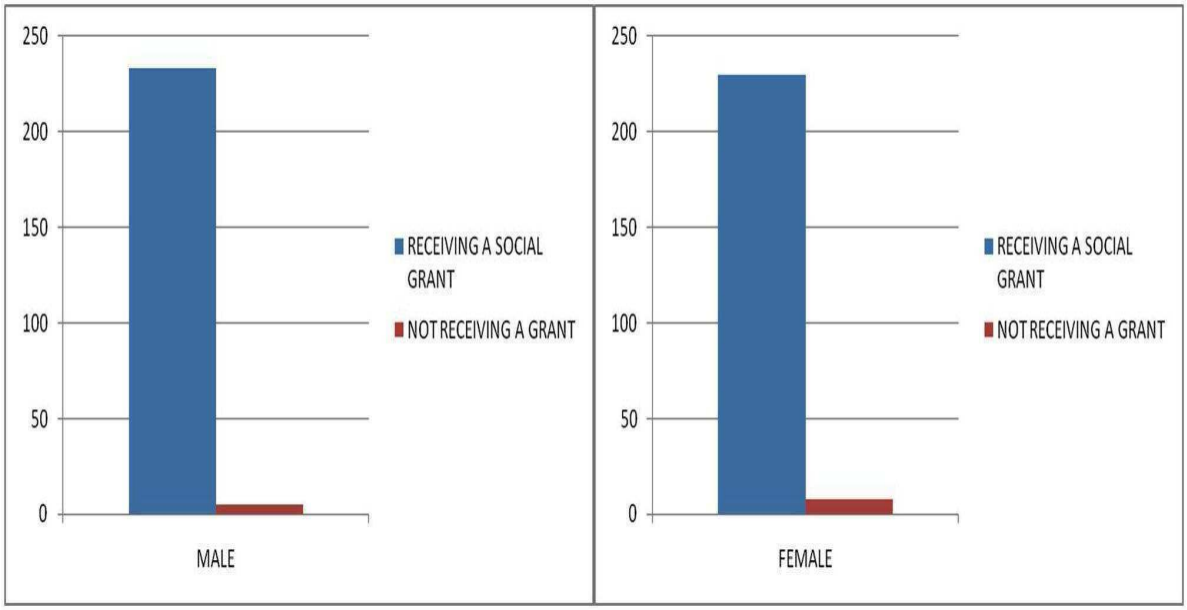
Language achievement where home language is different from the LOLT:
Grade1 (71 %), Grade 2 (43 %), Grade 3 (17 %).

Figure 1.5. South Africa by Province Geography by Population Group and Gender for Person Weighted. Maletswai (Aliwal North).



Source: Statistics South Africa (2008)

Figure 1.6. Number of learners who are registered for social grant.



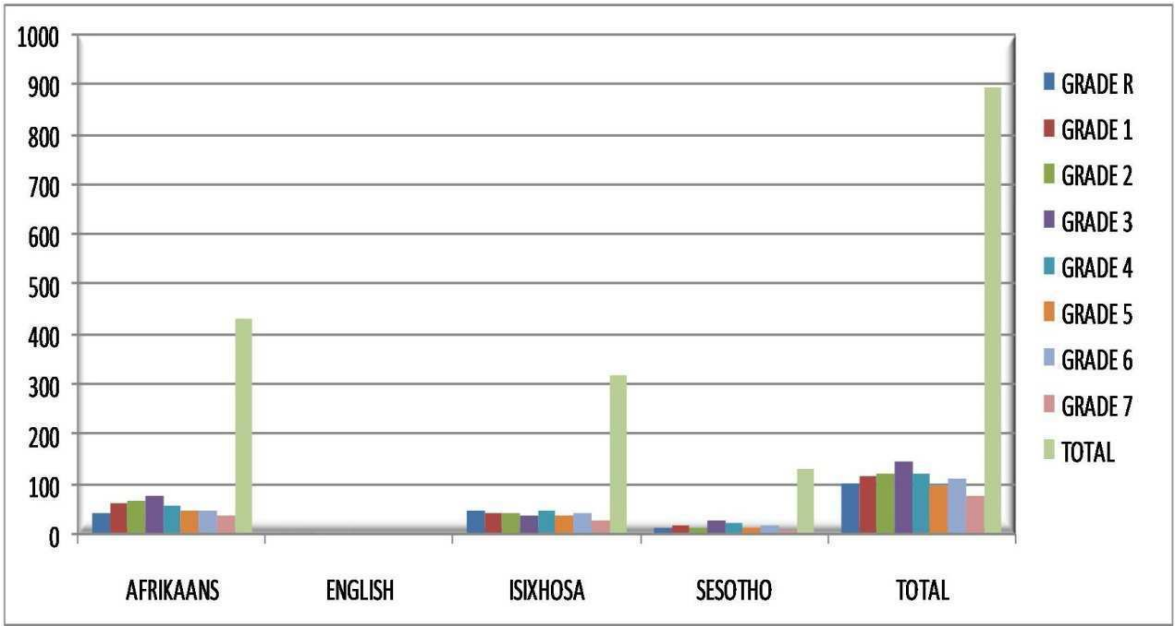
Source: Alheit Van Der Merwe Primary (2008)

Figure 1.7. Learners according race, gender and grade.

GRADE	AFRICAN BLACK		COLOURED		INDIAN		WHITE		TOTAL	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
GRADE R	39	22	21	23					60	45
GRADE 1	30	26	25	33					55	59
GRADE 2	25	33	35	31					60	64
GRADE 3	29	37	42	29					71	66
GRADE 4	36	23	32	26		1			68	50
GRADE 5	27	21	22	26					49	47
GRADE 6	47	20	15	30					62	50
GRADE 7	22	16	20	20		1			42	37
TOTAL	**255**	**198**	**212**	**218**	**0**	**2**	**0**	**0**	**467**	**418**
	TOTAL	**453**	**TOTAL**	**430**	**TOTAL**	**2**	**TOTAL**	**0**	**TOTAL**	**885**

Source: Alheit Van Der Merwe Primary (2008)

Figure 1.8. Learners according to home language and grade, male and female learners.



Source: Alheit Van Der Merwe Primary (2008)

The researcher's awareness of the problem as described above prompts the following question:

- What are the main barriers to the acquisition of reading in the Foundation Phase as experienced by second language learners in Eastern Cape primary schools?

1.2.2. PRELIMINARY LITERATURE INVESTIGATION

In the preliminary literature study, the researcher will investigate the foundational early literacy constructs, the phonological and the whole language approach. Whole language, phonological principles and principles of early childhood education are in complete accord with Curriculum 2005 and the new language policy.

1.2.2.1. THE PHONOLOGICAL APPROACH

According to Trawick-Smith (2006:268), phonology is the part of language that involves speech sounds, including pronunciation, fluency and intonation. Phonology consists of:

- Morphology
- Syntax
- Semantics
- Pragmatics

Wikipedia (2009:2) explains that phonology is the systematic use of sounds to encode meaning in any spoken human language. The linguistics applied to phonology is language acquisition, language assessment, language development, language education, psycholinguistics, neurolinguistics, linguistic anthropology, cognitive linguistics and computational linguistics.

Word play involving segmenting words into their constituent sounds, rhyming words, and blending sounds to make words is also essential to the reading process. The ability to identify and manipulate the sounds of language is called phonological awareness. Adams (1990) described five levels of phonological awareness ranging from an awareness of rhyme to being able to switch or substitute the components in a word.

1.2.2.2. THE WHOLE LANGUAGE APPROACH

The whole language approach has increased in popularity since the early 1980's (Gordon & Browne 2002:484). The father of this approach is Kennith Goodman. According to Whitmore

and Crowell (1994), the whole language approach emphasises learning to read and write naturally, for a purpose, for meaningful communication and for inherent pleasure. The principles of whole language (Freeman & Freeman 1992: 7) are as follows:

- Learning moves from the whole to part.
- Children actively construct knowledge, so lessons should be pupil centred.
- Lessons should have meaning for pupils now.
- Meaningful social interaction promotes learning.
- In a second language, oral and written language is acquired simultaneously.
- Emphasis should be on first language learning to build concepts and facilitate learning another language.
- Educators need to trust in the learner's potential.

It is only recently that phonics has begun making a comeback. While whole language and phonics are often pitted against one another, proponents of each maintain their particular approach is the key to engage learners in reading. The ability to read is more critical than ever before.

1.2.2.3. EXPLORING COGNITION AND LANGUAGE PROCESSES IN SECOND LANGUAGE READING ACQUISITION

This study explores aspects of the processing perspective in second language learning. It reviews more narrowly how our conceptual systems, governed by intricately linked networks of neural connections in the brain, make language development possible, creating, at the same time, some second language processing problems. Cognition in a specialised context illustrates some of the processing problems that the second language learner has to confront, and how mappings in the visual, phonological and semantic (conceptual) brain structures function in second language processing of new vocabulary. Selinker (1992:2) mention five cognitive processes related to second language acquisition:

- Language transfer
- Transfer of training
- Strategies of second language learning

- Second language communication strategies
- Generalisations of rules and principles

Some questions arose from exploring literature studies with regard to reading methods**:**

- How does internalising and processing occur regarding language and reading through cognition mechanisms? How do you process or adapt reading acquisition as phonological or as visual?
- To what extent can cognitive facets, namely the role of memory and literacy aspects discussed in the literature study, influence reading instruction?
- What is the influence of cognitive facets on reading achievement in Grade 1?
- Can reading achievement of Grade 1 entrants be predicted on the basis of cognitive domains?
- To what extent can cognitive facets be depended on to point out the probable successes and failures in beginning reading?
- What are the limitations with regard to memory that will influence beginning reading instruction?
- What are the possibilities regarding to memory that will influence reading acquisition in beginning reading?

1.2.3. STATEMENT OF THE PROBLEM

Beginning reading instruction has a prominent place in the curriculum irrespective whether a phonological or a whole language approach is followed. This raises the question whether a reading method can improve reading as many second language learners experience reading problems. The problem that confronts the researcher is to determine whether the act of reading is processed through cognition, after which it should be determined if memory plays a role with regard to the act of reading. If so, reading, meaning of language and memory will have an influence on beginning reading.

1.3. AIMS OF THE RESEARCH

The aims of research are both general and specific. The general aims relate to the literature study. The researcher intends to draw on the literature referred to in this study in order to explore and analyse cognitive processes in second language acquisition. The categories of barriers identified in the literature review and the extent to which there might be additional researched interventions, which might be held to influence the situation, are used.

1.3.1. GENERAL AIMS

This study has the following general aims:

- To explore the nature and frequency of cognition in foundational early literacy;
- To describe memory domain as first cognitive facet in foundational early literacy;
- To describe the language domain as second cognitive aspect.

1.3.2. SPECIFIC AIMS

The specific aims of the study are:

- In the light of available cognitive research, to determine what indicates the composition of an acceptable cognitive strategy instruction reading method for second language learners;
- To establish specific goals within the cognitive structure/ framework;
- To determine the effectiveness and the applicability of such a programme in the formal education practice by means of sampling.

1.4. RESEARCH DESIGN AND METHODOLOGY

The study utilises a literature study and an empirical investigation. The theoretical stage involves cognitive domains, namely memory and language. The empirical stage outlines a cognitive reading programme including facets of the literature study. The research methodology followed was in the form of a quantitative study. According to Mc Millan and Schumacher (2001:15), quantitative data presents statistical results represented with

numbers. Learners in a selected average socio-economic community in Aliwal North in the Sterkspruit District, Eastern Cape were decided on to fulfil this purpose.

An outline of the literature study, empirical research and the research instruments used to conduct this study (see Chapter 5 for a more detailed discussion) are furnished in this section.

1.4.1. LITERATURE STUDY

The literature study provides a conceptual framework for the ensuing empirical inquiry. In the literature study cognitive research related to language and reading is explored and discussed.

1.4.2. EMPIRICAL INVESTIGATION

The literature study is followed by an empirical inquiry that involves the application of a cognitive reading programme (CRP), which was informed by the findings of the literature study. The research design focused on testing the intervention programme, the CRP, empirically and quantitatively. The subjects in this empirical investigation were 20 Grade 1 learners from a selected primary school in Aliwal North district, Eastern Cape. Ten learners constituted the experimental group who were exposed to the CRP. Ten learners constituted the control group who received traditional reading instruction. T-tests were administered on the average reading ability of the experimental as well as the control group in the pre-tests and post-tests, administered before and after the intervention programme to test for significant differences.

1.5. DEMARCATION OF THE RESEARCH

The choice of the Sterkspruit, Eastern Cape area for the research limits the generalisability of the findings in terms of other levels of analysis. However, an attempt is made to make the findings of this research as representative as possible, given the limited context covered. The number of English second language learners is too large for the total to be included in the study, but a sufficiently large sample is required for analysis.

The point of departure in this investigation is to determine reading problems experienced by second language Foundation Phase learners and thereafter to determine cognitive domains that create these problems in reading.

The results of the investigation will be significant to the demarcated areas, but also to those who are involved with second language learners in the Foundation Phase in the formal sector.

1.6. DEFINITION AND CLARIFICATION OF IMPORTANT CONCEPTS

A clear description and explanation of the different concepts highlighted in the investigation is given in order to obviate ambiguities and to provide the reader with a clear understanding of what is being investigated.

1.6.1. COGNITIVE FACETS

Reading is a process that depends on cognitive operation, notwithstanding the reading approaches followed. Cognitive facets include memory domains and language domains operative in the reading abilities of learners.

1.6.2. MEMORY

According to the Cambridge International Dictionary of English (1995:886) memory is the ability to remember information, experiences and people. The Penguin Dictionary of Psychology (1985:446) describes memory as the hypothesized 'storage system' in the mind/brain that holds this information. Memory is an active process and consists of different phases. The first phase is sensory memory. It stores information for only a very short time, and last for less than a second. Sensory memory forms an integral part in the discrimination of visual and auditory stimuli. Long-term memory refers to information, which is accessible over a few seconds or over a period. The long-term memory consists of the episodic memory that recalls particular incidents, and semantic-memory, which concerns knowledge about the world (Baddeley 1993:22).

Long-term memory refers to the information stored in the brain for long periods of time, including our store of knowledge that represents our semantic memory. The way words stored in long-term memory is activated in the course of sentence perception and production is another area of concern still under study (Caramazza & Miozzo 1197; Pulvermuller 1999). Recent studies on 'brain-based learning' try to facilitate the way in which children learn and store information, by using activities that help activate the several memory lanes in which the brain stores information (Leiguarda 2003).

For the purpose of the study the role of the long-term memory will be looked at, but the focus will be on the sensory and the short-term memory. The short-term memory obtained new phonological and orthographical information with beginning reading continuously, before it can be stored and recalled from long term memory. Neuropsychologists consider that cognitive phenomena, such as attention and the use of language, could involve many functional modules of the cerebral cortex.

1.6.3. FOUNDATIONAL EARLY READING

The National Curriculum Statement Grades R – 9 Language policy document of 2005 outlines the following on the instruction of Literacy. These outcomes give specific focus to particular kinds of knowledge and skills. It is an integration of knowledge, skills and values.

Learning Outcome 1: Listening

The learner will be able to listen for information and enjoyment, and respond appropriately and critically in a wide range of situations.

Learning Outcome 2: Speaking

The learner will be able to communicate confidently and effectively in spoken language in a wide range of situations.

Learning Outcome 3: Reading and Viewing

The learner will be able to read and view for information and enjoyment and enjoyment, and respond critically to the aesthetic, cultural and emotional values in texts.

Learning Outcome 4: Writing

The learner will be able to write different kinds of factual and imaginative text for a wide range of purposes.

Learning Outcome 5: Thinking and Reasoning

The learner will be able to use language to think and reason, and access, process and use information for learning.

Learning Outcome 6: Language use and structure

The learner will know and be able to use sounds, words and grammar of the language to create and interpret text.

1.7. RESEARCH LAYOUT

The study was undertaken with Grade1 learners in the Foundation Phase as the subjects. The investigation under discussion will proceed in the following manner:

Chapter 1: The background, analysis of the problem, the aims of the research, research methods, demarcation of the research, clarification of concepts and the research programme are discussed.

Chapter 2: The literature review, which focuses on cognitive facets, is presented.

Chapter 3: This comprises a literature study and discussion of long-term and short-term memory as a cognitive facet.

Chapter 4: This chapter focuses on language domains and language development.

Chapter 5: This chapter concerns the empirical investigation. This includes a discussion of the foundational reading programme, the empirical research and the results of the investigation.

Chapter 6: In the final chapter**,** conclusions are drawn, limitations of the study discussed, recommendations made and a summary of the preceding chapters highlighted.

1.8. SUMMARY

A young second language Foundation Phase learner not only faces having to learn a new language, but also a new culture, that of the classroom or schooling. In addition, the child will have to forge new social relationships. From a language perspective, the child might exhibit a silent phase initially, perhaps lasting several months, in which he or she produces little oral English, all the while learning more about the new environment and growing in receptive ability in the new language. The environments created must be structured around the multidimensional process of language development and each child's diverse cultural background. Therefore, multilingualism should be encouraged, supported and valued. If the classroom educator is informed about the multiple adjustments that second language learner has to make, then he or she will allow the child adequate time, support and expanded opportunities to become familiar with the new environment and the challenges in it.

CHAPTER TWO

COGNITIVE DOMAINS FOR THE DEVELOPMENT OF LANGUAGE PROCESSES IN SECOND LANGUAGE ACQUISITION

A mind that is stretched by a new experience can never go
back to its old dimensions.

Oliver Wendell Holmes (1809-1894 cited in Johnston & Nahmad-Williams 2009:107)

2.1. INTRODUCTION

Chapter 1 describes the two divergent early foundational literacy constructs: the phonological and the whole language approaches. Reading is a process that depends on the cognitive operation, notwithstanding the reading approaches followed. A basic knowledge of cognition is essential.

Irvine and York (1995) and Timm et al (1999 cited in Trawick-Smith 2006:383) argue that learners of different cultures have different cognitive styles, some are field sensitive or more social in their learning, others less so. These individual variations derive from the rich traditions of families and cultural groups, and also place some children at risk of prejudice and disadvantage when learning to read. Research has shown that there is a relationship between reading and cognition. According to SEDL Reading Resources (undated), there are various cognitive domains that research has shown to be necessary for reading acquisition and the interrelationships that exist among these various cognitive domains.

2.2. COGNITIVE DEVELOPMENT

2.2.1. COGNITION

Johnston and Nahmad-Williams (2009:116) state that cognitive development is the development of cognition or conceptual knowledge and understanding, which involves the development of concepts or pictures in the mind, products of reasoning, which helps us to

make sense of the world. Louw and Louw (2007: 7) define cognitive development as how children come to know and understand their world and includes perception, learning, memory, thinking, decision-making, imagination, creativity, language and intelligence.

Mwamwenda (1995: 89) further states that cognitive development is the "development of a person's mental capacity, to engage in thinking, reasoning, interpretation, understanding, knowledge acquisition, remembering, organising information, analysis and problem solving, involving reasoning and dealing with various problems calling for objective thinking". According to Gordon and Browne (2000:444), cognition is the mental process or faculty that children use to acquire knowledge. Hendrikz (1986:88) is of the opinion that cognition includes the ways we come to know and comprehend the world in which we live, to learn from it and to think about it. These activities describe the processes of thinking, learning, remembering, comprehending, reasoning, making decisions and solving problems. This means to think is to be able to acquire and apply knowledge. Van der Zanden (1993:61) defines cognition as: "the process of act of knowing; our reception of raw sensory information and our transformation, elaboration, storage, recovery, and use of this information". Louw and Louw (2007:7) define cognition as how we acquire information about the world by means of our senses, how we process and interpret such information, and how we store, retrieve and use this knowledge to direct our behaviour. Cognition includes a person's thoughts, convictions, knowledge, and understanding. Cognitive approaches to learning emphasise the changes, which take place in the cognition of a subject during the learning process (Spangenberg 1993:271 cited in De Witt 2009:54).

Gordon and Browne (2000:444) accentuate that children think about themselves, the world, and others, by using conscious thought and memory. Brown (1994:68) points out that "the second language learner is clearly presented with a tremendous task in sorting out new meanings from old, distinguishing thoughts and concepts in one language that are similar but not parallel to the second language acquires a whole new system of conceptualisation".

Research has shown that various cognitive domains are necessary for reading acquisition (SEDL: undated). Therefore, in this regard Gordon and Browne (2000:444) go on to say that

the curriculum in the early years must address the thinking or cognitive skills. When we study the development of the child in totality, we are looking at changes over time. As children grow, changes occur in their lives, including changes to their cognitive functioning. Jean Piaget, the Swiss psychologist, has made possibly the greatest contribution to our understanding of a child's cognitive development. According to Trawick-Smith (2006:368), Piaget sought to describe the specific mental steps children go through and how they construct knowledge.

In this dissertation cognitive development refers to the development of a child's mind as evidenced by the way he reacts to dealing with different situations in different and peculiar ways, strategies to engage in objective thinking, activities that are intellectual in nature and the mental activities used to acquire and act upon knowledge.

2.2.2. INTELLIGENCE

Davis (1983:434) defines intelligence as "the ability to learn quickly, solve problems, understand complex and abstract issues, and generally behave in a reasonable, rational and purposeful manner". Mwamwenda (1995:271) points out that every human being has intelligence, but some have more than average, others have less than is essential for social adjustment, and the majority have an average amount of intelligence. Johnston and Nahmad-Williams (2009:108) describe intelligence as a measure of thinking ability, as measured by intelligence quotients.

Trawick-Smith (2006:362) emphasises that how well children do in school is, in part, a function of their overall intelligence. The author goes further on to say that important advancements in thinking are necessary for children to learn to read. Intelligence quotient (IQ) is a formula for expressing an individual's intelligence as a single score, computed by dividing one's mental age-determined by performance on a test by his or her chronological age. The author points out that an intelligence test is a test comprised of a series of questions that measure verbal a quantitative reasoning and abstract thinking that is designed to measure innate mental capabilities (Trawick-Smith 2006:487).

Baker (1996:103) argues that second language learning in the classroom has often been connected to the general ability of a child (intelligence). While the idea of general academic ability or 'intelligence' has been criticised, researchers have argued that the general factor of intelligence is allied to a general factor of language ability. This means that a more 'intelligent' a person is, the more likely he or she is to learn a second language more easily. Howard Gardner (1983 cited in Brown 1994: 93) advanced a controversial theory of intelligence that blows away traditional thoughts about IQ.

2.2.3. GARDNER'S THEORY OF MULTIPLE INTELLIGENCE

Human cognitive competence is better described in terms of sets of abilities, talents or mental skills, which we call 'Intelligences'. All normal individuals possess these skills to some extent; individuals differ in the degree of skill and the nature of their combination. Multiple intelligences pluralises the traditional concept of intelligence *(*Gordon & Browne 2000:144*).* Gardner describes seven different forms of knowing which, in his view, give us a much more comprehensive picture of intelligence. According to Johnston and Nahmad-Williams (2009:119) and Gordon and Browne (2000: 447), this includes:

- Linguistic abilities: Linguistic is the ability to use words, oral or written.
- Logical-mathematical abilities: It is the ability to understand and use numbers and reason well.
- Spatial intelligence: The ability to find your way around an environment, to form mental images of reality, and to transform them readily,
- Musical intelligence: the ability to perceive and create pitch and rhythmic patterns.
- Bodily-kinaesthetic intelligence: fine motor movement, athletic prowess.
- Interpersonal intelligence: the ability to understand others, how they feel, what motivates them, how they interact with one another.
- Intrapersonal intelligence: the ability to see oneself, to develop a sense of self-identity.

Brown (1994:94) points out that there is a relationship between intelligence and second language learning; however, in its traditional definition, intelligence may have little to do with one's success as a second language learner.

2.2.4. METACOGNITION

Johnston and Nahmad-Williams (2009:108) state that metacognition is to be aware and understand your own thought processes. According to Trawick-Smith (2006:380), metacognition is the ability to think about and regulate internal cognitive processes, such as learning and remembering. Therefore, educators, counsellors and school psychologists can assist learners to acquire metacognitive abilities by making informal suggestions for how to remember things. Educators must assist learners to expand their thinking skills and the ability to remember their work (Trawick-Smith 2006:381).

2.2.5. EQULIBRATION

According to Gordon and Browne (2000:136), equilibration is a mental process to achieve a mental balance, whereby a person takes new information and continually attempts to make sense of the experiences and perceptions. Equilibration is a balance among organisation, assimilation, and accommodation. Piaget believed that humans desire a state of cognitive balance or equilibration. When the child experiences cognitive conflict, adaptation is achieved through assimilation or accommodation.

2.2.6. ASSIMILATION AND ACCOMODATION

Piaget believed that learning and cognitive advancement at any age is the result of assimilation and accommodation. The latter are Piaget's terms for a learning process in which humans integrate new ideas or information into what they already know. Accommodation is Piaget's term for the learning process in which humans modify what they already know to make room for new ideas or information. Piaget's view is that the child does the assimilating and accommodating, not the educator. Learning is internal and personal. Children must play an active role in constructing knowledge; the educator serves only as a facilitator (Trawick-Smith 2006:367). Louw and Louw (2007:24) note that assimilation is the tendency to interpret

new experiences in terms of an existing scheme. In the case of accommodation, the scheme is adapted or changed as a result of new information acquired through assimilation. De Witt (2009:54) points out that through assimilation the child takes in all new experiences and adds them to existing experiences and understanding, which enables him or her to classify and order experiences and meanings through repetition. Smidt (2006:18 cited in De Witt 2009:54) implies that accommodation includes the mental judgements that have to be made where the child has to accommodate understanding in order to adapt to a new environment.

2.2.7. ORGANISATION

Organisation refers to the mind's natural tendency to organise information into related, interconnected structures. Thus, it implies the tendency to organise thinking processes into psychological structures/schemes. The most basic structure is the scheme (Trawick-Smith 2006:367). Louw and Louw (2007:24) accentuate that organisation is the tendency of cognitive processes to become not only more complex, but also systematic and coherent.

2.3. THEORIES OF COGNITIVE DEVELOPMENT

2.3.1. PIAGET'S THEORY OF COGNITIVE DEVELOPMENT

Particular attention will be paid to Jean Piaget's theory of cognitive development because it is of the utmost importance and the "most influential child development theory of this century". Piaget's approach looks at how the child's interaction with the environment leads to cognitive development (Lefrancois 1997:73).

Gordon and Browne (1989:109) point out that Piaget's theory depends on both environmental and maturational factors. It is environmental because the experiences that the children have will have an important effect on the way in which they develop; and it is maturational as it sets out a succession of cognitive stages that are influenced by heredity. Mwamwenda (1995:89) points out that Piaget's theory attempts to give a comprehensive explanation of the child's world and how he or she understands and interprets it.

The theory of cognitive development, first developed by Piaget, proposes that there are four distinct, increasingly sophisticated stages of mental representation that children pass through on their way to an adult level of intelligence. They are the following:

Stage1: The sensorimotor stage (birth to 18 or 24 months)
Stage 2: The preoperational stage (2 to 6 or 7 years)
Stage 3: The concrete operational stage (6 to 11 or 12 years)
Stage 4: The formal operational stage (11 or 12 years onwards)

Foundation Phase learners, according to this model, function in the second stage, that is, the preoperational stage of cognitive development. In the preoperational stage Piaget provides excellent descriptions of the preschooler's thinking. Children of this phase move into a new, distinct stage of intellectual development (Trawick-Smith 2006:366). There is "a unique level of analysis, internal organization and understanding of environmental information and events" during each of these stages. They are described in more detail as follows.

SENSORIMOTOR STAGE 0-2 YEARS (INFANCY)

According to Wikipedia (2008:1-5) this phase includes:

- Development based upon information obtained through the senses or body movements.
- Development of understanding of object permanence.
- Development of goal-directed action and reversible actions.

This stage lasts from the birth of a baby to the age of about two years. This involves "the process of coordinating ideas and actions and making them systematic" Wikipedia (2008:1-5). This is the first stage of cognitive development according to Piaget's theory. Children are in the sensorimotor stage when they acquire language, and it forms a basis for all subsequent understanding (Maier 1978:30). According to Johnston and Nahmad-Williams (2009:115), babies assimilate information through their senses and experiences, and in this way they learn about scientific phenomena by extending and modifying schemas (accommodation), thus building up mental pictures of the world.

Mwamwenda (1996:92) is of the opinion that the sensorimotor stage is the first stage in the growth and development of a child because the child has a basic structure for organising and adapting to his or her environment. The author says that the child's behaviour tends to be circular, and he or she develops an elementary understanding of time, cause and effect and perceptual knowledge of objects and their attributes. It is at this stage that the child acquires language, which enhances social and intellectual development. The most important development is the child's attainment of object permanence, which facilitates the internalisation of his or her activities and of objects. Learning is therefore at this stage action-orientated and serves as a foundation for subsequent symbolic thinking.

Within the sensorimotor stage six substages can be described; they are "successive and always in the same order" (Maier 1978:30). The substages are the following:

- Exercise of reflexes
- Primary circular reactions
- Secondary circular reactions
- Coordination of secondary schemas and application to new situations
- Tertiary circular reactions
- Inventions of new means through mental combinations

PRE-OPERATIONAL STAGE (2 TO 6 OR 7 YEARS)

According to Johnston and Nahmad-Williams (2009:115), at this stage children's processes are developing but are not necessarily ordered and logical. The authors state that children are very egocentric, believe that everything has a consciousness and all moving objects are alive. According to Wikipedia (2008:1-5), the preoperational stage is the beginning of logical mental actions (operations). Children have a difficulty with two principles, namely decentering and conservation. They are egocentric and have a tendency to see the world from their own view.

The majority of preschoolers operate at the pre-operational stage. At this stage, the child is not yet capable of using a logical process of reasoning on the basis of concrete evidence

(Lefrancois 1984 cited in Mwamwenda 1996:92). A pre-operational child is characterised by animism, egocentrism, transductive reasoning, syncretism, lack of decentring, lack of classification, lack of satiation and conservation skills and a rapid acquisition of language.

Bjorklund (1989:23-24) is of the opinion that the preoperational period is characterised by the lack of operations. According to him, operations are:

- Mental schemes that denote ways in which the individual will act in his or her life world;
- Mental constructs that require the use of symbols;
- Internalised actions that exist in an organised system;
- Logical and follow a system of rules.

CONCRETE OPERATIONAL STAGE (6 TO 11 OR 12 YEARS)

This stage takes place during the later elementary to middle school years:
According to Wikipedia (2008:1-5) the concrete operational stage consists of "Hands-on thinking". The child recognises the stability of the physical world, realises elements can be changed and retain original characteristics (identity) and is capable of reversible thinking. operations mastered at this stage are conservation, classification, and seriation.

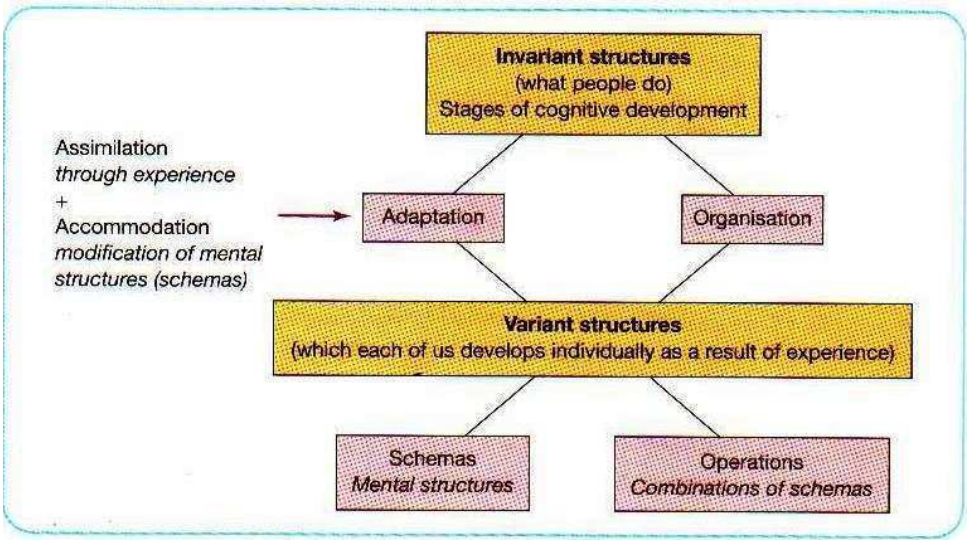
"Concrete operations are so named because children's thinking is limited to tangible facts and objects and not to hypothesis" (Bjorklund 1989:32). Mwamwenda (1995:95) states that this stage is referred to as the concrete operational stage, because the child is capable of using a logical process of reasoning on the basis of concrete evidence.

Trawick-Smith (2006:367) points out that during this stage children gain freedom from some of the cognitive limitations of previous developmental periods, but they still display some cognitive characteristics of preschool-age children. Johnston and Nahmad-Williams (2009:115) are of the opinion that children's thinking becomes more coordinated, rational and adult-like. Children can think logically if they can manipulate the object that they are thinking about.

To summarise changes that take place in this period, Lefrancois (1997:83) says that in this period children make an important change from a prelogical form of thinking to thinking that is based on rules of logic. The operations or a mental activity of this period applies to concrete objects and they differ from the previous period because of their ability to conserve.

Before the concrete operational stage, children are said to be preoperational; not because they cannot think, but because of limitations. These limitations come about because the children rely on their own perceptions, intuitions and thinking from their own perspective only.

Figure 2.4. Piaget's model of cognition.



Source: Adapted from Davenport (1994:132 cited in Johnston & Nahmad-Williams 2009:114)

2.3.2. VYGOTSKY'S SOCIOCULTURAL PERSPECTIVE ON COGNITIVE DEVELOPMENT

This section addresses the following question: How is information from the external world transformed and internalised?

Johnston and Nahmad-Williams 2009:115) point out that Vygotsky identified the importance of language in cognitive development so that as children's language develops, it becomes more complex. He believed that language is a symbolic system by which we communicate. It is

a cultural tool where history and culture are transmitted through language. Our thoughts are based on language - “inner speech”. Transitions to inner speech help solve problems. Self-talk and learning teaches learners to use cognitive self-instruction.

Social interaction plays an important role in the transformation and internalization processes. Vygotsky argued that development first takes place on a social plane. The child observes the parents’ behaviour, listens to the parents’ speech, and tries to imitate. The parents guide the child in his/her efforts, making corrections when needed and providing greater challenges when appropriate. On the internal plane, as the child becomes more competent, information becomes internalised. Language is now represented in the mind as thought or inner speech.

Vygotsky was also interested in human intellectual development. He introduced the notion of the zone of proximal development (ZPD), which is “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with a more capable peer”. According to Louw and Louw (2007:27), it refers to tasks, which are too difficult for a child to do alone, but which he or she can manage with the help of an adult.

Scaffolding is the process of guiding the learner from what is presently known to which is to be known. This occurs in the ZPD. The more competent person supports the learner in the endeavour to reach the new level of development. In contrast to Piaget, Vygotsky believed that instruction leads the learner into ZPD.

What comes to mind is: What is the role of language then according to Vygotsky?

Vygotsky believed that language has two purposes, namely communication and regulation. Communication is important in the transmission of culture and history between individuals. Regulation refers to one’s control over one’s cognitive processes (e.g. thoughts, memory, etc.). A goal of development is to make the transition from being other-regulated to becoming self-regulated.

2.3.3. BRUNER'S PERSPECTIVE ON COGNITIVE DEVELOPMENT

Jerome Bruner, an American developmental psychologist, developed a theory of cognitive development. Johnston and Nahmad-Williams (2009:117) state that Bruner's cognitive theory involves cognitive growth and considers environmental and experimental factors in the development of cognition. He suggests that cognitive ability develops depending on how the mind is used. According to Bruner (1966 cited in Mwamwenda 1996:104), children pass through three stages of cognitive development as they grow: the enactive, iconic and symbolic modes of thought.

Mwamwenda (1996:104) points out that the enactive mode of thinking constitutes the first stage and is commonly observed among infants. It is characterised as being motoric or action-based, as reflected in touching, tasting, moving and grasping. Bruner (1966 cited in Johnston & Nahmad-Williams 2009:118) is of the opinion that enactive representation is cognition expressed through physical actions. Mwamwenda (1996:104) mentions further that the infant perceives an object in terms of what is done to it and its thinking is based on what it does. There is hardly any form of conceptualisation on the basis of representation. As a result of experience acquired through physical interaction with objects, the infant is in a position to reproduce such experience psychomotorically. The author argues that neither language nor imagery would be considered important in this form of representation. Stone (1984:290) comments in this regard that the enactive mode of thinking is typical of children who 'have little option but come to terms with the world by holding, moving biting, throwing, squeezing, touching and so on'.

During this stage of iconic mode of thinking, the child's systems of representing information expand so that objects and experiences not only continue to exist in their absence, but form part of his or her internalised experience (Mwamwenda 1996:104). The author comments that the child forms images and pictures of experiences he has had, and as a result can interact with objects that are physically absent but readily available in his mind. Bruner (1966 cited in Johnston & Nahmad-Williams 2009:118) states that iconic representation is objects and events experienced through the senses represented by mental images. The iconic mode becomes increasingly important when what the child learns both in and out of the school

context involves concepts and principles that cannot be demonstrated physically. Therefore, educators must encourage learners to use their imagination and create images. Clifford (1981:264) advocates that "they can provide vicarious experiences and images that can enrich and supplement the actual experiences of the student".

The symbolic mode is the third and highest form of thinking postulated by Bruner. Bruner (1966 cited in Johnston & Nahmad-Williams 2009:118) states that through symbolic representation, thought is expressed through symbols, such as language. Mwamwenda (1996:105) mentions that at this stage the child represents information on the basis of symbols, ideas, thoughts or concepts. According to Bruner, symbolic thinking is the result of the mastery of language, which enables the child to symbolise his or her physical experience (Davis 1983 cited in Mwamwenda 1996:105). The author goes further to say that a child can engage in a wide range of information-gathering activities including the construction of hypotheses, using metaphoric and conditional propositions, problem solving and logical reasoning.

2.3.4. EVALUATION OF PIAGET, BRUNER AND VYGOTSKY'S THEORY

Piaget believed that development proceeds from the individual to the social world. Egocentric speech suggests that the child is self-centred and unable to consider the point of view of others. Piaget also maintains that development precedes learning.

Vygotsky believed that development begins at a social level and moves towards individual internalisation. Egocentric speech is seen as a transition between the child's learning language in a social communicative context and attempting to internalise it as "private" or "inner speech (thoughts). For Vygotsky, learning precedes development.

Both agree that development may be initiated by cognitive conflict. Like Piaget, Vygotsky believed that children's egocentric speech was an important part of the cognitive development. The two differed in how they viewed the purpose of egocentric speech.

Bruner believed that young children at preschool and primary school level learn more effectively when concrete objects, actions, materials and examples are used. Therefore, whenever possible, their senses should be drawn into explanations of concepts, relationships and cause and effect.

Bruner stressed the role of language in cognitive development. Piaget stressed action as the basis of cognitive development. Bruner accentuated that children pass through three stages of cognitive development. Vygotsky stressed the role of language in a sociocultural context. According to Vygotsky, self-talk and learning teach learners to use cognitive self-instruction.

2.4. CULTURE AND COGNITIVE ABILITIES

Trawick-Smith (2006:376) points out that there is greater individual variation in children's cognitive competence in the primary years. Bruner (1991 cited in Johnston & Nahmad-Williams 2009:118) argued that the mind structures its sense of reality through cultural mediation (or interaction with ideas, others and situations in the cultural context) and he specifically focused on the idea of narrative (personal explanation or storytelling) as one of these cultural products that supports cognitive development.

Some children are more advanced than Piaget would ever predict, and others develop more slowly. Flavell, Miller and Miller (1993 cited in Trawick-Smith 2006:376) suggest that cognitive ability varies more during the primary years than in any other period; one factor that contributes to this variation is culture. Dasen et al (1979 cited in Mwamwenda 1995:141) state that cross-cultural research has repeatedly demonstrated that cultural differences in cognitive development do not influence the attainment of cognitive stages except the rate at which they are attained. Trawick-Smith (2006:378) accentuates that cultural experiences, values and reading explain differences in cognition in the primary Foundation Phase years. It is therefore important to point out that cultures are not inferior because they value certain cognitive abilities less or provide fewer experiences to obtain them. Intellectual competence of school-age children must be judged in relation to the abilities or knowledge needed to function in their own cultural group.

2.4.1. CUMMINS'S MODEL OF SECOND LANGUAGE ACQUISITION AND COGNITIVE PROCESSING

According to Cummins (2000:60 cited in Lemmer 2002:47), learners require integrated basic interpersonal communicative skills (BICS) and cognitive/academic language proficiency (CALP) to achieve optimally in the school situation. Where there is a language deficit in the area of CALP, learners lack the language proficiency to master academic content and to become proficient in school discourse. Cummins states further that the lack in the academic dimension of language proficiency on the part of the language minority child often passes unnoticed by educators. Often it is hidden on the playground or in everyday conversation because the learners have already acquired informal, colloquial language or BICS. The latter consists of the 'visible' aspects of language such as pronunciation, basic vocabulary and grammar, which allow learners to converse fluently in undemanding everyday situations (Cummins 2000:56 cited in Lemmer 2002:47). In order to achieve academic success, a more sophisticated command of language or CALP is necessary.

According to Cummins (2000:56 cited in Lemmer 2002:47) learners must be able to use a language to:

- Grasp concepts: To gain knowledge of concepts;
- Establish relationships between concepts or information sets;
- Analyse, synthesise, classify, store and retrieve information;
- Articulate information processed in oral and written form.

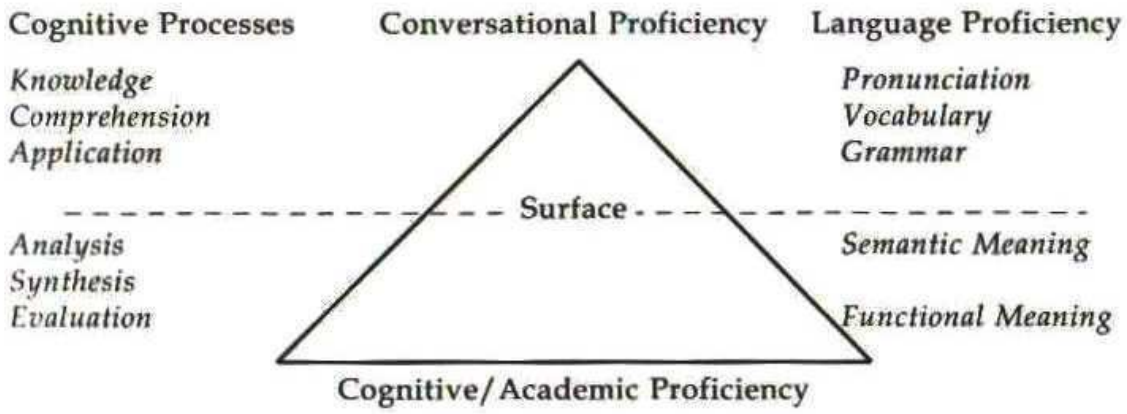
Language minority learners are able to demonstrate higher order thinking, such as generalising, hypothesising, arguing in their first language yet they lack the CALP required to carry out higher cognitive operations through the medium of English (Wales 1990:5 cited in Lemmer 2002:48). Educators in multicultural settings experience that language minority learners has difficulties with academic concepts and terminology because these terms and ideas are more abstract, less easily to understood and experienced than ideas and terms used in social interaction. This observation is in agreement with Chamot (1996:109 cited in Lemmer 2002) who found that educators may not realise that this cognitive difficulty is due to language and may ascribe it to a lack of intellectual ability. BICS and CALP have been linked to

visible and quantifiable aspects of language and to less visible and less easily measured aspects respectively. Chamot (1996:110 cited in Lemmer 2002:48) has further linked the metaphor to Bloom's taxonomy of educational objectives to the BICS/CALP distinction using the image of an iceberg.

According to Lemmer (2002:48) BICS would be sufficient for the surface level of cognitive processing to do the following:

- Recall memory
- Comprehension (grasp of basic meaning without necessarily relating it to other material)
- Application (use of abstractions in particular and concrete situations).

Figure 2.5. The iceberg model linking language skills and cognition processing.



(Baker 1996:152 cited in Lemmer 2002:48)

Under the surface the deeper levels of cognitive processing are linked to CALP. These deeper levels comprise:

- Analysis (breaking down a whole into its parts so that the organisation of elements is clear);
- Synthesis (putting elements into a coherent whole);
- Evaluation (judging the adequacy of ideas or material for a given purpose).

2.4.2. DIVERSE COGNITIVE NEEDS IN CURRICULA

According to Gordon and Browne (2000:454), educators can plan the cognitive curriculum for learners by taking into consideration the class setting. The environment and methods required to help children think include challenging situations, enriching materials and supportive adults. They point out that 6 to 8 year old still benefit in discovery-oriented, "learn by doing" situations. Trawick-Smith (2006:388) suggests that educators might work with learners who have severe cognitive impairments and those with highly advanced cognitive abilities.

In terms of this research, what comes to mind is how can the needs of learners with reading disabilities and those with advanced cognitive abilities be met in a second language environment of 50 learners in the unique Eastern Cape school setting situation under discussion.

2.5. COGNITIVE STRATEGIES

Several strategies are suggested in the literature (Howard et al. 2004; Ormrod 2000; Umansky & Hooper 1998 cited in Trawick- Smith 2006:388). These strategies as discussed by these authors are summarised in the ensuing paragraphs.

2.5.1. GRADED CHALLENGES

Graded challenges is the provision of play and learning materials in a classroom that represent varying degrees of difficulty so that children of all abilities can find something meaningful to do. This is recommended as a way to encourage greater social interaction to meet diverse cognitive needs. Learners are drawn to activities that match their cognitive abilities. Graded challenges work best in classrooms with learning centres and group projects. Whole-group teaching is exceedingly difficult in classrooms of diverse learners.

2.5.2. COOPERATIVE LEARNING AND PARTNERING

Classroom strategies in which children work in pairs or groups so that more competent learners may be matched with those who have cognitive disabilities. Educators can plan projects in which learners work in pairs or groups. The educator should assign learners to these groups so that more competent learners are matched with those who have cognitive disabilities. More advanced learners can then guide those needing assistance.

2.5.3. VISUAL AND AUDITORY CUES

Many activities in the primary years require an ability to read. A project based on a children's book or a cooking activity with a written recipe are examples. Children with cognitive impairments will have difficulty with these activities. Educators can include visual or auditory cues for these learners. A recorded version of the book or pictures on the recipe, cups and teaspoons and ingredient labels can guide them in their cooking. More competent partners can be asked to read the text to less able readers as well.

2.5.4. ACTIVITIES ADDRESSING MULTIPLE INTELLIGENCES

Cognitive disabilities may affect some areas of learning but not others. Learners may struggle with reading but be very competent musicians. Gifted and talented learners may not be competent in some areas. They may excel in verbal abilities but have great difficulty with mathematics. Educators can plan activities that address all areas of learning so that each child has an opportunity to show his or her unique abilities. Educators might try to plan at least several activities per week that addresses each of Gardner's multiple intelligences.

2.5.5. FLEXIBLE SCHEDULING

A classroom strategy identified in which some children are allowed to take as long as they need on a learning task and others are able to move ahead to more advanced activities if they finish early. Learners of diverse abilities take more or less time in learning concepts. Some learners will finish activities quickly and be ready to move on but will have to wait while other learners catch up. Other learners will take a long time to finish and may never complete

projects or assignments. Educators can address this pacing problem by adopting flexible scheduling, a strategy in which some learners are allowed to take as long as they need on a learning task and others are able to move ahead to more advanced activities if they finish early. Educators can simply extend a learning period, so that learners can complete an assignment they are working on. They can plan a variety of higher-level activities to keep on hand for learners who finish early.

2.5.6. QUESTIONS OF DIFFERENT COGNITIVE LEVELS

Questions that educators ask that are of many different difficulty levels so that challenging, open-ended questions are alternated with lower level, simple-answer questions. Questions are powerful teaching tools for primary-grade educators. Higher-level, open-ended questions stimulate advanced thinking.

The more thought provoking the question is, the better. For learners with cognitive disabilities, however, such questions are very challenging. Less complex questions would be more appropriate. During planning, a teacher can write out questions that are of many different difficulty levels. These can be asked within the same activity. High-level questions can be alternated with lower level ones. Care can be taken to let less able learners answer the easier questions; more challenging ones can be directed to cognitively more advanced learners.

2.6. SUMMARY

Chapter 2 examined the intellectual development of the primary grade learner and how cognition influences and is influenced by formal reading. The Foundation Phase learner from ages 6 to 8 is marked by rapid cognitive growth.

Most learners of this age enter the concrete operational stage of development, in which they are able to solve more problems and acquire new abilities in literacy. Piaget viewed intelligence as the acquisition of specific thinking processes. For children in his concrete operational stage of cognitive development, these processes include reversibility and

causality. His work has influenced the Foundation Phase curriculum development in all learning areas. Piaget's view of cognitive development has been criticised as underestimating the primary age learner's thinking and for failing to appreciate cultural differences in learning.

Vygotsky's theory emphasises the role of culture and language more fully. He argued that verbalizations, both the child's and those of others, are now internalised and help guide learning. Metacognition contributes to cognitive development in the primary years. Learners are able to control their learning processes and can use strategies such as rehearsal, labelling and organization, and paying attention.

Howard Gardner proposes multiple intelligences, including musical, spatial, and even interpersonal domains that are not always appreciated in the school curriculum. Educators must therefore plan experiences that represent a range of cognitive abilities so that learners of diverse backgrounds are challenged but never overwhelmed.

CHAPTER 3

MEMORY AS A COGNITIVE CONSTRUCT

School success requires not just acquiring knowledge but also retaining
it for significant periods of time. Children must remember ideas or
concepts and build on them during later school experiences.
Memory is critical for long-term success in school.
(Trawick-Smith 2006:379)

3.1. INTRODUCTION TO THE MEMORY DOMAINS

In chapter 2 the researcher examined the cognitive domains in second language acquisition. In chapter 3 the different memory mechanisms are explored: the developmental courses, different systems, memory and metacognition strategies, neural connections, components of working memory and reading acquisition.

Memory forms an integral part of the learning process (Berk, 2006:27; Slater & Bremmer, 2003: 285 cited in De Witt 2009:59). According to Louw and Louw (2007:15), memory is a very important aspect of cognitive development. Aleksander (1996:43) is of the opinion that the essence of cognition appears to rely on mechanisms of memory. In this chapter the author will attempt to demonstrate, according to Freeman and Company (1979:112), the possibility of identifying areas or structures in the brain that are involved in certain memory processes. Our memory is based on neural connections of the hippocampus area of the brain, though the localisation of various forms of memory is under research. David Sousa (1995 cited in Ahola & Kovacik 2007:121) says"that memory gives us a past and a record of who we are and is essential to human individuality".

3.1.1. THE DEVELOPMENTAL COURSE OF MEMORY

Memory includes processes by which people encode, store, and retrieve information. According to Baddelley (1993:167), encoding refers to the initial perception and registration of information. Johnston and Nahmad-Williams (2009:128) point out that information is converted into codes so that it can be represented mentally. Ahola and Kovacik (2007:121) define encoding as the manner in which information is processed for storage.

According to Johnston & Nahmad-Williams (2009:128), storage is the information stored in our brains for either a short time or a longer time. Ahola and Kovacik (2007:121) refer to storage as the manner in which information is retained in memory.

Retrieval refers to the processes involved in using stored information about the experience; people must have encoded, stored, and retrieved information about the experience. Retrieval involves recovering stored information from long-term memory (Johnston & Nahmad-Williams 2009:129). It is the process of taking information out of our memory storage (Ahola & Kovacik 2007:121).

According to Memory MSN Encarta (2009:4), memory and learning are closely related. Learning is often used to refer to processes involved in the initial acquisition or encoding of information, whereas the term memory more often refers to later storage and retrieval of information. Therefore, information is learned only when it can be retrieved later and retrieval cannot occur unless information was learned. The authors also revealed that psychologists often refer to the learning/memory process as a means of incorporating all facets of encoding, storage, and retrieval. Learning and memory cannot be separated from each other. Memory is very important in people's lives and for human survival. It is critical to humans and all other living organisms. Practically our entire daily activities - talking, understanding, reading and socializing - depend on our having learned and stored information about our environments. Memory allows us to retrieve events from the distant past or from moments ago. It enables us to learn new skills and to form habits. Without the ability to access past experiences or information, we would be unable to comprehend language (Mwamwenda 1996:235).

3.1.2. THE MAIN SYSTEMS OF MEMORY

Memory can be defined as:

- The reliving of an event from the past, together with the knowledge that one is reliving it;
- The ability of a organism to remember, that is, that characteristic which influences the future behaviour of organisms on the basis of what they already experienced;

- The totality experiences that can be remembered or specific experience derived from these (Gouws et al., 1979:96 cited in De Witt 2009:59).

According to Baddeley (1993:17), most theoretical models of memory distinguish three main systems or types: the sensory memory, short-term memory and long- term memory.

3.1.3. SENSORY MEMORY

Trawick-Smith (2006:379) define sensory memory as "a kind of memory that involves brief recollections of experiences involving the senses, and disappears unless it is processed fully in the mind". It also refers to the immediate memory for sensory information. Retention is usually brief (Gouws et al., 1979:272; Klahr & Wallace, 1976; 175; Berk, 2006:273 cited in De Witt 2009:59). Memory MSN Encarta (2009:4) is of the opinion that sensory memory refers to the initial recording in our sensory systems. The authors state that when sensations strike our eyes, they linger briefly in the visual system, and this kind of sensory memory is called iconic memory and refers to the usually brief visual persistence of information as it is being interpreted by the visual system. Echoic memory is the name applied to the same phenomenon in the auditory domain: the brief mental echo that persists after information has been heard.

3.1.4. SHORT-TERM OR WORKING MEMORY

Short-term memory refers to the retention of material for short periods of time (Berk, 2006:272 cited in De Witt 2009:59). Short term or working memory is the name given to this system or, perhaps more appropriately, set of systems. Information, which is essential for a brief period of time, is very temporarily stored, and then becomes quite irrelevant (Baddeley 1993:23). Trawick-Smith (2006:379) defines short-term memory as a type of memory in which experiences are stored in the brain for a short period of time. One can organise, make sense of, and reflect on, or in other ways, process information in short term memory. Louw and Louw (2007:1660) are of the opinion that short-term memory is the child's working memory where developmental changes in short term memory (STM) are apparent.

Memory MSN Encarta (2009:5) refers to short-term memory as a broader system that both stores information briefly and allows manipulation and use of the stored information. Mwamwenda (1996:235) on the other hand is of the opinion that information received by the sensory register in its original form undergoes processing in the short-term memory, in which it is retained for only a short while. According to Pickering (2006: xvii), working memory and short-term memory are overlapping concepts. Short-term memory manipulates information while it is being stored, and when some form of active processing is going on in addition to the storage of information, this is much more likely to be conceptualised as working memory activity.

Working memory capacity is correlated with intelligence. This correlation has led some psychologists to argue that working memory abilities are essentially those that underlie general intelligence. The more capacity people have to hold information in mind while they think, the more intelligent they are. Research suggests that there are different types of working memory; the ability to hold visual images in mind seems independent from the ability to retain verbal information (Memory MSN Encarta 2009:7).

3.1.5. LONG TERM MEMORY

Louw and Louw (2007:166) refer to long-term memory as our permanent storehouse of information. According to Gouws et al. (1979:169 cited in De Witt 2009:59), it refers to the retention of material for periods varying between less than a minute and a lifetime of the organism.

Trawick-Smith (1996:380) defines long-term memory as “a type of memory in which certain images, facts, or concepts are drawn from short-term memory and are permanently stored.” Some equate long-term memory with knowledge itself. Biehler and Snowman (1986 cited in Mwamwenda 1996:236) argues that on the basis of the findings of clinical, experimental and neurological research, long-term memory is not only unlimited in capacity, but also capable of storing all the experiences a person has during his life. Mwamwenda (1996:236) hypothesised that “’information stored in long-term memory is not likely to be forgotten easily. Forgetting

occurs only if the retrieval of information is not activated by the cues necessary to identify the information."

Caramazza and Miozzo (1997) and Pulvermuller (1999: 253-279) explain that long-term memory refers to the information stored in the brain for long periods of time, including our store of knowledge that represents our semantic memory. The authors point out that much of the neuroscience of language has been concerned with how memory can be dependent on context; how an area of knowledge may be activated and become 'working memory' at a given point in time. The way words stored in long-term memory are activated in the course of sentence perception and production is another area of concern still under study.

3.2. MEMORY AND METACOGNITION STRATEGIES

Memory plays an important role in the lives of educators and learners, especially in success at school and beyond. For the purpose of this study, an investigation of some of the factors that facilitate the retention of reading information is important. Thus, the following variables are discussed: recognition, rehearsal, organisation and attention.

3.2.1. REHEARSAL

When the information received in the sensory region is selected for further processing, the process set in motion is known as rehearsal (Mwamwenda 1996:237). According to Flavell, Beach and Chinsky (1966) and Naus (1982 cited in Trawick-Smith 1996:380), children discover during the primary years that they can remember information for longer periods through rehearsal. Rehearsal is the repeating of material verbally or the practising of actions over and over so they are retained. Research has shown that children younger than 6 years old repeat facts or skills again and again that they wish to learn. Oyen and Bebko (1996 cited in Trawick-Smith 1996:380) argue that whereas kindergartens and preschoolers might learn the names of plants in a terrarium by listening and remembering in a haphazard way, first graders will rehearse these names, saying them aloud or to themselves again and again.

3.2.2. LABELING AND ORGANISATION

Trawick-Smith (1996:380) is of the view that labelling and organisation is a learning strategy in which learners place objects, events, or ideas they wish to remember into mental categories and then name them. Another way to remember new information is by label and organising it in some way in the mind as it is being learned. Trawick-Smith (1996:380) points out that as children reach primary years, they become more sophisticated at placing objects, events, or ideas into mental classifications to remember them. They are of the opinion that children can also create labels for these classifications. Mwamwenda (1996:237) also advocates that if the information to be learned is well organised, it can be remembered easily. One way of organising information is by breaking it into smaller units and trying to link these to each other in the way they relate to each other so that remembering one unit can lead to remembering yet another unit.

3.2.3. ATTENTION

Attention is the process of selecting important information for further processing (Mwamwenda 1996:238). Trawick-Smith (1996:380) concluded that it is a learning strategy in which learners control attention and focus on only one or several relevant phenomena at a time. This ability significantly enhances their ability to remember. Mwamwenda (1996:381) mentions that attention is vital to remembering, because unless selective and proper attention is given to what is to be learned, learning is unlikely to be effective. Attention may come into play at various stages, before the information is encoded in the sensory register, or while it is there, or when it is already in short-term memory.

In our everyday lives, we encounter numerous experiences to which we do not react with equal interest and attention; we are selective in determining which stimuli will become part of our permanent experience and which will be dropped from memory instantly. According to Lefrancois (1982:237), “human attention is such that we process only a very small number of all stimuli that impinge on us at any given time”. What is learned and retained in our memory system is a function of the attention paid to our experiences.

3.3. BRAIN AND MEMORY

According to Freeman and Company (1979:112), it is possible to identify areas or structures in the brain that are involved in certain memory processes. Aleksander (1996:43) is of the opinion that the essence of cognition appears to rely on mechanisms of memory. Our memory is based on neural connections of the hippocampus area of the brain, though the localisation of various forms of memory is under research.

Leiguarda (2003:17-19) contends that recent studies on 'brain-based learning' try to facilitate the way in which people learn and store information, by using activities that help activate the several memory lanes in which the brain stores information. The brain is divided into different sections. The cerebral cortex is associated with thinking and reasoning and is divided into two hemispheres that are interconnected. The cerebrum is divided into two halves and each is further divided into two halves and each is further divided into four lobes, each associated with particular activities as follows (Smidt 2006:125):

- The occipital lobe is concerned with sight or vision
- The parietal lobe deals with movement, number and orientation.
- The temporal lobe is associated with hearing and language.
- The frontal lobe is associated with feelings, emotions, planning and
- decision making as well as with short-term memory and attention.

3.4. COMPONENTS OF WORKING MEMORY

3.4.1. THE CENTRAL EXECUTIVE

The central executive mechanism keeps the information alive through repetitions and prevents irrelevant material and distractions from interfering (Abadzi 2006:28). According to Baddeley (1993:68), the central executive is "…a limited capacity attentional system that controls the phonological loop and the sketch pad, and relates them to long term memory".

The central executive is a system that is responsible for the control of cognitive processes (Baddeley 2010:1). It has the following functions:

- Binding information from a number of sources into coherent episodes;
- Coordination of the slave systems;
- Shifting between tasks or retrieval strategies;
- Selective attention and inhibition;
- It is a supervisory system that controls cognitive processes.

3.4.2. PHONOLOGICAL LOOP

The phonological loop (or "articulatory loop") deals with sound or phonological information according to Baddeley (2006:6). Abadzi (2006:28) asserts that the phonological loop holds information in a speech-like code. The duration and capacity of its storage are exceedingly limited. Seven items can stay in the phonological loop only for 12 seconds. The phonological loop consists of two parts.

SHORT- TERM PHONOLOGICAL STORE

Any auditory verbal information is assumed to enter automatically into the phonological store. Visually presented language can be transformed into phonological code by silent articulation and be encoded into the phonological store, a store that is capable of holding phonological information over a matter of seconds. This transformation is facilitated by the articulatory temporal order.

ARTICULATORY REHEARSAL COMPONENT

The articulatory process acts as an 'inner speech' and repeats the series of words, that is, the rehearsal of items, hence the term "articulatory loop". The phonological loop plays a key role in the acquisition of vocabulary, especially in the early childhood years, and it is also vital for learning a second language (Baddeley 2006:6).

The main findings provide the following evidence*:*

- The effect of phonological similarity: Lists of words that sound similar are more difficult to remember than words that sound different. Semantic similarity (similarity of meaning) has comparatively little effect, supporting the assumption that verbal information is coded phonologically in working memory (Baddeley 1996:7)
- The effect of articulatory suppression: Memory for verbal material is impaired when people are asked to say something irrelevant aloud. This is assumed to block the articulatory rehearsal process, thereby leaving memory traces in the phonological loop to decay (Baddeley 1996:7).
- Transfer of information between codes: Articulatory suppression prevents this transfer; phonological similarity is erased for visually presented items.

What comes to mind is: Is the phonological loop important only for vocabulary acquisition?

Although the evidence is less extensive, it appears to contribute to syntactic development (Baddeley, Gathercole, & Papagno, 1998 cited in Baddeley 2006:13) presumably because this also depends on the capacity to hold sequences of speech sounds during the learning process. The writers also suggest that the phonological loop appears to contribute to the development of reading skills. This ranges from learning letter-sound correspondences, through sound blending to the level of text comprehension. For none of these functions is it likely that poor phonological loop capacity is the sole determining factor. Limited phonological loop capacity may, therefore, be compensated by strengths in other capacities.

Baddeley (1996: 13) accentuates that the simple concept of a phonological store, together with a sub vocal articulatory system, seems to give a good account, not only of normal functioning, but also of a range of neuropsychological and developmental deficits. Therefore, evidence suggests that the system is involved in language acquisition and second language learning in children. Although the evidence is less strong, the phonological loop appears to contribute to the acquisition of grammar and to the early stages of reading.

3.4.3. VISUO-SPATIAL SKETCHPAD

The visuo-spatial sketchpad holds information about what we see. Abadzi (2006:28) agrees that the visuo-spatial sketchpad holds visual or spatial information, such as a picture that was just seen. The visuo-spatial sketchpad holds about four items, which is why people tend to have poor memories of scenes they see briefly. It is used in the temporary storage and manipulation of spatial and visual information, such as remembering shapes and colours, or the location or speed of objects in space. The latter are involved tasks, which involve planning of spatial movements. The visuo-spatial sketchpad can be divided into separate visual, spatial and kinaesthetic (movements) components and is represented in the right hemisphere of the brain (Baddeley 2006:13).

3.4.4. EPISODIC BUFFER

In 2000 Baddeley added a fourth component to the model, called the 'episodic buffer'. This component is a third slave system, dedicated to linking information with time sequencing, such as the memory of a story or a movie scene. The episodic buffer is also assumed to have links to long-term memory and semantic meaning.

3.4.5. EVALUATION OF THE FOUR COMPONENTS OF WORKING MEMORY

PHONOLOGICAL LOOP

Baddeley's theory accounts reasonably well for the word-length effect and the effects of articulatory suppression. Baddeley et al (1998) and Papagno et al (1991 cited in Hitch's weblink 2010:3) suggest that the phonological loop may be more important in learning new words than familiar ones. Baddeley found evidence that subvocal rehearsal is not needed for vocabulary learning as young children (who do not use subvocal rehearsal) still show a link between phonological memory and vocabulary meaning.

VISUO-SPATIAL SKETCHPAD

Three main types of evidence support the theory of separate visual (visual cache) and spatial (inner scribe) components of the visuo-spatial sketchpad.

- There is little interference between visual and spatial tasks (Baddeley & Lieberman, 1980 cited in Hitch's weblink 2010:4).
- There could be brain damage to one, but not to the other component (Beschin et al., 1997 cited in Hitch's weblink 2010: 4).
- Consists of brain-imaging data (Smith & Johnides 1997 cited in Hitch's weblink 2010:4).
- Many tasks require both components to be used in combination.

CENTRAL EXECUTIVE (CE)

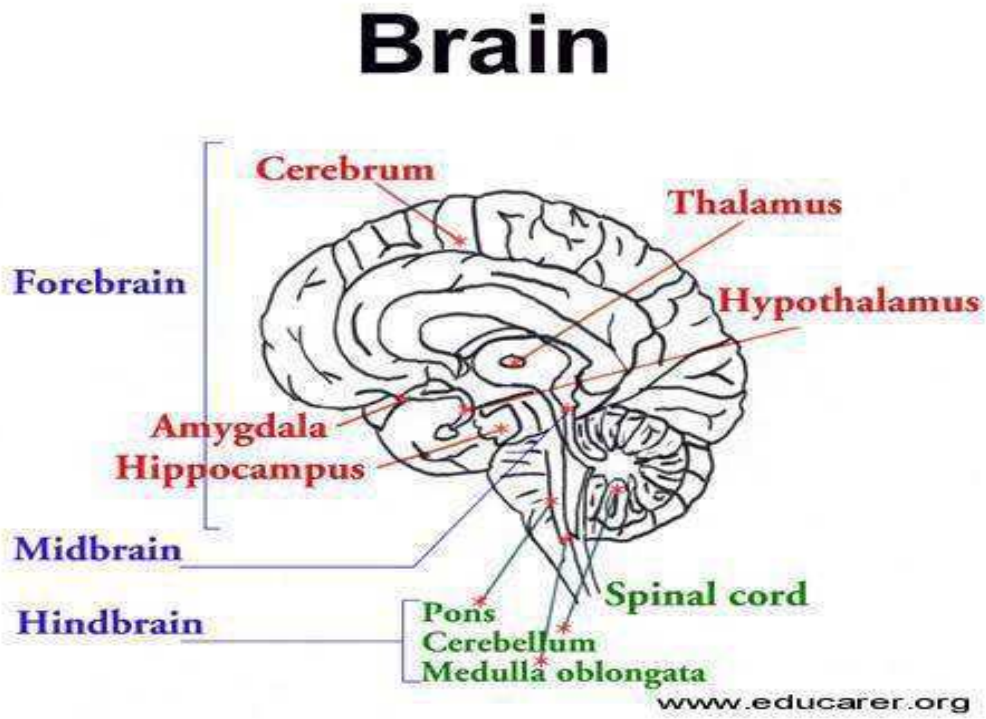
Shah and Miyake (1996 cited in Hitch's weblink 2010:6) disagree with the idea of a single central executive serving various functions. They propose separate verbal and spatial working memory systems. Supporting evidence showed that there was no significant correlation between reading span and spatial span, which suggests that verbal and spatial working memory are rather separate.

EPISODIC BUFFER

The episodic buffer is a valuable addition to the working memory model and increases its ability to predict behaviour in many situations. Future research will aim to clarify the processes involved (Hitch's weblink 2010:7).

Areas or structures in the brain are involved in certain memory processes. Our memory is based on neural connections of the hippocampus area of the brain (Freeman E Company 979:112).

Figure 3.4. Early Brain Development.



Source: Porter (2007:1) Available at: EDUCARERorg%20OF%20INFANTS%20ARTIC

3.5. LEARNING TO READ: THE TASK

To start reading, the beginning reader has to acquire two abilities. Baddeley (2006:34) proposes that the beginning reader has to learn that there is a systematic correspondence between the written and the spoken form of words. Letters represents phonemes in the spoken form. An understanding of the alphabetical principle to acquire the basic sound correspondences of the orthography is essential. A reader should also be able to recognise phonemes in spoken words. According to Sousa (2007:15), reading involves two basic operations: decoding and comprehension. To decode, the learner needs to possess phonemic awareness, understand phonics, and have an adequate vocabulary. To comprehend, the learner must know what the words in that lexicon mean and be able to decode with reasonable fluency.

The acquisition of letter-sound knowledge and the ability to manipulate phonemes in spoken words (phoneme sensitivity or phonological awareness) have been regarded as the twin foundations of early reading development (Byrne, 1998 cited in Baddeley 2006:35). These abilities develop in tandem as soon as a minimum level of letter knowledge is acquired (Bowey 1994; Johnston, Anderson & Holligan, 1996 cited in Baddeley 2006:35). There is probably an interactive relationship between early reading ability and the development of phonological sensitivity.

3.5.1. PRINT AWARENESS

According to Wikipedia (2009:1), print exposure is simply the amount of time a child spends being visually aware of the written word (reading) – whether through newspapers, magazines, books, journals, scientific papers or more. Research has shown that the amount of print material that a child accesses has deep cognitive consequences. The act of reading, for the most part irrespective of what is being read, increases the achievement difference among children. Print exposure can also be a big factor in learning English as a second language.

Ahola and Kovacik (2007:213) state that as the child become more and more exposed to written materials, she/he begins to understand that print carries meaning. Print awareness can be ever present in the dramatic play area, where children pretend to read menus, letters, and sale item flyers.

The writers held the view that finally the child will develop the ability to identify specific words in very specific contexts, such as being able to recognise the other children's names in the class by seeing the name on the printed name card. The child may not recognise the name in another context, yet she has learned to match the name with the child purely by the shape of the word. This is called logographic reading. The development of reading is tabulated in Figure 3.5.

Figure 3.5. The development of reading.

	Stage 1	Stage 2	Stage 3	Stage 4
Book/Reading behaviors	Recognizes books by covers and labels objects in books; talks about characters in the books; asks to be read to	Listens to stories in a group or with one other adult; might read storybooks on own; identifies characters in the stories and the story line; may dictate own stories	*Emergent reading;* recalls a story and may act it out; predicts text; may read early reader books; connects what happens in a story to things in own life; may have some sight words	Reads texts, uses nonfiction informational texts; reads for own purposes; comprehends meaning from implied text
Print/ Alphabetic/ Phonetic awareness	May distinguish between writing and drawing; may pick out specific letters in puzzles or signs	May recognize own name; *logographic reading;* understands that print carries meaning; may have some sound-letter correspondences; identifies letter names; has sensitivity to specific sounds within words	Labels all letters and sequence of alphabet; has sound-letter correspondence with most letters; can blend several letters together to read words	*Orthographic reading;* decodes new words; reads words that are spelled irregularly (dipthongs, vowels, etc.)
Writing/ Spelling	Engages in purposeful scribbling; scribbling may take on form of conventional writing (left to right)	Scribbles/writes as part of an activity; may make picture to go with story; may attempt writing letters; copies letters or name	Writes names independently; uses *invented spelling;* writes lists when dictated by another; writes most upper- and lowercase letters	Now spells from an orthographic perspective; moves from transitional spelling to correct spelling
Language development	Asks and answers *who, what, where* questions; engages in conversation with several interchanges; communicates personal experiences when given a cue	Talks about things that happened yesterday; engages in complex conversations; asks questions relevant to a conversation; uses new vocabulary; may rhyme words	Can say word families (*cat, bat, hat,* etc.); makes up nonsensical words and rhymes	Clarifies own points; creatively uses language to get points across; uses humor, idioms; understands and uses the difference between written and spoken language

Source: Burns, Griffin, and Snow (1999 cited in Ahola & Kovacik 2007:217)

3.5.2. THE ROLE OF VERBAL SHORT TERM MEMORY

Verbal short-term memory is a system for the temporary storage of verbal information (Baddeley, Gathercole & Papagno 1998 cited in Baddeley 2006:36). This system is denoted as

the phonological loop. The learning of letter names and sounds precedes learning to read words. Letter knowledge in the early years has been found to be one of the best predictors of later reading ability (De Jongh & Van der Leij 1999; Share, Jorm, Maclean & Mathews 1984; Lonigan, Burgess & Anthony 2000; Scarborough 1998; Wagner, Torgessen & Rashotte 1994 cited in Baddeley 2006). Learning letter names and sounds can be conceived as the acquisition of novel sound patterns (Share 1995 cited in Baddeley 2006:36). Baddeley et al. (1998 cited in Baddeley 2006:36) have suggested that verbal short-term memory (STM) supports the learning of new words and is suited for the temporary storage of unfamiliar sound sequences. Therefore, the acquisition of letter knowledge seems a natural starting point to consider the role of verbal STM in learning to read.

3.5.3. WORKING MEMORY AND SKILLED READING COMPREHENSION

The working memory model proposed by Baddeley and Hitch has been influential in our understanding of the relationships between memory processes and reading comprehension. Working memory consists of three components: the central executive, the phonological loop, and the visuospatial sketchpad. The latter two components are dedicated to the temporary storage of verbal and visual-spatial information. The central executive stores and processes incoming information, performance on measures of short-term memory and working memory increase during early and middle childhood when reading skills are developing. Several researchers have noted that children's basic reading and language skills also grow during this period. The journey from print to meaning involves many stages. The reader must decode words on the page and access their meanings, then compute the syntactic structures of sentences. After they have completed these word-and sentence-level tasks, they need to establish links between the ideas in these sentences. Therefore, a very different relationship between working memory and reading comprehension in children has been suggested (Baddeley 2006:65).

3.6. SUMMARY

In chapter 3 the researcher examines the different memory mechanisms, the functions and the limitations of these mechanisms. Emanating from the discussion of the memory

mechanisms, it was shown that the phonological loop or articulatory loop, central executive and the echoic memory are the key to beginning reading.

Therefore, reading is a phonological activity, rather than a visual activity, and the foundation of reading lies in phonemic awareness. With regard to beginning reading, the study of the role of memory reflects that a solution for the learners with a reading disability does not lie in the holistic visual units, but in the improvement of the learner's phonological short term (working memory) abilities. There is an interactive relationship between early reading ability and the development of phonological sensitivity.

The chapter also reflected that there is no panacea with regard to the improvement of reading abilities, but that the answer is contained in the phonological practices. Learning to read starts with the acquisition of letter knowledge and the development of phonemes in spoken words. Verbal short-term memory might be involved in the learning of letter-sound correspondences because letter names and letter sounds can be regarded as novel sound structures. Working memory capacity is an important determinant of children's reading comprehension because it underpins many of the skills necessary to ensure good understanding of a text.

CHAPTER 4

LANGUAGE AS A COGNITIVE CONSTRUCT

The limits of my language mean the limits of my world.

(Ludwig Wittgenstein 1889-1951 cited in Johnston & Nahmad-Williams 2009: 138)

4.1. INTRODUCTION TO THE LANGUAGE DOMAIN

In chapter 3 the researcher examined the memory mechanisms in second language acquisition and neural connections of the brain. This chapter will outline foundational early literacy constructs, sound, grammar and meaning, grammatical components of language, neural connections, pragmatics, influential language acquisition theories and curriculum strategies for language acquisition.

Language and cognition are linked as language is listed in the cognitive domain (Ahola & Kovacik 2007:188). The acquisition of language is one of the most fascinating areas of study and has been the subject of debate among linguists, psycholinguistics and cognitive psychologists (Johnston & Nahmad-Williams 2009:138). The development of language is interconnected with development in other domains, therefore it helps children sharpen their memory, control their behaviour, and direct and organise thoughts (Ahola & Kovacik 2007:188). According to Davin and Van Staden (2005:78), language is of basic importance for the normal and complete development of every human being and serves a wide variety of purposes for the developing child. Brock, Dodds, Jarvis and Olusoga (2009:100) agree that language is the key to developing young children's understanding to enable learning to occur. The acquisition of language is therefore an amazing process (Ahola & Kovacik 2007:189).

For the purpose of this study the researcher will explore the development of language and literacy in the primary years and the interconnection between these domains of development and school life.

Learners are affected by many factors in the second language acquisition process. The level of cognitive development, socio economic and cultural background, and the ability to acquire a language can be expressed as the factors affecting second language acquisition.

4.1.1. SOCIAL CONSTRUCTION OF LANGUAGE

Language comes in different forms (written, oral, sign, pictures, etc.); all forms are made up of symbols. Symbols of a particular culture and the specific rules that govern the use of symbols are constructed by that culture. The symbols are then particular to a culture and the way those symbols are put together to form meaning are specific to that culture (Ahola & Kovacik 2007:188).

Plotnik (1999 cited in Ahola & Kovacik 2007:188) agrees that language is a form of communication where we learn to use complex rules to manipulate symbols (words and gestures). Language is basically a vehicle for communication where we can convey our thoughts, emotions and needs to others. Sharing of information in a communicative way and how we transmit the culture from one generation to the next generation depend on language.

4.1.2. LANGUAGE AND COGNITION

There is a link between language and cognition. Theorists believe that cognition drives language. Others believe the opposite. The development of one is directly linked to the development of the other (Ahola & Kovacik 2007:188). There is a relationship between language and the forming of concepts. According to Vygotsky (in Fontana, 19847:74 cited in De Witt 2009:100), specific characteristics promote the forming of cognitive thought. Vygotsky believed that words form the basis of complex concepts. Gardner lists language ability as one form of cognition (linguistic intelligence) and most language development theorists agree that there seems to be an innate human tendency towards language (Chosky, 1993 cited in Gordon & Browne 2000:466).

4.1.3. LANGUAGE AND CULTURE

According to Smidt (2006:78), children construct their identities from their experiences and through their interactions. They see themselves then as a part of a group sharing a culture. Language becomes more specific and complex itself, as a culture becomes more complex and diversified. Children growing up in a particular culture learn vocabulary that is useful and significant to them (Ahola & Kovacik 2007:188). Children of all linguistic and cultural backgrounds learn the basic syntax, semantics, and phonology of the language spoken within their families and communities.

De Witt (2009:100) points out that every cultural group has its own language. The concept mother tongue refers to the primary language. During the primary years the most significant language advancement takes place and the children's ability to use language in a new and different way (Trawick-Smith 2006:394). The writer held the view that children in a culturally diverse environment must learn a new style of communication: *the language of school* (or the LOLT). Learners must also acquire language to influence their peers or to make new friends.

They learn to read and write conventionally during primary years in most cultures; those who are delayed in communication abilities face many challenges in learning language and literacy and therefore may need much adult support in learning the structure and social uses of language. Children who speak a different language from other learners in the classroom learn not only to speak, read, and write in a new language but also to use it effectively in peer groups and in school. Cognitive skills, behaviour patterns and the development of language are related to the cultural context in which children are brought up. Culture, therefore, influences the way we think (Kay 2004:55).

4.2. FOUNDATIONAL EARLY LITERACY CONSTRUCTS

4.2.1. PHONOLOGICAL APPROACH

Phonology is concerned with the organisation of sounds in a language, which includes important indicators of meaning, such as intonation and use of emphasis. The pitch, loudness and duration of speech sounds are called prosody and enable us to clarify meaning, which

goes beyond the actual words that we are using (Graddol et al. 1994 cited in Johnston & Nahmad-Williams 2009:147). Rubba (2009: 1-7) maintains that phonolgy is the branch of linguistics, which studies the use of sound in human language. Adams (1990), Hurford *et al*., (1993) National Research Council (1998), Stanovich, (1985) and Wagner and Torgessen (1987) suggest that phonology is a reliable predictor of reading competence.

Phonological awareness is the ability to reflect on and manipulate the segments of speech, physical nature of speech sounds and speech production. It focuses on auditory and oral abilities, rhyming, alliteration, breaking apart syllables, identifying the initial sounds in words, blending phonemes together, and orally segmenting words into their speech sounds. Spoken language can be broken into smaller components (Ball & Blachman 1991: Stanovich, Cunningham & Cramer 1984).

Segmentation tasks include identifying phonemes in whole words. According to Wagner and Torgessen (1987), phonological awareness is related to reading ability at an early age. O'Connor (2000) and Wagner and Torgessen (1987) maintain that phonological awareness is a causal factor in the development of reading competence. Phonemic and phonological research has shown the benefits of using phonological and phonemic awareness activities at the very early stages of reading.

4.2.2. PHONICS

Phonics instruction involves how to connect the sounds of the spoken language with letters. Letters are used to represent sounds in phonology, spelling and phonics instruction. The sound: /k/ can be presented by *c, k, ck* or *ch* spellings in English. Learners blend the sounds of letters together to produce pronunciation of unknown words and tend to emphasise attention to individual components /k/, /ae/, and /t/. Johnston and Nahmad-Williams (2009:148) observed that phonics is the teaching and learning of letter/sound correspondence for reading and writing.

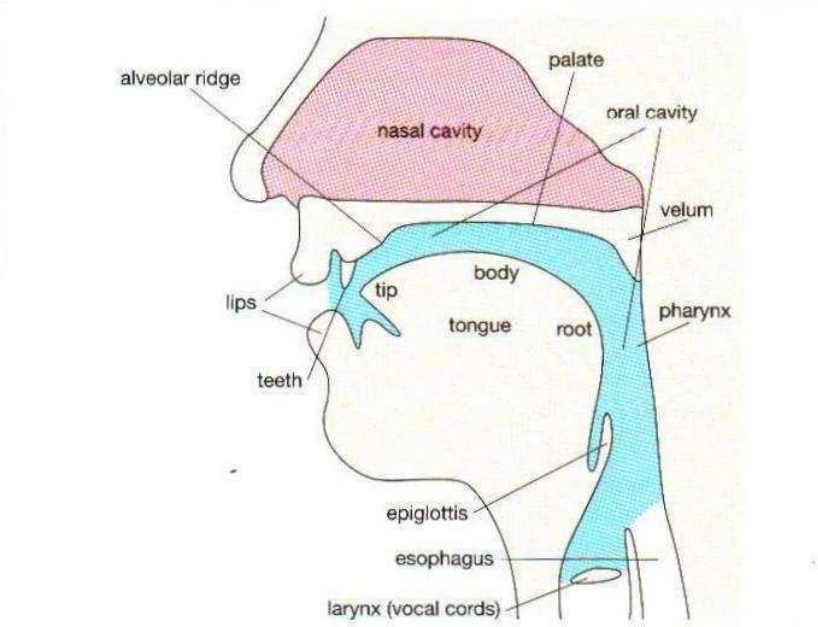
4.2.3. PHONICS AND ARTICULATION

According to Johnston and Nahmad-Williams (2009:148), In addition to our vocal chords, we use a variety of mouthparts to make different sounds when speaking. These are:

- Lips (upper and lower)
- Tongue (tip, middle and back)
- Alveolar ridge (the ridge just behind the top teeth)
- Hard palate
- Soft palate
- Teeth (upper and lower)

Although there are only 26 letters in the English alphabet, there are actually about 44 phonemes of which 20 or more are vowel sounds.

Figure 4.2. The anatomical location of the vocal tract.



Source: http://www.indiana.edu/-hlw/PhonUnits/vowels.html cited in Johnston & Nahmad-Williams 2009:148)

In the area of phonology and second language acquisition, the question that comes to mind is: What do children (learning a second language) do when confronted with sounds they cannot pronounce?

The process of acquiring a second language varies according to family and school circumstances. August and Hakuta (1998 cited in Trawick-Smith 2009: 397) found that second language learners who are exposed equally to both languages from birth become proficient in both by the end of the preschool years**.** Bilingual children have learned to distinguish among and produce the sounds of the two languages. Children who use a different sound system than that of the dominant culture may be teased or corrected, for the first time in the primary years. Their teachers often insist on standard pronunciations in school. Their peers often mimic their speech patterns. It is therefore important for professionals who work with children to understand that differences in articulation are not deficits. Substitutions are a creative way for children to solve the problem of pronouncing unfamiliar speech sounds (Hemmings & Metz 1990 cited in Trawick-Smith 2006:397)

4.2.4. THE WHOLE LANGUAGE APPROACH

The whole language approach has risen in popularity since the early 1980's (Gordon & Browne 2000:484). Baker (1996:297) points out that the whole language approach is a holistic and integrated approach to teaching and writing written language that focuses on the oral language experiences of the child and the communication of meaning through print, rather than emphasising the teaching of reading skills such as word recognition, sound symbols associations or sound blending. Davin and Van Staden (2005:105) make it clear that reading principles are not learned as isolated units but to analyse the meaning of any given text. Meij (1995: 7-9) regards the following methods for the learning to read phase as instructional methods of the whole language approach. Whole language:

- Focuses on making meaning in reading and expressing meaning in writing.
- Includes constructivist approaches to knowledge creation, emphasising children's interpretations and free expressions of ideas in writing.
- Emphasises high-quality and culturally diverse literature.

- Integrates literacy into other areas of the curriculum, especially mathematics, science and social studies.

Frequent reading is advocated:

- With learners in small "guided reading groups";
- Learners with read "aloud";
- Learners independently (Wikipedia 2009: I-8)

Reading and writing for real purposes:

- Focuses on motivational aspects of literacy, emphasising the love of books and engaging reading materials;
- Meaning-centred whole to part to whole instruction where phonics are taught;
- Contextually in "embedded" phonics;
- Emphasises using and understanding the meaning-making role of phonics, grammar, spelling, capitalisations and punctuations in diverse social contexts (Baker 1996:297).

The whole language approach consists of the language experience and the look and say method. These are discussed in ensuing sections.

4.2.5. THE LANGUAGE EXPERIENCE APPROACH

The language experience approach (LEA) is a whole language approach that promotes reading and writing through the use of personal experiences (Gordon & Browne 2000:487). The LEA was first developed for native English-speaking children (Ashton-Warner 1963; Spache & Spache 1964; Stauffer 1965 cited in Eric Digest 2009:2). It has also been used successfully with English second language learners.

According to Hall (1990 cited in Eric Digest 2009:1), the LEA is as diverse in practice as its practitioners. It includes the following:

- Materials are learner generated;
- All communication skills: reading, writing, listening and speaking are generated by learners;

- Difficulty of vocabulary and grammar is determined by the learners' own use;
- Learning and teaching are personalised, communicative and creative;

Krashen and Terrel (1983 cited in Eric Digest 2009:3) recommend criteria to determine whether reading materials are appropriate for ESL learners. The reading materials must be: at a comprehensible level of complexity; and interesting to the reader. Reading text originating from learners' experiences meet these two criteria because the degree of complexity is determined by the learner's own language; and the text relates to learners' personal interests.

4.2.6. LOOK AND SAY METHOD

The Look and Say method is also known as the whole word approach. According to Zimmer (1999 cited in Levy 2009:1), the look and say method is known as psycholinguistics. It is based on the Gestalt learning theory, which proposes that we understand the world as whole objects and not parts of the whole. This is a holistic approach, which claims that learners understand the details or parts. The emphasis is on teaching the whole word.

Beck and Juel (2002 cited in Levy 2009:2) point out that the whole word approach is a method to teach reading by introducing words to children as whole units without analysis of their sub word parts. The whole word method involves teaching "sight read words," that is to be able to pronounce a whole word as a single unit (Mayer 2003 cited in Levy 2009:3). Whole word instruction involves associating word names with printed words.

By repeated exposure to words, especially in meaningful contexts, it is expected that learners will learn to read words without any conscious attention to sub words units. Whole word recognition, or the development of a whole word vocabulary, is a goal of whole word instruction, which is a method to teach learners to read.

4.3. THE DIFFERENCES BETWEEN PHONOLOGICAL AND WHOLE LANGUAGE APPROACHES

The differences to these approaches are discussed under the following headings:

- Contextual meaning

- Reading as a whole
- Phonemes Reading material
- Learners' assessment

4.3.1. CONTEXTUAL MEANING AND READING AS A WHOLE

With holistic thinking, learners read the text for meaning first (whole), which enable learners to examine features of the phonics system (part) and finally use their knowledge while reading the text again (whole). The meaning-making role of phonics, grammar, spelling, capitalisations and punctuation occur in a diverse social context.

Researchers who favour a phonics based approach do not agree. They point out that good readers use decoding as their primary approach to reading and use context to confirm that what they have read makes sense. Goodman's theory emphasises that good readers decode rapidly and automatically. Poor readers, who have not developed this fluency skill, will resort to guessing the identity of words, using strategies such as looking at the picture, or using only some of the letters in the words (Wikipedia 2009: I-8).

4.3.2. PHONEMES

Phonics instruction concentrates on the individual components of words, the phonemes. The phonemes /k/ and /t/ are represented by the graphemes *c* and *t.* Segmentation tasks include identifying phonemes and the initial sounds in whole words, blending phonemes together, and orally segmenting words into their speech sounds (Ball & Blachman 1991; Stanovich, Cunningham & Cramer 1984).

Whole language proponents do not favour some types of phonics instruction, because they do not focus on the individual parts. They focus on the relationship of parts to and within a larger context. The whole language advocates state that they teach "embedded phonics." Letters are taught during other lessons focused on meaning. It emphasises the consonants and the short vowels. Critics of whole language argue that this approach leaves out teaching the decoding skills, which the phonics approach emphasises (Gordon & Browne 2000: 484).

4.3.3. LEARNING MATERIAL

Phonics based researchers point out that phonics and other concepts about print come to be known and used by children in their attempts to become capable readers and writers (Adams 1990:430). Learning material includes books, magazines, newspapers, lists, menus and price tags (Adams 1990:335). According to the whole language approach, learners need interesting, thoughtful books that increase and draw on their everyday experiences to widen their understanding of themselves and others. They need to feel that books are relevant to their world and their way of thinking (Baker 1996: 298). Books need to challenge stereotyped gender roles, such as traditional roles for mothers and fathers. Magazines and newspapers, directories and posters, signs in the streets, packages and labels are all reading material (Baker 1996:298).

4.3.4. LEARNERS' ASSESSMENT

Assessment should always inform instruction. Individual second language learners come from diverse backgrounds and skills so it is necessary to adapt their instruction according to their individual strengths.

4.3.5. READING ASSESSMENT

*T*he phonological approach assesses:

- Knowledge of the alphabetic principle: a learner's understanding of the alphabetic principle can be assessed very early. Assessing letter recognition, initial sounds, rimes, morphemes and syllables.
- Phoneme awareness: this examines the learner's specific knowledge that words are made up of phonemes
- Phonological awareness: this measure the learner's knowledge that words are made up by sounds.
- Segmenting and blending: these techniques can be used when assessing phoneme awareness.
- Letters of the alphabet: important for assessing decoding skills.

- Linguistic knowledge: assesses semantics and syntax.

The whole language approach assesses:

- Concepts about print: this assesses the understanding of the text. Even children that are not writing well-formed letters can reveal what they know about print. It can also determine the general knowledge of books, one-to-one correspondence between printed words and spoken words and punctuation.
- Reading comprehension: learners may be asked to retell the story in their own words or to summarise the main idea or to make up their own endings (Gordon & Browne 2000:484).
- Language comprehension*:* when assessing the language comprehension skills of learners with limited English proficiency, every attempt should be made to assess the child's language comprehension skills in both home language and second language. A learner's proficiency with a language, any language, is a strength that educators should make every effort to build upon.

Assessment of affective aspects (motivation, enjoyment, interest and habit), as well as situational aspects (availability of appropriate literature and home support) is integral. There are a variety of approaches that can be used to assess early reading skills and educators should be familiar with the different approaches commonly used to assess early reading skill development (SEDL's reading resources: undated).

4.4. THE GRAMMATICAL COMPONENTS OF LANGUAGE

4.4.1. MORPHOLOGY

Matlin (2002:484 cited in De Witt 2009:107) notes that the smallest unit of sound that has meaning is called a morpheme and can be combined to form meaningful words. The child starts inflecting words when he or she starts using three or more words in sentences. The first thing a child masters is the plural form. Johnston and Nahmad-Williams (2009:156) add that this aspect of grammar is involved when children learn the way words change, such as adding an 's' to make a word a plural or '*ed'* to put it in the past tense. Trawick- Smith (2006: 401)

even suggests that morphemes are small parts of words that hold meaning, such as the past tense –ed ending, the plural –s, and articles such as *a* and *the.*

4.4.2. SYNTAX

Syntax refers to the standardised set of rules that determine how words should be combined to make sense to speakers of a language (Ahola & Kovacik 2007:199). The precise rules for word order are the grammar of a language (Matlin 2002:484 cited in De Witt 2009:107). Trawick-Smith (2006: 401) suggests that syntax is the part of language that involves creating sentences, including word order, sentence length and complexity, and the use of clauses and word endings. Johnston and Nahmad-Williams (2009:156) conclude that this aspect of grammar is the study of sentence structure when children learn to order words within a sentence to communicate meaningfully.

4.4.3. SEMANTICS

The semantic or meaning value of language makes thinking and thought processes possible. Without semantics, meaningful speech would also not be possible (De Witt 2009:108). Johnston-Nahmad Williams (2009:159) is of the opinion that semantics includes the study of meaning and vocabulary. Children begin to understand that some words are opposites, that some hold the same meaning, and that some have similar or different definitions (Trawick-Smith 2006:399). Ahola and Kovacik (2007:199) define semantics as word combinations and the meaning of words.

4.4.4. PRAGMATICS

Pragmatics is the component of language that includes the functional use of language in the social context (Ahola & Kovacik 2007:200). Language that influences people and accomplishes things socially involves using words, sentences, and speech sounds (Trawick-Smith 2006:404). The writer goes on to say that simply speaking correct language forms is not enough to ensure communication. Children must use words, sounds and sentences effectively to express ideas and get what they need. They must learn to persuade or argue with peers during a game or converse with adults at a family gathering. Johnston and Nahmad-Williams (2009:161) stress

that pragmatics involves the art of conversation in a communicative context and interaction with different people in different situations.

4.5. BRAIN DEVELOPMENT

Ahola and Kovacik (2007:189) accentuate that language takes place throughout the entire brain. According to Geschwind (1979:9), the human brain is governed by dedicated networks of neurons. Two regions of the cerebral cortex are important to linguistic competence. Characteristic of the human brain is the allocation of functions to the two cerebral hemispheres. Each side plays a role in different functions of the brain. Ahola and Kovacik (2007:189) mention further that language is a team effort, both the left and right hemispheres being utilized. Both hemispheres are needed to master language comprehension and expression. One area of the brain interprets the sounds of the language; the other the visual piece of language such as gestures and facial expressions. In right-handed people, the left side of the brain processes written words logic, numbers, mathematics and sequential tasks. The right side deals more with "creative" processes: rhyme, rhythm, music, pictures and imagination (Dryden & Vos 2005:157). The writers further state that cognitive networks are the "association cortex" linking parts of the brain together for thinking and interacting. It is the specific part of the brain that allows us to think, reason, read, write, paint, compose, speak and communicate with each other and the world.

4.5.1. BRAIN-BASED LINGUISTIC ACQUISITION

According to Byrnes and Wasik (2009:11), all aspects of human cognition including language, literacy and memory are products of brain activity. The authors are of the opinion that when children process spoken language or expressing ideas themselves, their brains are active. Serra et al (2000 cited in Escribano 2004:91) further assert that in order to form concepts, our mind tends to categorise stimuli, and by the time a child is four months old, he or she has categorised a great number of sounds and phonemes from the mother tongue, so that he or she is ready to begin acquiring an acoustic image of words. The authors state that when we use language we try to categorise the world around us by assigning a term to a concept.

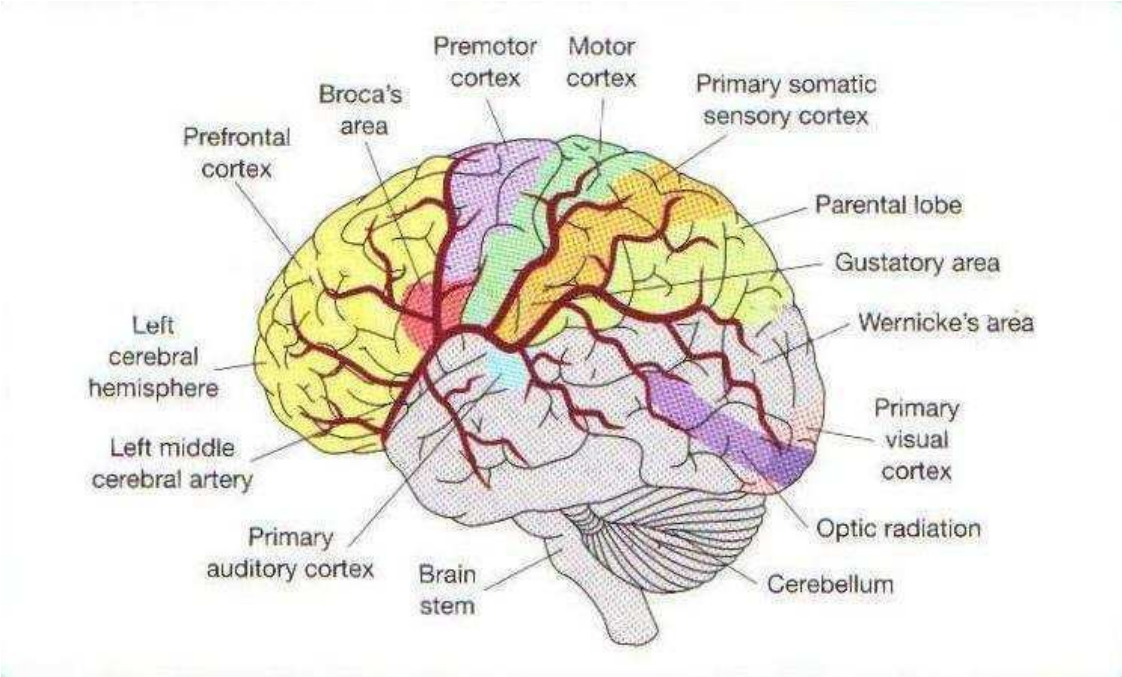
Cuenca and Hilferty (1999 cited in Escribano 1994:91) argue that in the same way, when one hears a word, one tends to project one's patterns of reality in order to have a mental image of it. Things are classified in linguistics in much the same way as everywhere else, that is, on the basis of similarity. They also suggest that we tend to organise our knowledge using the conceptual categories and structures we already have, basing our knowledge on similarity and depending on the world around us.

According to Widdowson (1996 cited in Escribano 2004:88) context is a schematic construct that is represented in the mind: "So the achievement of pragmatic meaning is a matter of matching up the linguistic elements of the code with the schematic elements of the context. This holds for all language learning, whether it is the mother tongue, or a second language."

The traditional distinction between linguistic competence and performance between the speakers' or hearers' knowledge of a language and their ability to use it in concrete situations is a cognitive ability (Johnson-Laird 1986 cited in Escribano 1994:92). A great deal of a person's language command resides in the knowledge of words and in their properties, since the meaning of words and the details of how they are used is learned. Conceptual thought is a transformation of sensory thought mediated by cognition. Therefore, cognition transforms the experience of, for example, seeing, hearing, touching, smelling, observing many dogs into the concept of 'dog'. The author argues that cognition is in the domain of experience, dependent on the physical apparatus of the brain, where abstraction can be considered the result of mental operations on which it is experienced; linguistic concepts, words, are abstractions. When we talk about linguistic elements with elements of the context, we mean more than establishing conditioned associations as an association is not a meaning. The author believes that meaning includes associative links between words and objects and experiences that result in the formation of concepts.

The theory of neural instantiation, explained by Jackendoff (2002), holds that the data structures and the processes that store and assemble them are realised in the brain. Thus, according to the same author, "linguistic structures are functional characterisations that require neural instantiation" (Jackendoff 2002 cited in Escribano 1994:92) although little is known yet about how neurons actually instantiate such language details.

Figure 4.3. The brain.



Source: Illustration after Leslie Laurien (cited in Johnston & Nahmad-Williams 2009:109)

Ahola and Kovacik (2007:189) distinguish two brain development concepts related to language development:

- The concept of critical period and a sensitive period
- The concept of plasticity

4.5.2. CRITICAL PERIODS FOR LANGUAGE ACQUISITION

The critical period of language acquisition theory asserts that the crucial period of language acquisition ends around the age of 12 years. If no language is learned before then, it can never be learned in a normal sense. Ahola & Kovacik (2007:189) reveal that if children are not exposed to the components of language by 12 years of age, they will have lost the ability to use a language. The critical periods can be opportunities in which regions of the brain are flexible and connections are made. The optimal time for learning a language is between the ages of birth to 12 (Ahola & Kovacik 2007:189).

4.5.3. CRITICAL PERIODS FOR SOUND DISCRIMINATION

There are critical periods for learning to discriminate sounds of a language. Research has shown that by 12 months if a child has not heard a specific sound in a given language, he or she will lose the ability to hear it. The ability to discriminate sounds has lasting effects on literacy and language development.

4.5.4. PLASTICITY

The plasticity of the brain makes it possible to learn language. Plasticity refers to the brain's ability to change, even though there are critical periods for language development. The brain will change its structure and function to compensate for brain malfunction or loss of brain tissue. The brain will change, but sometimes intervention is needed to help the brain relearn. Researchers have found that the neurological deficits underlying dyslexic can be reversed after intense intervention lasting two months. This is done by intensive phonetic instruction in which the left hemisphere of the brain is activated. The left side of the brain learns to activate itself during the reading process by doing this over and over again. The brain can now learn how to respond more efficiently due to its incredible ability (Ahola & Kovacik 2007:189).

4.6. FACTORS THAT INFLUENCE LANGUAGE ACQUISITION

4.6.1. LANGUAGE ENVIRONMENT

De Witt (2009:108) points out that children learn best the language that is spoken in their cultural environment, which is the language of their parents, extended family, neighbourhood, people and region. Gordon and Browne (2000:466) add that wherever people live together, language of some form develops. The child's language has an effect on his educative milieu. He is familiar with the language used in his family and neighbourhood. Thirion (1989:388) states that many disadvantaged parents in South Africa were not exposed to the school reality as children. Therefore, parents lack the interest and are unable to provide a stimulating language environment that enhances learning. Some parents place little importance on education and do not motivate their children or are unable to do so.

Louw and Louw (2007:170) argue that it is important for young children to receive good adult linguistic input for optimal language input. The writers hold the view that the home literacy environment is very important in children's language acquisition. Davin and Van Staden (2005:84) agree that learners need a language-rich environment with plenty of informal exposure to books, printed materials and the spoken word to be able to read and spell with ease. Gordon and Browne (2000:472) propose a stimulating, active and diverse environment with many opportunities for language in meaningful social interactions and responsive experiences with all children. Engelbrecht et al (1982:132 cited in De Witt 2009:5) maintain that through language the child becomes a part of the environment and its world of thought and views.

4.6.2. LANGUAGE AND EDUCATION

According to Anderson (2005:2), research shows that the more often babies and very young children are exposed to stories, pictures and books, the easier they find the process of learning to read when they get to school. Alarmingly, 90% of young children in South Africa have no access to any books at all. Many children grow up in homes where parents are not literate. The author states further that South African children are also deeply disadvantaged because there are so few books written for the young child in his or her own language and with illustrations from their own context.

Communication between parents and their children influences language acquisition. Relationships between parents and children are established through language. Language acquisition may be effected negatively if the relationships are not up to standard. Educators tend also to be prescriptive and explain less when they interact with children. Learners will not be able to be creative. Children from democratic families tend to communicate sooner than children from permissive families (De Witt 2009:108). Driessen et al (2002:176) has suggested that children of highly educated parents benefit more from education as their parents are able to assist more in their learning. Such children can make better progress than those who are not fully supported by their parents due to poor educational backgrounds.

4.6.3. SOCIO-ECONOMIC STATUS (SES)

Socio-economic status (SES) refers to such things as income level and parent education (Byrnes & Wasik 2009:191). Research indicates that there is a significant relationship between parents' socio-economic status and their children's level of intelligence (Milner 1968 cited in Mahlobo 1999:45). Poverty has a profound and wide-ranging effect on child development in all areas. It causes stress and conflict and living in poorer areas is often associated with gangs, violence and crime, with effects on children's physical development, mental health, intelligence and school achievement (DfES, 2003 cited in Johnston & Nahmad-Williams 2009:220). According to Louw and Louw (2007:171), the SES in which children grow up may have an impact on a child's language development. They are not exposed to a rich literacy environment in the home and therefore they lack stimulation; no verbal interaction takes place. Parents are also less responsive to their children due to crowded homes. Children from a lower socio-economic class are less creative and have less initiative.

Du Toit (1993 cited in Mahlobo 1999:460) further describes that families with low socio-economic status lack resources such as magazines, books, radios, television, TV games, computers and computer games that can serve to stimulate learners intellectually and provide exposure to English. This can affect the learners; English proficiency and academic performance since such learners tend to be characterised by a lack of motivation, poor academic achievement, poor language skills, inductive rather than deductive reasoning, as well as the ability to use high order cognitive strategies like analysis, synthesis and evaluation. Louw and Louw (1990:205 and Seifert and Hoffnung (1991:334 cited in De Witt 2009:109) have suggested that children from higher income groups begin to talk sooner, because they receive more encouragement from their parents. Furthermore, children from high SES households demonstrate higher levels of reading readiness and emergent literacy, than children from lower SES households (Adams 1990; Baker, Fernandez-Fein, Scher & Williams 1998; Bowey 1995; Snow et al 1998 cited in Byrnes & Wasik 2009:191). Davin and Van Staden (2005:61) conclude that children who come from homes where adults may not be verbal and rarely read books to their children have a poor language acquisition foundation.

Therefore, poverty undeniably poses numerous threats to children's educational prospects. Learners in low-income families tend to have uneducated parents, lack adequate nutrition, live in poor communities and attend substandard schools. All these factors can be detrimental to reading.

4.6.4. LANGUAGE EXPERIENCE

Bronfenbrenner emphasised the importance of studying 'development-in-context, that is, the environment in which children are situated and are experiencing. Bronfenbrenner (1995 cited in Johnston & Nahmad-Williams 2009:231) felt that it is necessary that children understand their experiences before they can restructure and adapt to their surroundings**.**

De Witt (2009:108) asserts that experience is one of the most important factors in the acquisition of a language and speech. Gordon and Browne (2000:490) agree that good literature comes in many forms and can be presented in a variety of ways. The environment also plays an important role because through language children can know and experience whatever they come into contact with (De Witt 2009:109).

4.6.5. GENDER OF THE CHILD

Gender role describes the different behaviour associated with males and females in a social system. Children learn their gender roles at an early age as part of their socialisation into the family and wider culture (Kay 2004:38). Kohlberg (1987 cited in Kay 2004:39) found that children acquire a stable concept of gender at about five years old; they absorb the concept of their own gender as part of their cognitive development and develop in accordance with that concept. Little girls appear to begin talking at an earlier age than little boys (Papalia & Olds 1990; Louw & Louw 1990:204; Seifert & Hoffnung 1991:334 cited in De Witt 2009:109). **A**ccording to Louw and Louw (2007:171), some authors allege that the different activities in which boys and girls engage and the different way parents tend to interact verbally with boys and girls may influence the development of their speech patterns. This has not been proved by research, although it cannot be denied that in certain cases, it might have an influence. It remains an open question as to how long the effect may last. The writers held the view that

culture also does not seem to play a role in language development of different genders. Masitsa (1988 cited in Louw & Louw 2007:171) mentions that in South Africa, no difference was noted in the language comprehension of black boys and black girls.

4.6.6. MEDIA

Louw and Louw (2007:172) assert that children are exposed to various forms of mass media such as television, radio and Internet when they grow up. In a multilingual country such as South Africa, this means exposure to their mother tongue, as well as to other languages. This may enhance their language development. According to Huston and Wright (cited in Louw & Louw 2007:172) research has shown that by watching popular education programmes, children's vocabulary, school readiness, literacy skills and later high school grades are positively enhanced. Some researchers are of the opinion that merely listening to a language will not ensure adequate acquisition; children should therefore practise the pronunciation of words and the construction of sentences when learning a language.

4.6.7. INCLUSIVITY AND DIVERSITY

Every child brings a unique culture to the classroom – a history of personal experience. Zwarts (2007: xi) points out that there are also issues of race, ethnicity and disability in language acquisition. Children absorb spoken and unspoken attitudes towards those who are different, and teachers are among the most influential in helping shape these attitudes. The special educational, social, emotional needs of all learners should be addressed. Zwarts (2007:xi) emphasises that learners have special educational needs if they have encountered barriers to learning and development. These barriers include anything that makes it difficult for the child to learn in any given classroom situation. Learners will experience a language barrier if teaching and learning happens in a LOLT that is not the same as their home language. McAfee and Leong (2002:17) further state that all learners should be included in the regular classroom as far as possible. Therefore, educators have the responsibility for identifying learners whether called gifted, talented or with high potential to develop programmes to match their capabilities.

4.6.8. MULTILINGUALISM

In a multilingual country like South Africa, it is more than likely that learners will have different home languages. At times it will be more appropriate to use the learner's home language to assess understanding. Therefore, learners should never be excluded from discussions because they are unable to express themselves in English. Learners should be encouraged to participate in their home languages and translations and explanations should be used in order to develop multilingualism (Beal & Atcheson 2008: x).

4.6.9. BILINGUALISM

Louw and Louw (2007:17) stress that children can learn more than one language easily without confusing languages. Bilingualism seems to have a positive effect on the development of cognitive abilities. Gordon and Browne (2000:472) state that cognitive, social and linguistic skills are all at work in acquiring a second language. The bilingual child must learn to comprehend and produce aspects of language. Bilingualism can improve understanding between nations especially in a multilingual, diverse South Africa. According to Trawick-Smith (2006:408), bilingual education refers to a variety of strategies used in schools to assist children who speak languages different from that of the dominant culture. Bilingual children are often seen as having a problem coping with two languages, instead of being valued and praised for their ability to communicate in two languages and to translate between them (Malik 1998 cited in Kay 2004:59). Gordon and Brown (2004:492) state:

> Research has shown that young learners can learn two languages at the same time. The two languages can be learned in a parallel manner. The depth of knowledge of one language may differ from the other or the two may develop equally. The simultaneous acquisition of two languages may mean a mixing of the two, as heard in young Learning two languages does not harm the acquisition of either Language.

4.6.10. BILINGUAL RECOMMENDATIONS FOR EDUCATORS

The following recommendations serve as guidelines for educators of learners who speak other languages (Gordon & Browne 2000:472)

a) Accept individual differences

Educators need to invite and try to include all children in classroom activities with regard to both style and the time frame of language learning. Assume developmental equivalence, that is, that the children although different, are normal.

b) *S*upport children's attempts to communicate

We need to recognise developmentally equivalent patterns. The learning process of a second language is not unlike that of the first, that is, encouraging children's communication bids rather than correcting them will help children try to learn.

c) Maintain an additive philosophy

Educators should recognise that children are acquiring more and new language skills, not simply replacing their primary linguistic skills.

d) Provide a stimulating, active and diverse environment

Create many opportunities for language in meaningful social interactions and responsive experiences with all children. Learning in a self- help environment with an anti- bias curriculum gives children a developmentally and linguistically appropriate education.

e) Use informal observations

Guide the planning of activities and the spontaneous interaction for speakers of other languages.

f) Find out about the family

Educators need to establish ties between the home and the school. According to Bowman (1989 cited in Gordon & Brown 2000:472), "school learning is most likely to occur when family values reinforce school expectations".

g) Provide an accepting classroom climate

Educators need to provide a classroom that values culturally and linguistically diverse young children and comes to grips with their own cultural ethnocentricity and learns about the languages, dialects and cultures beyond their own. It is critical to value all ways of achieving developmental milestones, not just those of the educator's culture or educational experience.

The challenge to young children and their educators is enormous. Regarding informed, open-minded instruction, and children can learn a second language without undue stress and alienation. Educators must therefore understand the increased workload bilingualism creates and they must keep in mind that leaning another language affects cognitive and social development.

4.7. INFLUENTIAL LANGUAGE ACQUISITION THEORIES

Psychologists and psycholinguists have proposed different theories as to how language is acquired. In this section, the writer will examine some of these theories.

4.7.1. THEORY OF BEHAVIORISM

According to De Witt (2009:105), a behaviourist explanation for language acquisition is that it takes place through the process of operant conditioning. Doctor and Knight (1993:399), Louw and Louw (1990:206) and Seifert and Hoffnung, (1991:214 cited in De Witt 2009:105) are of the opinion that through imitation and trial and error the child learns correct sentence construction. Grammatically correct sentences are positively reinforced by approval, while

incorrect ones are negatively reinforced by disapproval. The view of non- behaviourists is that parents tend to be more concerned about the meaning of a sentence than its syntax, and therefore non-behaviourists have criticised the above view.

4.7.2. CHOMSKY'S VIEW ON LANGUAGE ACQUISITION

According to Johnston and Nahmad-Williams (2009:143), Chomsky challenged Skinner's behavioural theory on language acquisition, taking a nativist approach. He proposed that babies are born with an innate language acquisition device (LAD). This device allows the language user to discover the rules of the language, by starting with the simple rules and progressing to those that are more complex. (Louw and Louw (1990:208 cited in De Witt 2009:104) assumed that the ability to learn language is an innate characteristic of humankind. Mwamwenda (1995:166) confirms Chomsky's proposition that every child has an innate mechanism designed for the acquisition of language, which predetermines the way in which the child is likely to use the language. Phonemes (sound of a language) are combined to form morphemes (meaning); some being complete words such as 'come', 'cat', etc. Words can be formed from morphemes. Syntax involves the combination of morphemes/words into phrases and phrases into sentences. According to Chomsky, children acquire language and are able to construct sentences that are grammatically correct (Bowd et al 1982 cited in Mwamwenda 1995:166).

4.7.3. VYGOTSKY'S AND PIAGET'S VIEW ON LANGUAGE ACQUISITION

Johnston and Nahmad-Williams (2009:145) assert that Vygotsky and Piaget saw language acquisition as a cognitive process. Piaget believed that cognitive development came first, and then language helped to put symbols to those thoughts. Piaget (in Kohnstamm, 1980: 180; Feeny et al., 2006:113 cited in De Witt 2009:105) saw grammatical development linked to intellectual development. Piaget believed that the child's language development and cognitive development go hand in hand, but that thinking develops before language. Vygotsky (in Wadsworth, 1989:65 cited in De Witt 2009:106) believed that language and cognitive development take place independently. Children's thinking begins to influence their utterances only at the age of two. For that reason language and cognitive development now

becomes intertwined. Vygotsky also emphasised relationships between adults and children in the acquisition of language and maintained that adults play a crucial role in the child's learning as they help the child to construct meaning which assists discovery (Feeney et al. 2006:116 cited in De Witt 2009:106)

4.8. CLASSROOM STRATEGIES FOR EFFECTIVE READING ACQUISITION

Several specific classroom strategies have been found effective in promoting reading development in the primary years (Adams 1990; Clay 2001; Fountas & Pinnel 1996; Juel 1991; McGee & Richgels 2000; Morrow 1994; and Snow, Burns & Griffith 1998 cited in Trawick-Smith 2006:417). Some of these ideas as suggested by the above authors are discussed in the ensuing sections.

4.8.1. DAILY READING

Teachers should read books to children to continually expand their knowledge of print and stories (cf. Trawick-Smith 2006:417). 'Big books' are preferable because they will allow children in a group to see print and illustrations. Big books were devised as a way of making stories available to a wider audience. Holdaway (cited in Whitebread 2003:182) noted that all children were successful at their own level with this approach. Large groups could be involved in the shared reading of a familiar text. They provide a shared context for discussion and make it easy for all the children in a class to focus on the chosen text. As children become better readers, teachers should choose books that have increasingly dense text, less repetition and some new and unique words in order to expand children's literacy understanding

4.8.2. INDEPENDENT READING

Educators should provide a wide range of text types (e.g., high-quality fiction, informal books, poetry) that children might choose from to read independently. Educators can create a class library for learners to visit daily. Books related to various learning areas can be included: science centre, the art area and even the playground. A silent reading time should be planned when all in the class, including the teacher, read their own books (cf. Trawick-Smith 2006:417)

4.8.3. GUIDED READING

Teachers can implement an approach to support children who are experiencing reading difficulties. The teacher meets with small groups of learners to read together a book that is selected for its difficulty level and interest. The teacher talks through the book first with the children, asking questions about the title, pointing out new words and discussing the illustrations on each page. Children follow along with their own copy; the teacher then reads the book to the children and encourages them to read it independently. They read aloud so that the teacher can identify points of difficulties especially in some areas where the learners are struggling with the text. The teacher applies intervention strategies to assist learners in solving reading problems independently (cf. Trawick-Smith 2006:417).

4.8.4. DEMONSTRATING AND MODELLING STRATEGIES FOR DECODING WORDS

According to the above mentioned authors cited by Trawick-Smith (2006:417) (cf. Par 4.8), educators can use specific comprehension strategies in groups or with individual learners. They might demonstrate the use of phonics strategies, for example, recalling a short vowel sound, which helps a child decode a word. Teachers can teach a sentence context strategy in which they ask children to read the full sentence or even look at illustrations to guess what an unknown word might be. Teachers choose these strategies as they come up in real reading situations. Some teachers conduct formal lessons in which they systematically teach all the reading skills. Both approaches appear to contribute to reading development.

4.8.5. INTRODUCING NEW WORDS; BUILDING A SIGHT VOCABULARY

Educators can introduce new words in order to promote children's sight vocabulary. This can be done informally, as teachers read to children. When any challenging words come up, the teacher can point them up, define and discuss them. More formal methods are used for building sight vocabulary. Teachers may include a wall in the classroom on which are posted the words that both teachers and children select to be remembered. They may engage children in–depth word studies and make-a-word activities, in which similarities in words are studied or words are sorted into families (Cf. Trawick-Smith 2006:418)

4.8.6. FACILITATING 'GRAND CONVERSATIONS' ABOUT BOOKS

The focus should always be on the content of reading material, regardless of the reading skills to be taught in a classroom reading experience. Children should ask questions. According to McGee and Richgels (2000:264 cited in Trawick-Smith 2006:418), an effort should be made to engage children in 'grand conversations' about what has been read. Such conversations are those that stem from children's comments and questions rather than the teacher's. Almost any reading experience should include the question, "Who has something to say about the story?" Children must state their own thoughts. Gordon and Browne (2000:474) conclude that to make sure that all children experience the art of conversation, the teacher must provide plenty of opportunities for communication purposes.

4.9. SUMMARY

The focus of this chapter has been language acquisition in the primary years. During this phase children have a concept of oral language already. However, there are many refinements in foundational early literacy constructs, phonology, semantics and syntax during this developmental period. A variety of different reading assessments can be used to measure the same cognitive linguistic domains through a variety of assessment approaches. It is therefore important that educators must be familiar with the various different approaches that are commonly used for assessing the cognitive domains associated with reading development. Culture and the different languages children are learning affect the acquisition of language. The educator's role also requires an understanding of bilingualism whereby different sets of linguistic rules should be distinguished. Children who can think and talk about sounds, word meanings and sentence structure can acquire complex linguistic rules more readily Advances in pragmatics in the primary years includes learning the social rules of language in school and in other contexts. Each culture has unique social rules for language, making it difficult for children of some backgrounds to learn the pragmatics of the school. Structured bilingual programmes can help children in the primary grades acquire these aspects of language.

The researcher also pointed out a number of theories to explain how children learn language. Behaviourist theory advocates that language is learned on the basis of association and

imitation and trial accompanied by appropriate reinforcement. Chomsky believed that in every normal child there is an innate mechanism responsible for the acquisition of language and that this device enables children to use appropriate language rules to construct sentences. Vygotsky and Piaget saw language acquisition as a cognitive process. Language in all its forms enables learners to think abstractly and contributes to their ability to understand concepts that are taught in different learning areas.

Children learn to read in a conventional way in the primary years. Culture and the number of languages (bilingualism) a child is learning influence literacy development. Second language learners needs require extra support in learning to speak, read and write. Educators can plan curriculum strategies to develop these skills in several ways.

CHAPTER FIVE

RESEARCH DESIGN

5.1. INTRODUCTION TO THE EMPIRICAL INVESTIGATION

This chapter presents the research design of the empirical investigation, including a description of sampling, measuring instruments, the general procedure of the investigation, the processing of data, results and interpretation.

The study aimed to accomplish the following:

- To determine whether insights from cognitive domains and development can serve as a possibility for the establishment of credible beginning reading instruction methods for the second language learner in the foundational years.
- To determine whether the insights relating to the language domains, reading acquisition and reading proficiency in the second language learner can be acquired through cognition.

Firstly, a literature review preceded the empirical research in order to provide background information on the research topic. The study of the literature expanded the researcher's understanding, broadened knowledge of the research topic and provided a theoretical background for the design and evaluation of the empirical study.

An outline regarding beginning reading approaches that are being used in the school's curriculum was given. An area of particular concern is literacy education where cognitive skills and problem solving techniques are essential for learners' success in schools in the Eastern Cape. Motivation and integration were given within the context of the development of beginning reading in the primary years regarding to the specific methodologies. The different perspectives of the two opposing early foundational literacy methods, namely the phonological and the whole language competence methods, were investigated.

An analysis of the difference between the two opposing foundational literacy constructs reflects that each approach focuses on pronunciation as its foundation irrespective of sufficient research carried out on each approach. However, there are still learners that reflect a lack of reading proficiency. According to Meij (1995:113), proponents of the competence literacy constructs have shown that their particular approaches are the key to engage learners in reading; however, the ability to read is more critical than ever before. The literature study relating to the different beginning reading methodologies also reflected that the research was done with some of the findings of the opposing methodologies. The previous chapters of this study focus on the study of cognition relating to the interconnection of the language domains and language skills, in a quest for direction relating to the beginning reading approach.

From a study of cognition, two cognitive facets which can add to reading acquisition were produced, namely the role of the memory domain and the language domain. The study indicated that the reading process depends on the cognitive operation and that the cognitive domains are a necessity for reading proficiency in second language acquisition. The study also revealed that the acquisition of second language through cognition is among the developmental milestones in a child's life that which receives perhaps the most attention in academic endeavour.

In chapter 3 memory mechanisms, functions and the limitations were discussed. It was shown that memory is fundamental to many other cognitive processes. The role of memory as a cognitive aspect and a number of facets that can determine the choice of beginning reading accuracy and instruction were discussed. It was also revealed that the phonological loop, central executive and the echoic memory are vital for learning a second language. These components are also central to beginning reading. There is an interactive relationship and integration between early reading ability, memory abilities and the development of phonological activities and sensitivity.

Therefore, reading is phonological, rather than visual, and the foundation of reading lies in phonemic awareness and the fact that it is a causal factor in the development of reading. Phonological awareness affects early reading ability and the ability to read also increases phonological awareness. The acquisition of letter-sound knowledge and the ability to

manipulate phonemes in spoken words have been regarded as the twin foundations of early reading development. These abilities develop in tandem as soon as a minimum level of letter knowledge is acquired. The study of the role of memory reflects that a solution for the learner with a reading disability does not lies in the integrated, holistic and isolated visual units, but in the improvement of the learner's phonological short term abilities. Reading disabilities are not created because the duration of the phonological memory is too short, but because too little phonological activity in the duration of the short-term memory is being decoded to give meaning to the text. This problem can be remedied through metacognitive phonological experiences to improve the speed of decoding (Meij 1995:115). Reading involves two basic operations, namely decoding and comprehension. Processing a significant amount within the phonological loop improves a reading speed that can add to better understanding or comprehension acquisition.

5.2. SPECIFIC RESEARCH PROBLEMS, HYPOTHESES AND THE PURPOSE OF EMPIRICAL INVESTIGATION

Gay, Mills and Airasian (2006:178) point out that no other area of the curriculum receives as much attention as does reading instruction. Therefore, although beginning reading has a prominent and central place in the school curriculum, reading problems still occur especially with regard to the second language learners in the Foundation Phase.

A literature study concerned the two opposing foundational literacy constructs that forms part of the NCS curriculum in Literacy that is currently being used by all the schools, namely the phonological and the whole language approaches, raised questions regarding the cognitive validity and reliability of these reading approaches. In an attempt to establish a valid cognitive reading method, the researcher used the literature study to establish a framework within a cognitive accountable beginning reading programme.

According to Gay, Mills and Airasian (2006:56), a hypothesis is a researcher's prediction of the research findings. In this study the researcher has formulated a hypothesis before conducting the study because the nature of the study is determined by the hypothesis. Every aspect of

the research is affected by the hypothesis, including the participants, measuring instruments, design, procedures, data analysis, and conclusions. A research hypothesis states the expected relationship (or difference) between two variables. It states the relationship the researcher expects to verify through the collection and analysis of data.

5.3. ETHICS OF RESEARCH

There are several reasons why it is important to adhere to ethical norms in research. Ethics are generally considered to deal with beliefs about what is right or wrong, proper or improper, good or bad (McMillan & Schumacher 2006:142). There is some degree of disagreement about how to define what is ethically correct in research. McMillan and Schumacher (2006) state further that the primary investigator of a study is responsible for the ethical standards to which the study adheres, and should therefore inform the subjects of all aspects of the research that might influence willingness to participate. The investigator should also be as open and honest with the subjects as possible, and therefore promote ethical standards and values.

For this study, the researcher obtained permission from all the different stakeholders of the Sterkspruit Department of Education (see Annexure 6): the circuit manager, the principal, the participatory educator, the school governing body, all learner participants and their parents (see Annexure 7). In particular, the researcher obtained parental consent before proceeding since learners between the ages of six and seven were involved in the research. Letters (in English and Afrikaans) were sent to parents, requesting permission for participation (cf. Annexure 7). Almost all data-gathering in public schools that requires student participation beyond normal testing requires parental as well as school district and principal permission. In this study all the parents signed the letters granting permission to conduct the research. McMillan and Schumacher (2001:197) maintain that most studies require the investigator to secure informed consent from the subjects before they participate in the research.

Informed consent is achieved by providing subjects with an explanation of the research, opportunity to terminate their participation at any time. Informed consent implies that the subjects have a choice about whether to participate. Consent is usually obtained by asking subjects (or parents of minors) to sign a form that indicates understanding of the research and

consent to participate. Thus, in gaining permission from research participants and /or stakeholders, the researcher gave subjects the assurances of confidentiality and anonymity and described the purpose of the study.

The letters (see Annexure 7) also assured the subjects of confidentiality, and that access to individual data or the names of the subjects is only available to the researcher. Confidentiality is ensured by making certain that the data cannot be linked to individual subjects by name, but numbers, because of the fact that the research study is quantitative-experimental in nature. (McMillan & Schumacher 2001:198). Once approval to proceed with the research had been secured from the authorities (see Annexure 6), the researcher began the process of negotiating and maintaining relationships with individuals and groups of primary interest.

5.4. AIM OF THE RESEARCH

The main aim of the study was to examine and analyse cognitive processes in second language acquisition and to determine what indicates the composition of an acceptable cognitive reading instruction method.

In order to accomplish this, the following was done:

- A literature study was undertaken in order to develop a conceptual framework and find information pertaining to the cognitive facets of the second language learner in totality. The theory helped to guide the researcher and provided a starting point for interpreting the data; it also helped to enhance the credibility of the study.
- An empirical survey was undertaken to gather data that could be interpreted and to enhance the validity of the study.
- Furthermore, a connection between the literature survey (the theoretical part) and the empirical study (the practical part) were sought.

5.5. RESEARCH DESIGN

Empirical quantitative research study was conducted. McMillan and Schumacher (2001:13) mention that in this type of research, one independent variable is controlled and the effect on

one or more dependent variables is observed. The research design focused on testing the intervention programme empirically and quantitatively. A quantitative research design means that the researcher designs a scientific study involving numbers to answer questions. This is a content analysis experiment. Experimental research provides the strongest results of any of the quantitative research approaches because it provides clear evidence of linking variables.

A true experimental design is one in which one or more randomly assigned groups of subjects receives a pre-test, a treatment, and a post-test, and one randomly assigned group of subjects receives only the pre-test and post-test (McMillan & Schumacher 2001:598). According to Fouche and de Vos (in de Vos, Schurink & Schurink 1998:132), the experimental group and the comparison group do the same pre- and post- diagnostic tests. However, only the experimental group receives the treatment (intervention programme). The researcher's view judged this a practical design to use and it would give clear indications of the probable effect of the programme. The results of the quantitative research can be regarded as reliable as it is easy to make generalisations about the findings.

This study adopted a pre-test-post-test control group design. This design was selected because it provides an extension of the one-group pre-test-post-test design in two ways: a second group is added, called the control or comparison group (McMillan & Schumacher 2001:335).

5.6. RESEARCH METHOD

In the development of a credible beginning cognitive reading programme, quantitative methodology was deployed. Firstly, to establish a general summary of a cognitive reading method, a literature study was completed and the theories identified were categorised according to relevance.

The research process can be divided into the following three phases:

- During phase one (literature study) a theoretical overview of the concept cognitive facets for second language learners was completed .
- During phase two (literature study) domains of cognitive development were identified.

- During the third phase a cognitive reading programme (CRP) based on the information obtained in phase one and two was applied.

The third phase of the study was carried out at a primary school in the Eastern Cape. The school operates under the auspices of the Department of Education, Sterkspruit District. The school serves a low socio-economic community that has experienced recent growth and socio-economic change. In this school, it is mandatory that all Grade 1 new entrants take English or Afrikaans as their first language for 9 hrs 10 minutes a week and 1 hr 10 minutes per day according to the NCS curriculum criteria for Literacy as a learning area.

The empirical investigation was undertaken with Grade 1 learners in their first year of formal reading. The languages of instruction are English and Afrikaans, which are the languages of learning and teaching (LOLT). At the beginning of the school year, twenty (20) Grade 1 learners were selected from a population of approximately 110. These learners were further sub-divided into an experimental group and a control group. The experimental group comprised 10 second language learners, that is, IsiXhosa and Sesotho speakers. The no treatment control group comprised 10 home language (i.e. Afrikaans speaking) learners. The subjects were identified from two Grade 1 classes as average overall performers, but underachievers in reading (below average). Probable causes for underperformance (low) reading achievement were attributed to the changing demographics of the community, classroom overcrowding, home influences and curricular issues.

5.6.1. DATA COLLECTION

The data gathering procedures that were employed in this study are discussed briefly in this section. The procedures are described, whereafter the rationale for their choice is given.

Data was gathered by means of an informal standardised diagnostic test and a Early Childhood Development (ECD) reading skill tool that were used as criteria for reading performance of both groups at the beginning and during the implementation of the programme for the purpose of data collection. The data collected originated in a specific situation.

Informal diagnostic tests for prediction and analysis of reading abilities and disabilities and the ECD reading skill tool for assessment purposes were administered to the 20 subjects during the first week of the second term. The informal diagnostic tests were administered according to instructions as determined by the authors of the tests when conducting these tests. The standardized reading test was obtained from the Department of Orthopedagogics, University of Stellenbosch and the reading skill tool was obtained from the University of South Africa. These reading tests are commonly used to determine the reading ability level of the sample participants. By using these types of tests a child's ability can be compared with other children at the same age. These diagnostic tests were used to measure intellectual processes, reading fluency, comprehension ability such as thinking skills, memorising, problem solving techniques, analysing, reasoning and applying information. According to Gay, Mills and Airasian (2006:128), most tests taken by learners are achievement tests.

For all subjects, data were collected concurrently at the level of support required at the beginning of the intervention process and the next more independent level.

5.6.2. SUBJECTS IN THE STUDY

Sampling is the process of selecting a number subjects for a study in such a way that they represent the larger group from which they were selected. In this study sampling is made up of the individuals, items, or events selected from a larger group referred as a population. If a quantitative sample is well selected, the research results based on it can be generalized to the population (Gay. Mills & Airasian 2006:99).

As mentioned this research took place at a selected primary school in the Eastern Cape. Total school enrolment stood at more than 820 learners for the 2010 academic year, with an average of 45 learners per class. The learner population is multicultural, reflecting the diverse groups in the Eastern Cape setting. Learners at this school come from low income homes where reading materials tend to be scarce.

The subjects were selected in such a way as to give as accurate a sampling as possible of all Grade 1 learners at the school. The educators where the research was being carried out are experienced Grade 1 educators with an excellent teaching reputation. Twenty learners were selected and divided into two groups. It was convenient for the researcher to use these learners since she has direct access to the learning areas and the Foundation Phase at the school and the learners could be reached relatively easily to complete the diagnostic reading test and the reading programme. During the six weeks, both the control and the experimental group received 1 hour 50 minutes of regular Literacy class daily, plus an additional 30 minute session cognitive enrichment class (for the experimental group) after school (extra) classes daily for the period.

5.7. INSTRUCTIONAL PROCEDURES

5.7.1. THE EXPERIMENTAL GROUP

Both groups covered the same literacy learning area matter and received reading instruction for the same amount of time. Academic objectives and outcomes were the same for both groups and all diagnostic tests measuring achievement were identical. However, the ten learners who constituted the experimental group were exposed to a cognitive reading programme (CRP) for Grade 1 first year entrants. Thus, the experimental group took part in the cognitive assisted programme, the core of which consisted of learners' reading texts, doing a variety of reading activities and participating in daily reading instruction (see par.5.6.3). At the beginning of the instruction, the researcher demonstrated to the learners how to apply reading strategies taught in the cognitive reading programme (CRP).

The intervention lasted for six weeks, which excluded the time for data collection. The reading programme consists of 30 daily sessions after school. Learners spent a 30 minute session doing the programme, pre- and post- reading activities (mostly post-reading), which included attention to learners' problem areas in reading.

Additional time for reading was provided along with increased access to books: Drop All and Read (DAR). The researcher used various techniques to encourage learners to read more and

to increase their reading skills and she also designed a set of lesson plans that embedded the instructional and procedural knowledge needed to perform the following tasks:

- Asking a main idea question;
- Predicting what the subsequent paragraph is about;
- Clarifying unclear phrases.

The instructor took on a supportive role by offering hints, providing feedback, and praising, because learners experience problems in utilising the knowledge and skills acquired via formal learning. Figure 5.1 provides the formal teaching time in hours and minutes per week and per day for Literacy grade 1.

Figure 5.1. The formal teaching time in hours and minutes per week and per day: Experimental group.

	Grade 1
	9 hrs 10 min per week 1 hr 50 min per day
Learning Programme	Literacy 40%
Per week	9 hrs 10 minutes
Per day	1 hr 50 minutes
Additional DAR → (Drop All and Read)	10 minutes per day
Cognitive Assisted Programme (CAP)	30 minutes (session) per day

5.7.2. THE CONTROL GROUP

During the school year, the control group (no treatment group) was taught in a conventional way using the prescribed traditional methods. The control group adopted a traditional teacher-centred reading approach in which the teacher directed the instructions and learners generated responses. For the experimental and control groups, the instructional materials and learning content were the same except that the control group was not exposed to the cognitive reading programme (CRP). Figure 5.2 provides the formal teaching time in hours and minutes per week and per day for Literacy Grade 1.

Figure 5.2. The formal teaching time in hours and minutes per week and per day: Control Group.

	Grade 1
	9 hrs 10 min per week 1 hr 50 min per day
Learning Programme	Literacy 40%
Per week	9 hrs 10 minutes
Per day	1 hr 50 minutes
Additional DAR → Drop all and read	10 minutes per day

Source: Department of Education (2003: 32)

5.7.3. COGNITIVE READING PROGRAMME

The cognitive strategy reading instruction framework (the CRP) is embedded in the Learning outcomes and assessment standards of the NCS curriculum and indicates the expected level of achievement of second language learners. This programme consists of learning outcomes LO'S, assessment standards, lessons and activities. This programme was the interventory structure that was applied to the experimental group and is further discussed as follows:

Cognitive integrated activities are designed as follows:

- Because language activities are closely linked, certain activities often go together.
- Similarly, although there is focussed time for oral, listening and speaking, learners will also develop these skills during reading and writing (Department of Education 2010:5)

The programme outlines the following**:**

LO1 LISTENING

Listening to stories and phonic sounds

LO2 SPEAKING

Responding to questions

LO3 READING AND VIEWING

Read words on flashcards and written sheets/books

LO4 Writing

Words for phonics/ drawing and copying of sentences

LO5 THINKING AND REASONING

Learners use language to develop concepts, think and reason

LO6 LANGUAGE STRUCTURE AND USE

Enjoying language by using sounds, words and grammar

5.7.4. COGNITIVE LEVELS TAKEN INTO CONSIDERATION IN THE INTERVENTION PROCESS

Beginning Reading Instruction Method (Baseline):

Level 1

Baseline structure for Grade 1 new entrants

Cognitive skills: Language, vocabulary, thinking and reasoning, problem solving

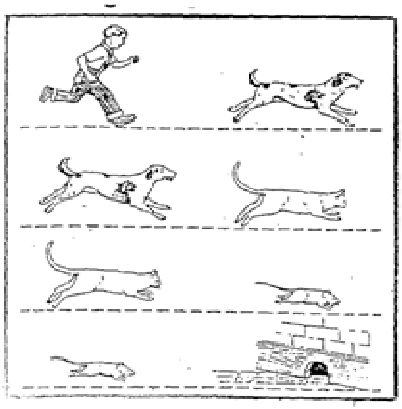
Development of eye – coordination:

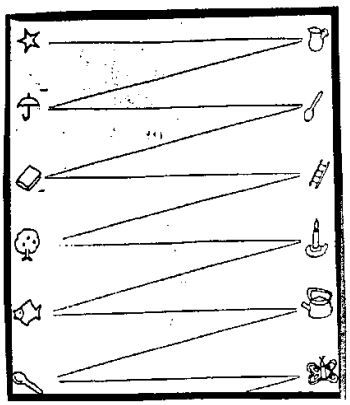
Development of eye – coordination from left to right. Left to right eye movements

Beginning top left.

Move a finger from left to right and say:

"The boy is running after the dog etc.





Activities:

Left to right eye movements:

Activities:

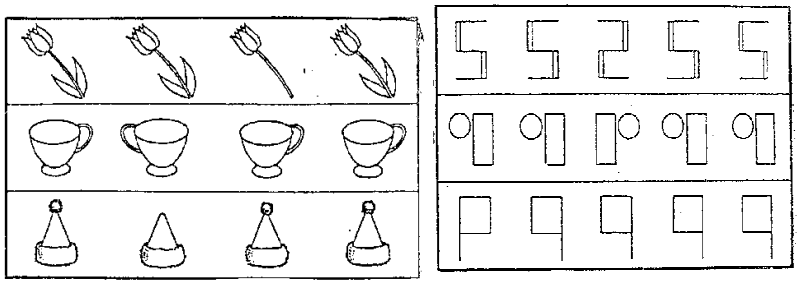
- Move a finger from left to right starting at the top and say:
  "The train is going to the station," etc.

Level 2: Visual discrimination:

Learners must be able to discriminate and distinguish between pictures, letters/sounds and words:

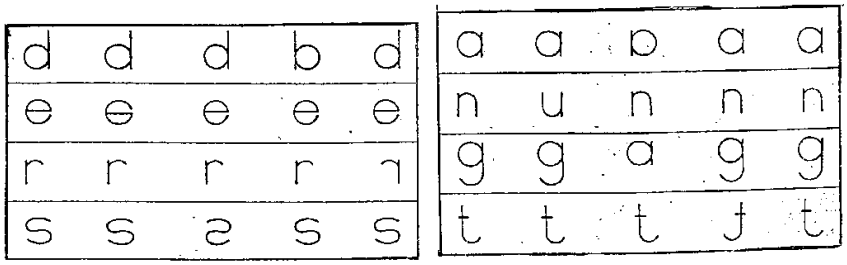
LO 5 : Thinking and Reasoning
AS 5.2Identifies similarities differences using appropriate language (e.g. like, the same as, different from).

- Learners must identify the differences in pictures and figures
- What is similar and what is different?



Sound/letter differences:

Which sound/letter is similar and which sound is different?



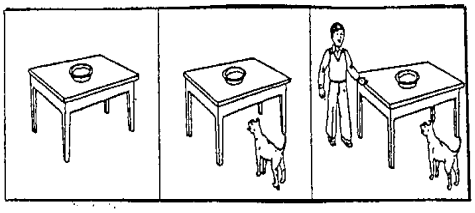
Look for the sound/letter that looks exactly like the one in a block in the margin.

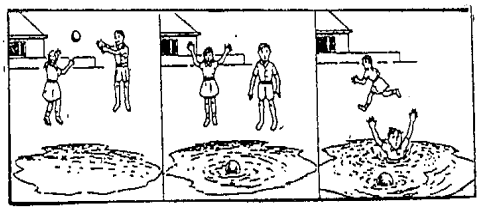
o	e	o	o	c	e	o	a
ad	da	pa	ad	ab	ad		
n	m	n	h	m	n	h	n
sc	sc	cs	ac	sc	cs		

Similarities and differences in words

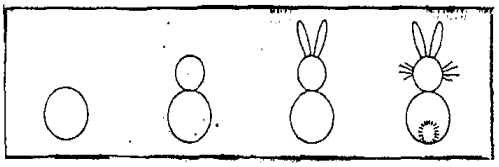
die	dei	die	pei	die
en	eu	en	eu	en
pos	dos	pos	poz	pos
sit	sit	sij	sit	fis

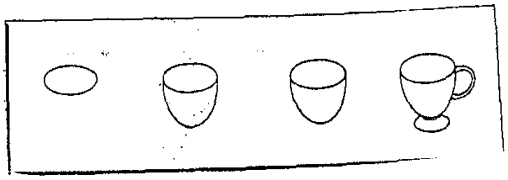
loop	loop	looq	lood	loop
was	was	was	saw	was
bal	bal	dal	bal	pol
ek	ek	ek	ek	ek





- Interpretation of pictures: Predicting outcome:
- What is happening here?
- Tell the story
- How did the story end?



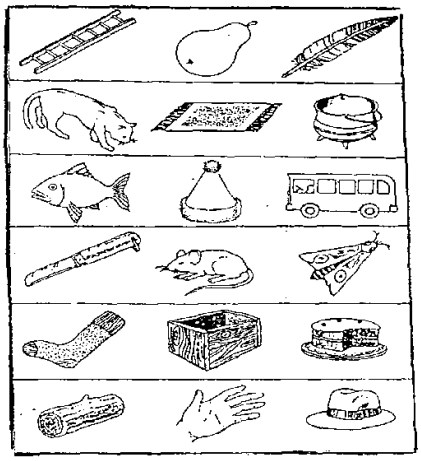


Level 3 Auditory discrimination:

LO1: **Listening: Develops phonics awareness**:

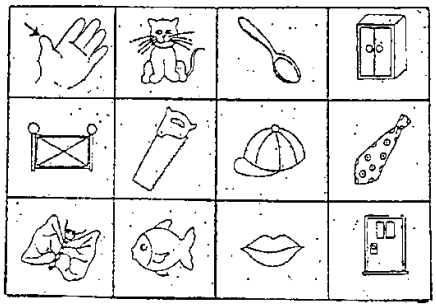
AS6.1Distinguishes between different phonemes especially at the beginning of words

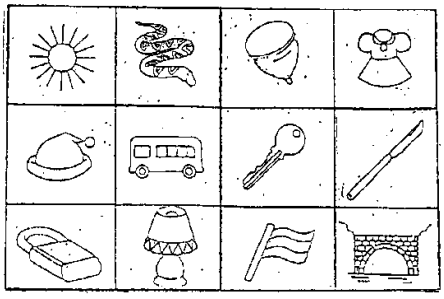
The development of co-ordination between listening and speaking skills through the recognition of rhyme words and to distinguish between different phonemes at the beginning and the end of words. This indicates an understanding that words are made up of sounds:



cat, mat. pot (end with "t" phoneme)

- Teacher asks questions:
- Which word starts with the "c"?
- Which word ends with a "n"?





Level 4: Auditory analysing and synthesing:

LO 3: Reading and viewing **AS 3.5** Develops phonic awareness. Understands the difference between letter names and letter sounds

- Learner identifies a specific picture
- Learner begins with the three separate sounds and merges (or blends) them to build up a word.
- Learners must be able to hear as well as see the sound/letter.

- Learners start with the **whole word** and **break it** up into separate sounds
- Learners must also build up three letter words from three separate sounds

c…a…t **c a t**

LO4: **Writing: Writes so that others can understand using sound/ letters AS 4.5 to build up words.**

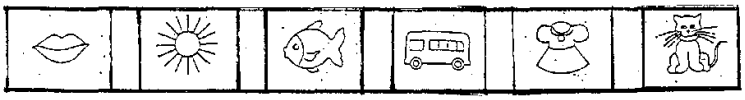
Learners build up words using:

sun
cat
hat

Level 5: Auditory memory

LO1: Listening

AS1.1 Listens attentively to instructions and announcements, and responds appropriately



- With which sound does the first picture starts and end?

  Teacher asks questions:

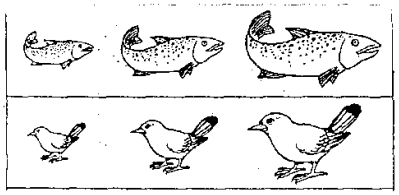
- Show me the first picture.

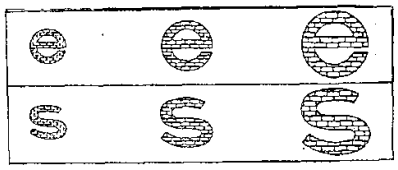
Level 6: Letter shape recognition

LO5: Thinking and Reasoning

Uses Language to develop concepts. Demonstrates developing knowledge of concepts such as quantity, size, shape, direction, colour, speed, time, age, sequence.

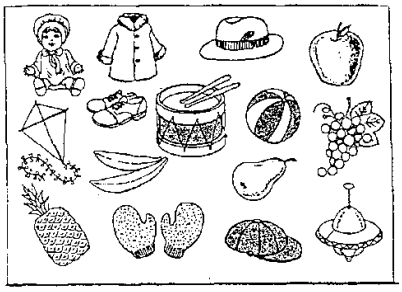
Concepts:
(big, bigger, biggest)

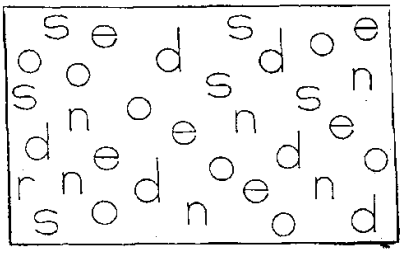




Draw a cross above the item indicated, e.g. “Draw a cross above the fish that is bigger than the smallest fish.”

Classifying





Level 6 Shared reading activities:

Card 1

Deb is a dog
He is big
He is a big dog

- Learners memorising the words. The teacher could make reading cards with 2 – 3 short sentences using the words they need to know.
- Teacher photocopies the cards and gives them to the learners to glue into: “My first reading book”.
- Teacher makes 4-6 different cards using the same words,

Source: (Greyling, Joubert, Anker J & Anker B. Undated)

5.6.5 THE READING MATERIALS

Krashen and Terrell (1983 cited in Taylor 2009:1-6) recommend two criteria for determining whether reading materials are appropriate for second language learners (L2).
The reading must be:

- At a comprehensible level of complexity; and
- Interesting to the reader.

Reading texts originating from learners' experiences meet these two criteria because:

- The degree of complexity is determined by the learner's own language; and
- The texts relate to the learner's personal interests.

The reading materials used in this present study consisted of selected texts from textbooks. The range of learning and support teaching support materials for literacy include story books, picture books, sound cards (frieze), word games books with rhymes and versus, readers etc. These reading materials are expository texts suitable for the below average readers. The selection of the reading materials was based on the levels of cognitive complexity according to Bloom's Taxonomy:

- Intellectual processes: knowledge to recall, remember and recognize an idea.
- Cognitive processes: thinking skills, memorizing, problem solving, (information you need to solve a problem) analysis (break information into parts) reasoning and synthesis (assemble separate into a new whole and recombine into a new form).
- Reading comprehension ability to translate or explain in own words.
- Language capacity and evaluation: ability to make judgements about information (Bloom et al., 1956 cited in McAfee & Leong 2002:560).

  The reading materials, illustrated in figure 5.3 consist of shared reading and writing/word and essential sentence level work based on the levels of cognitive complexity.

Figure 5.3. Reading materials.

	Shared reading and writing/ word and sentence level work				
Reading	**Big Book:** Discussion on prediction, characters, giving opinions/ shared writing, sequencing words in a sentence, sequencing sentences, activities on the characters, dramatization	**Big Book:** discussion on prediction, characters, giving opinions/ shared writing in groups based on a picture, discussions on text and illustrations of book, shared writing of the continuation of the story	**Story from Reader or Learner's Book:** discussions, giving opinions, shared writing, written comprehension on the characters/ open-ended questioning, high frequency word game, dramatisation of the story	**Poster:** discussions and shared writing of simple posters	**Big Book:** discussions on prediction, characters, shared writing, paired discussions

Source: Department of Education (2010)

5.8. THE INSTRUMENT

The research project tested the independent variable of cognitive assisted instruction on reading development. Ten learners received the treatment monitored by the researcher. The dependent variable, reading proficiency was assessed via two instruments. The dependant variable was a pre-and post-informal diagnostic reading test and the ECD reading skill tool (Foundation Phase: Grade 1-3). The researcher administered these diagnostic tests to the experimental and control group at the beginning and end of each session.

The research project tested the independent variable of cognitive methods instruction on reading development. The dependent variable was a pre and post- test. The effectiveness for the establishment of a credible cognitive reading method was determined by comparing the literacy achievement of the two groups as measured by the reading diagnostic test and the reading tool. The instruments used to determine the effect of cognitive assisted instruction on reading was a **Pre and post diagnostic and reading test form A** designed by the Department of Orthopedagogics, University of Stellenbosch and the **ECD Reading skill tool form B** (Foundation Phase: Grades 1-3) from the University of South Africa (see Annexure one). Ten learners of the experimental group received the treatment monitored by the researcher.

All results were compared to determine the effect the treatment had on these subjects. These instruments had been used previously by local researchers and were found useful. Both instruments were administered twice, once before the treatment began and again after the treatment had been carried out.

5.9. METHOD OF INVESTIGATION

The method of investigation is discussed as follows:

- The researcher explained the process of the pre-test (foundational evaluation tests);
- The application of the reading programme;
- The process of the post-test (re-evaluation) thereafter concludes the method of investigation.

5.9.1. EVALUATION TESTS

As mentioned, twenty Grade 1 learners were identified as average overall performers, but underachievers in reading (below average). The identified learners were randomly divided into two groups: the experimental group who received the treatment and the control group who did not receive treatment. The standardised individual diagnostic reading test and the reading skill tool form A and form B (annexure 1) was administered to the two groups to determine the learners' reading ability level.

It was important for the researcher to examine whether there was any significant difference in terms of reading proficiency between the experimental and the control group, before the application of the cognitive reading programme(CRP). A comparison was made between the achievements of the two groups.

5.9.2. DATA ANALYSIS

T-tests were used to compare the pre-test reading ability scores of the control and the experimental group. As data were collected from the participants, the researcher examined and re-examined the data in search of outcomes and integration in the data to arrive at a conclusion of outcomes. The researcher anticipated that analysing and synthesising the data

would take approximately three to four weeks. Matched pair t - tests were used to compare the pre-test and post-test scores of the control and experimental groups on the diagnostic reading test and the reading skill assessment. A t-test was also used to compare the post-test scores of the two groups on the instruments to see if the treatment might have been associated with any difference in reading proficiency.

Therefore, t-tests were administered on the average reading ability of the experimental as well as the comparison group in the pre-tests and post-tests before and after the intervention programme to test for significant differences. The results are indicated in paragraph 5.9.

5.10. RESULTS AND INTERPRETATIONS

The results of the data analysis are presented and interpreted and the findings are presented in this section. To determine whether there was a significant difference in reading ability between the two groups before treatment was administered, the following null-hypothesis was formulated before the treatment:

There is no significant difference between the reading ability level of the experimental and the control group.

5.11. RESULTS OF THE PRE-TREATMENT EVALUATION

After completion of the individual reading diagnostic and reading skill tool evaluation, the reading proficiency level for both groups was determined through comparing the averages obtained in the pre-evaluation test. A comparison was made and results are illustrated in table 5.1 prior to treatment.

Table 5.1 Descriptive statistics by group: Reading ability prior to treatment

	N	Mean	S.D
EXPERIMENTAL GROUP	10	14.8	6.41
CONTROL GROUP	10	18.5	4.62

The difference in reading ability between the experimental and control groups prior to treatment was found to be not significant (t = -1,48, d-.f. = 18, p = .156). There is no significant difference between learner's average reading ability level in the pre-test for the experimental group, as well as for the comparison group. After conducting the pre-treatment reading ability evaluation a reading programme was introduced for the experimental group. As mentioned above the experimental group attended the 30-day reading sessions after school. The reading programme was applied to the experimental group. The control group followed the normal prescribed programme of the school.

In analysing the presentation and results of this programme, one must be aware of the fact that these learners had already been exposed to six months (two terms) of reading instruction. Thus, the same programme cannot be followed with learners who have no reading experience or exposure to reading.

5.12. RESULTS OF THE POST – TREATMENT EVALUATION

Table 5.2 displays the difference in average and standard deviation of the post treatment evaluation between the experimental and the control group.

Table 5.2. Results of the post treatment evaluation

	N	**Mean**	**S.D.**
EXPERIMENTAL GROUP	10	19.2	4.94
CONTROL GROUP	10	21.5	4.74

With t (18) = 0,302> 0,005 the null hypothesis was not rejected. There is a significant difference between the average of the experimental group (19.2) and the control group (21.5). The learners in the comparison group (control) also showed a significant improvement in their average. The participants who were taught with the cognitive reading programme (CRP) had a significant increase from pre-test to post-test. The mean net gain is 4.40 and the improved percentage, 43.30. A significant increase of reading ability of the experimental group took place. This indicates a significant improvement in the average reading ability of the

experimental group. The level of significance indicates the probable positive influence of the intervention programme on the experimental group.

5.13. STATISTICAL TECHNIQUES

The final step is to describe the procedures and interpretation in a written format for others to examine and critique. Before writing up the study, it was important to spend time thinking about the data analysis and interpreting what the data revealed.

5.14. THE RESULTS OF THE INVESTIGATION

Table 5.3 displayed the results of the pre-test and post-test of the two comparison groups, after which the results were graphically illustrated and further analysed. After the application of the cognitive reading programme (CRP), the results of the investigation reflected a drastic improvement of reading abilities. It is important to compare the evaluation results to adhere to the objective of the study namely:

- To determine whether the cognitive reading programme is applicable or not;
- Whether it assisted in the enhancement of the learners reading ability.

Therefore, the raw scores of the subjects of both groups were compared and tabulated in Table 5.3.

Table 5.3. Results of investigation: Experimental & control group

Subject	Group	Pre-Score	Post-Score	ImproveS	ImproveP	Pre-Score-C	Post-Score-C	ImproveS-C	ImproveP-C
E01	1	24	25	1	4	3	3	1	1
E02	1	22	24	2	9	3	3	1	1
E03	1	20	24	4	20	2	3	2	2
E04	1	19	23	4	21	2	2	2	2
E05	1	15	21	6	40	2	2	3	3
E06	1	14	19	5	36	2	2	3	3
E07	1	12	16	4	33	1	2	2	2
E08	1	10	15	5	50	1	1	3	3
E09	1	7	14	7	100	1	1	3	3
E10	1	5	11	6	120	1	1	3	3
C01	2	26	28	2	8	3	3	1	1
C02	2	24	27	3	13	3	3	2	1
C03	2	23	26	3	13	3	3	2	1
C04	2	20	23	3	15	2	2	2	2
C05	2	18	22	4	22	2	2	2	2
C06	2	17	21	4	24	2	2	2	2
C07	2	16	20	4	25	2	2	2	2
C08	2	15	19	4	27	2	2	2	2
C09	2	14	15	1	7	2	1	1	1
C10	2	12	14	2	17	1	1	1	2

5.15. RESULTS ACCORDING TO RAW SCORES – EXPERIMENTAL GROUP

Table 5.4 reflects graphically the reading improvement of the experimental group through a raw score for pre-evaluation (pre-score), mean 14.8 and the standard deviation of 6.41. Post-evaluation (post-score) reflects 19.2 with an improved score of 4.40 and a improved standard deviation of 4.94. The improved standard deviation indicates 1.84. The improved percentage is 43.3 mean and the improved standard deviation is 38.11.

Table 5.4. Descriptive statistics: Experimental group

N	10

Mean, s.d. etc. requested for (1=Yes):	0	1	1	1	1	0	0	0	0
Statistics	Group	Pre-Score	Post-Score	ImproveS	ImproveP	Pre-Score-C	Post-Score-C	ImproveS-C	ImproveP-C
N	10	10	10	10	10	10	10	10	10
Mean		14.80	19.20	4.40	43.30				
SD		6.41	4.94	1.84	38.11				
Min	1.00	5.00	11.00	1.00	4.00	1.00	1.00	1.00	1.00
Quartile 1		10.50	15.25	4.00	20.25				
Median		14.50	20.00	4.50	34.50				
Quartile 3		19.75	23.75	5.75	47.50				
Maximum	1.00	24.00	25.00	7.00	120.00	3.00	3.00	3.00	3.00

The following conclusions can be drawn from Table 5.4. With pre-evaluation 8 subjects out of the 10 in the experimental group were poor readers and 2 below average. The re-evaluation reflected a general improvement of all the experimental subjects with a 4.40 mean and improved percentage of 43.3. This implies that 4 readers could be classified as very weak, 2 readers below average or poor readers.

5.16. RESULTS ACCORDING TO RAW SCORES – CONTROL GROUP

Table 5.5 reflects graphically the reading improvement of the control group through a raw score for pre-evaluation (pre-score) mean of 18.5 and the post-evaluation score reflects 21.5 with an improved score of 3.00 and improved standard deviation of 1.05.

Table 5.5. Descriptive statisitcs control group

N	10

Mean, s.d. etc. requested for (1=Yes):	0	1	1	1	1	0	0	0	0
Statistics	Group	Pre-Score	Post-Score	ImproveS	ImproveP	Pre-Score-C	Post-Score-C	ImproveS-C	ImproveP-C
N	10	10	10	10	10	10	10	10	10
Mean		18.50	21.50	3.00	17.10				
SD		4.62	4.74	1.05	7.11				
Min	2.00	12.00	14.00	1.00	7.00	1.00	1.00	1.00	1.00
Quartile 1		15.25	19.25	2.25	13.00				
Median		17.50	21.50	3.00	16.00				
Quartile 3		22.25	25.25	4.00	23.50				
Maximum	2.00	26.00	28.00	4.00	27.00	3.00	3.00	2.00	2.00

The following conclusion can be drawn from Table 5.5. With pre-evaluation 7 out of the 10 subjects in the control group were below average or poor readers. One subject could be classified as very weak, 4 weak and two below average. The re-evaluation reflected a general improvement of all subjects of the control group of a 3.00 mean and standard deviation of 1.05. Subject 20 has been classified as a weak reader. Subjects 16, 17 and 18 were classified as average and below average. The control group did not take part in the cognitive reading programme.

The subjects of the experimental group were tested and compared with the control group. The results generally indicate better reading results for the learners who were exposed to a cognitive reading programme. All statistically significant differences were in favour of the experimental group. The findings of this study suggest that learners in the experimental group outperformed the control group in contrast with the control group who received the traditional teacher-directed reading instruction.

This study discusses the effect of a cognitive reading programme on second language learners' language proficiency. An analysis was performed to evaluate the impact of the two instructional approaches: the cognitive reading programme and the traditional whole class teacher-fronted method.

Table 5.6. Comparison between the pre- and post-scores: Experimental vs. control group

Comparison Experimental vs Control

	Expermental (n=10)		Control (n=10)		Exp-Con Difference	Two-sample t-Test (df = 18)		Cohen's d
	Mean	Std.Dev	Mean	Std.Dev	Mean	t-Stat.	p-value	
Pre-Score	14.80	6.41	18.50	4.62	-3.70	-1.48	.156	0.66
Post-Score	19.20	4.94	21.50	4.74	-2.30	-1.06	.302	0.47
ImproveS	4.40	1.84	3.00	1.05	1.40	2.09	.051	0.93
ImproveP	43.30	38.11	17.10	7.11	26.20	2.14	.047	0.96

Comparison Pre vs Post

	Experimental			Control		
	Matched-pair t-test (df = 9)			Matched-pair t- test (df = 9)		
	t-Stat.	p-value	Cohen's d	t-Stat.	p-value	Cohen's d
ImproveS	7.57	.000	2.39	9.00	.000	2.85
ImproveP	3.59	.006	1.14	7.61	.000	2.41

Statistical Significant if $p < .05$, indicated in red (note reported $p = .000$ implies $p < .0005$)

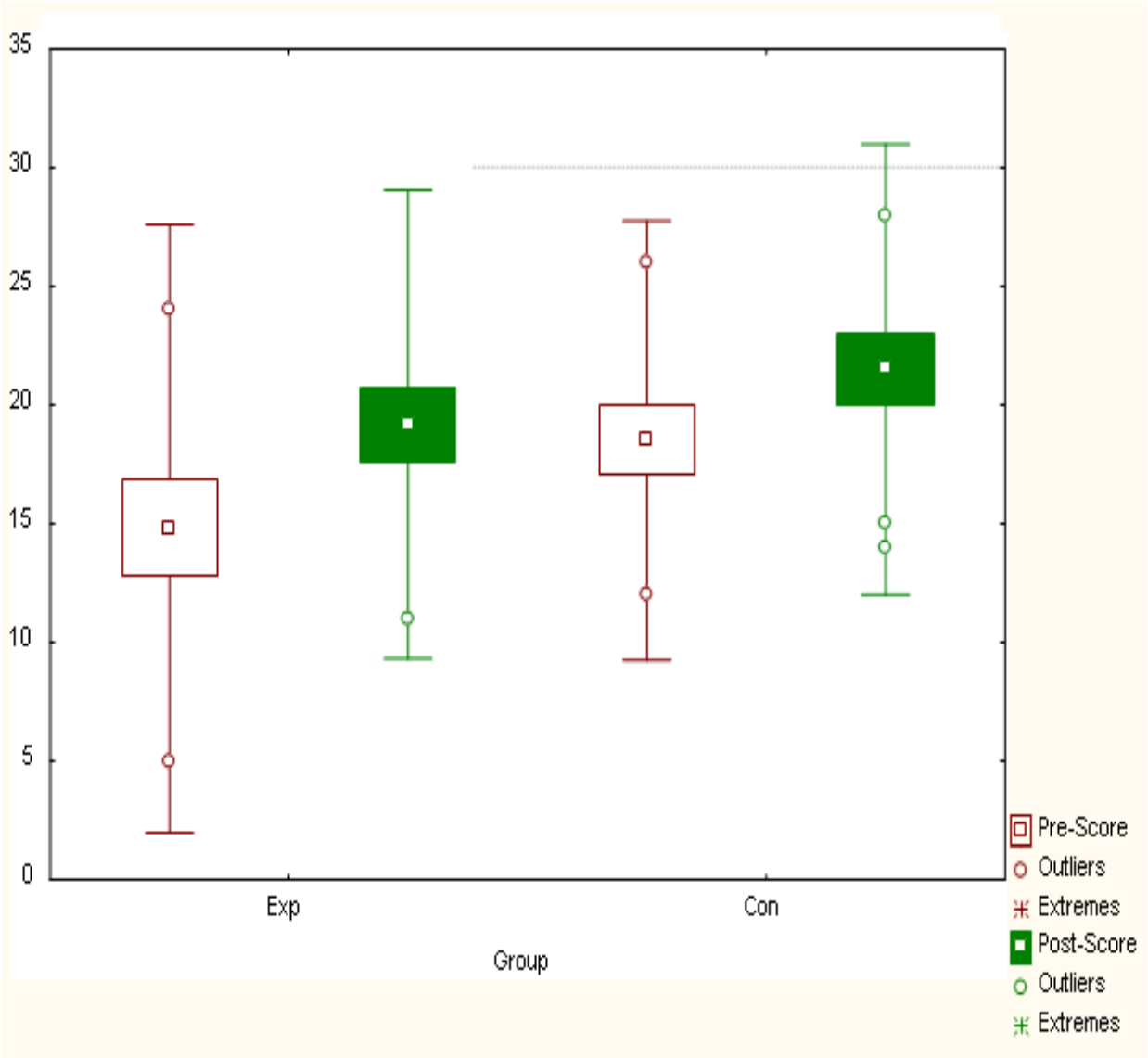
Practical Significance: Small $0.20 < d < 0.50$; Moderate: $0.5 < d < 0.8$; Large $d > 0.80$; only applicable if $p < .05$.

Initially the mean pre -test scores of the two groups were compared to ensure that they had similar reading abilities. Table 5.6 indicates that the two groups did not differ significantly with regard to their pre-test scores. The changes in scores from pre-test to post-test for each group were then compared using a matched-pair t-test. Table 5.6 indicates that both the experimental and control groups had significant pre-test to post-test differences, which given all Cohen's d statistics being greater than 0.80, can be described as large differences. It should be noted, however, that, as reported in Table 5.6, the differences for the experimental group were significantly larger than those of the control group.

Figure 5.4 presents the pre-test and post-test achievement of the experimental and the control groups as box-and-whisker plots. The length of the box, the rectangle bounded by the "hinges," represents the proportion of the distribution that falls between the 25^{th} and 75^{th} percentile. The square in the box represents the range of the scores (McMillan & Schumacher 2006:168). The mean marked percentages corresponding to each subject's score for the pre and post –test, as well as the differences in percentages for both groups were calculated. The

results were plotted in histograms comparing the average percentages allotted to each score by the subjects from both groups.

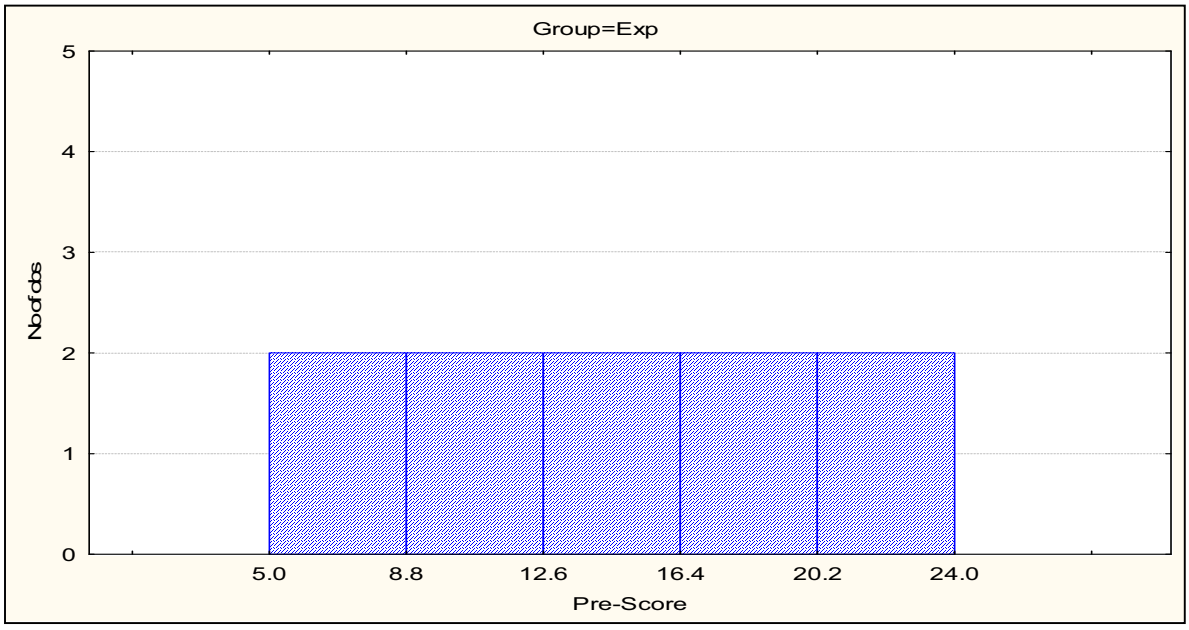
Figure 5.4. Box Plot: Pre versus Post by group



5.17. HISTOGRAMS- PRE- SCORE OF EXPERIMENTAL AND CONTROL GROUP

The distribution of scores for the experimental and control groups are depicted as histograms in figures 5.5 – 5.8.

Figure 5.5. Pre-scores of experimental and control groups



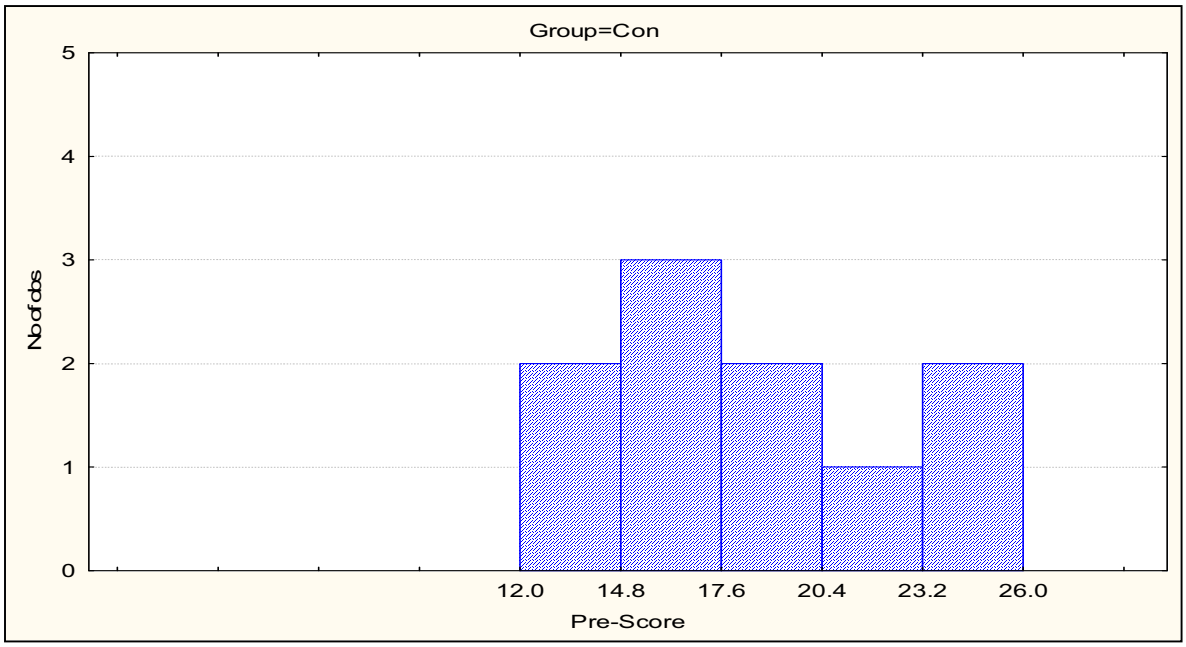
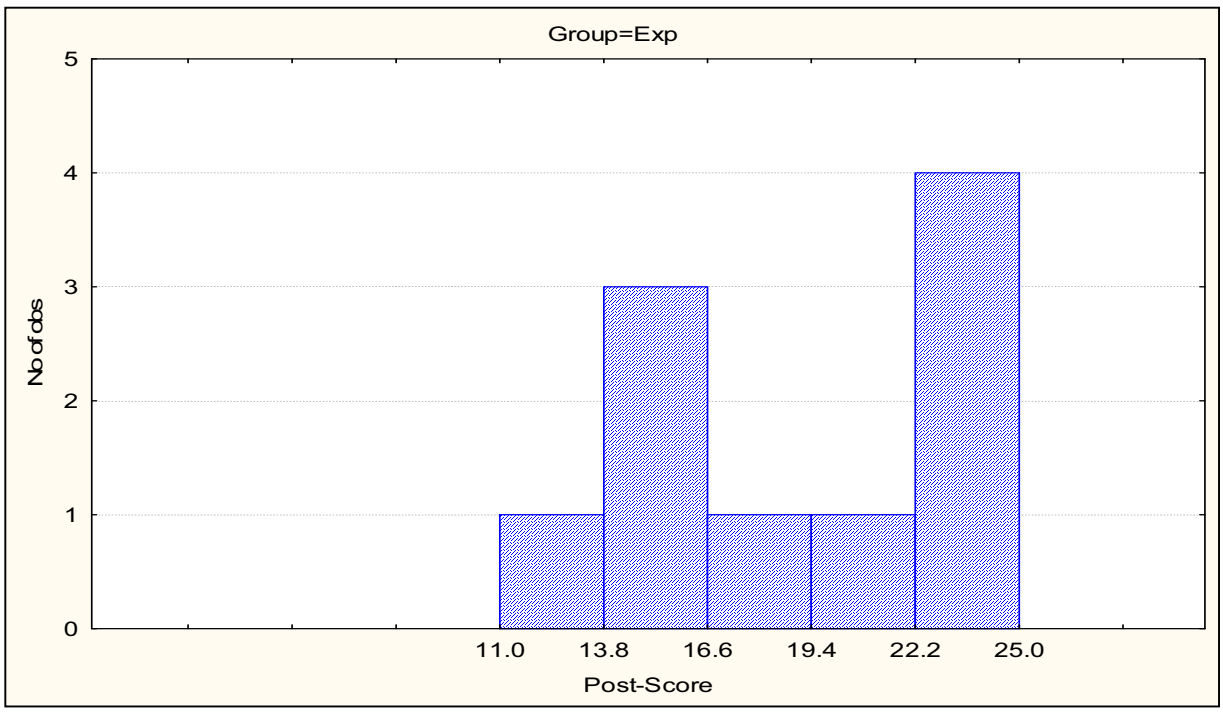


Figure 5.6. Histograms: Post- score of experimental and control group



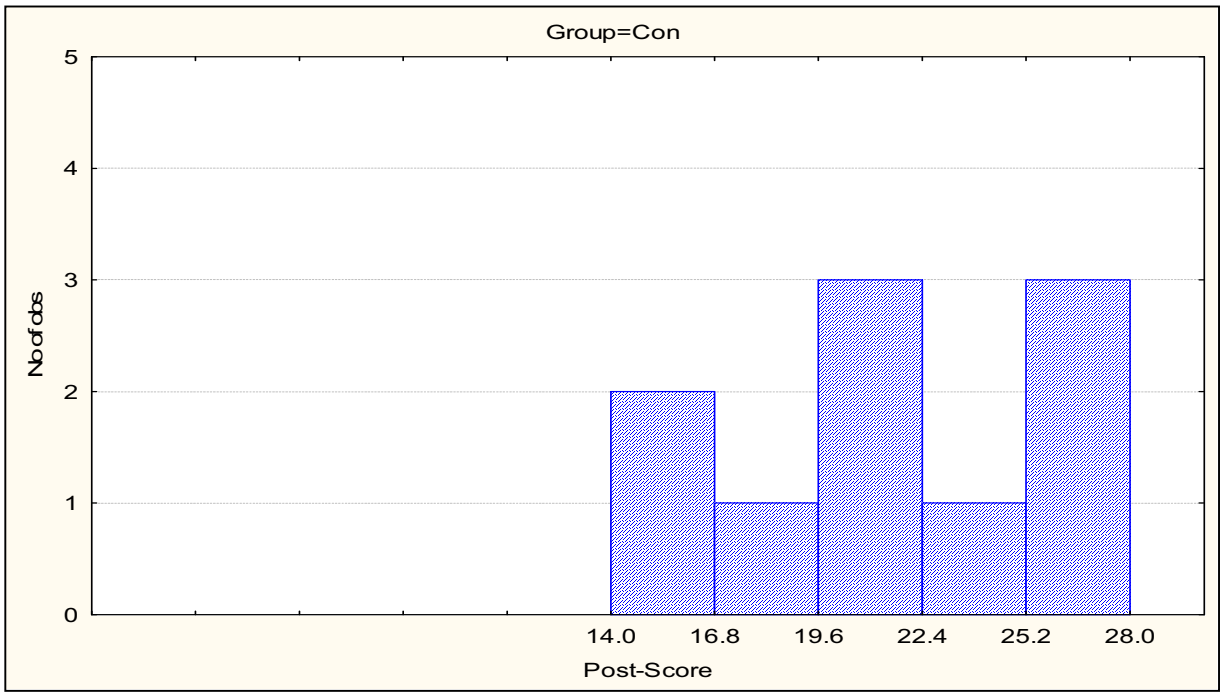
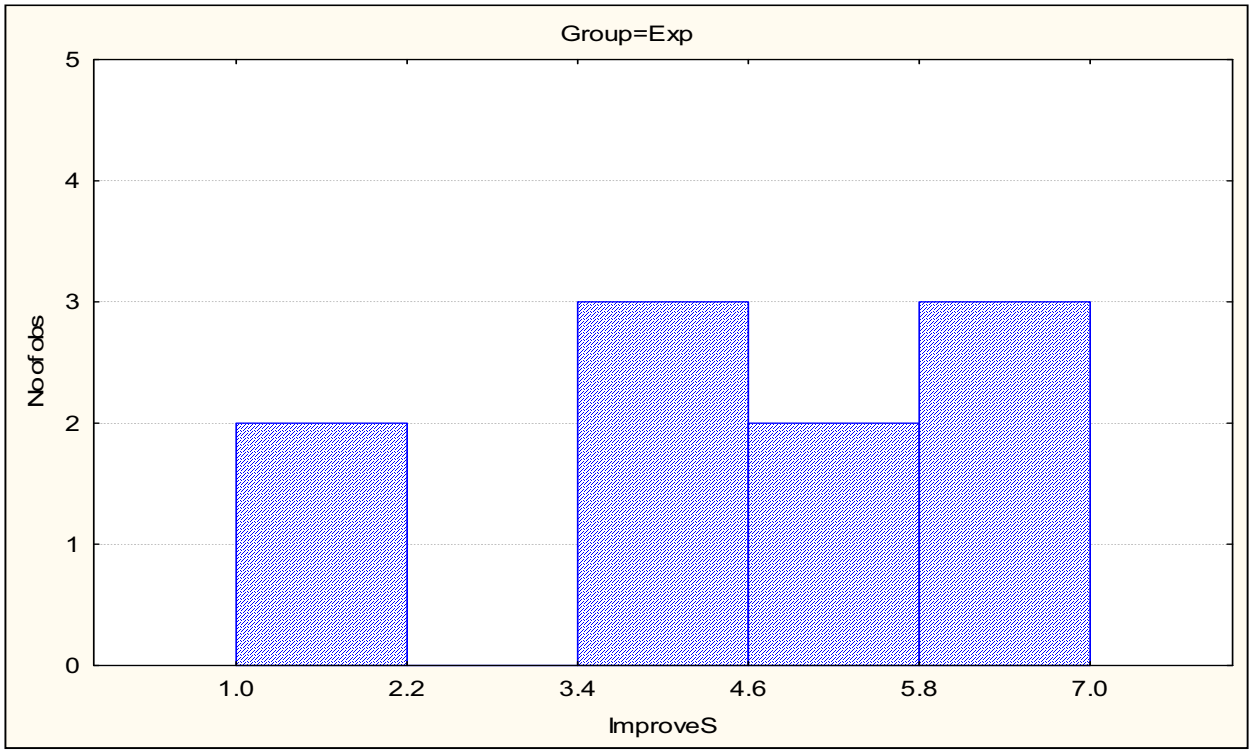


Figure 5.7. Improvement in scores.



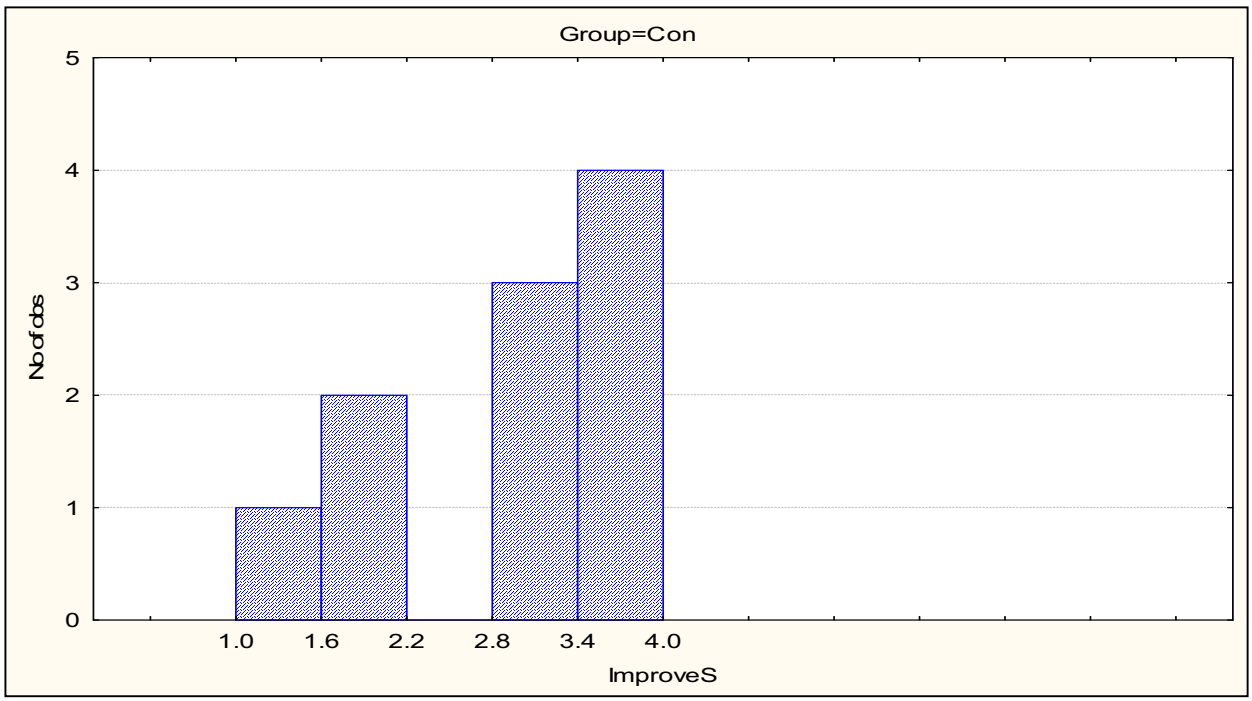
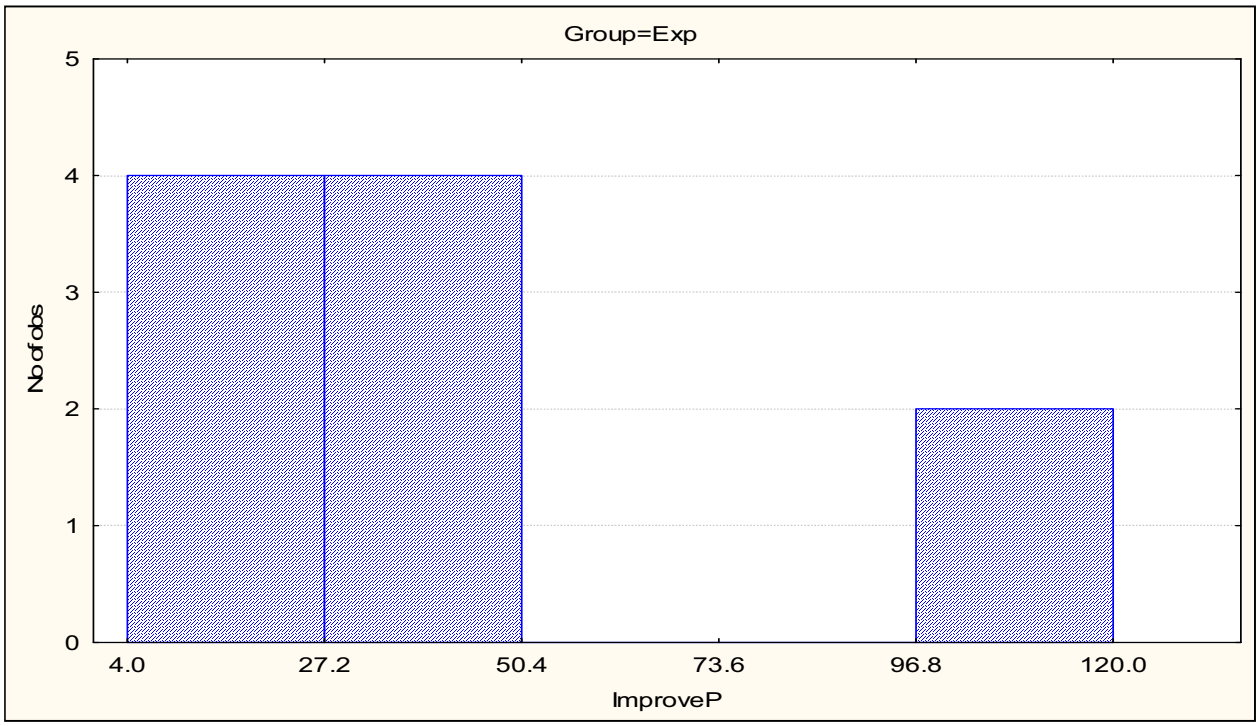
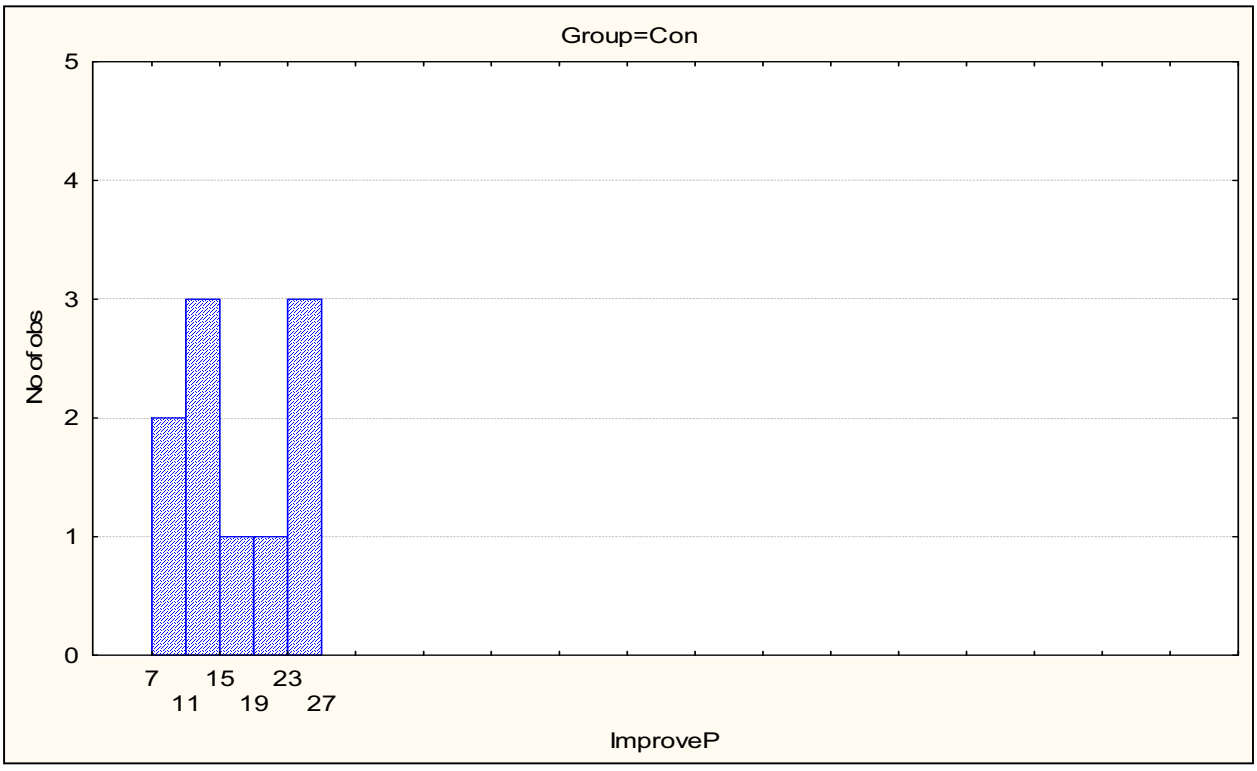


Figure 5.8. Percentage improvements in scores. Experimental versus control.





5.18. CONCLUSION OF THE RESULTS

The following main findings emerged as a result of the consolidation process.

The literature has already provided us with some of what we needed. The learners who were exposed to a cognitive reading programme show better gains in reading achievement than comparison learners. The experimental data indicated that a cognitive reading programme is a promising alternative to the traditional method used in the control group. Using the cognitive reading programme significantly improved learners' attitudes towards reading while at the same time working as well as in the cognitive domains. Finally, the aforementioned implies that the intervention programme had a significant influence on reading ability level on second language learners in the Foundation Phase.

5.19. SUMMARY

This chapter presented the data and displayed what was done in this study. Data was gathered and analysed by means of quantitative methods. Data gathering in such a study was an ongoing process. The large amount of data was consolidated to reduce it to a manageable size. Several categories emerged from this exercise and the findings were drawn. The findings were then interpreted against the background of the literature and the information that emerged as data was collected.

In the final chapter conclusions, recommendations and guidelines for developing a cognitive literacy enrichment programme for second language learners will be presented.

CHAPTER 6

CONCLUSION, RECOMMENDATIONS AND SUMMARY

6.1. INTRODUCTION

Chapter 6 provides the general conclusion, a summary of the study, limitations and recommendations for future studies. The chapter closes with general implications.

This research investigated the use of a beginning reading method for second language learners in the foundational years. The purpose of this study reported in this research were to determine some of the causes of literacy failure of Grade 1 second language entrants in the schools, and if possible, to set up cognitive formulas for predicting success in advance of instruction.

From this perspective the study has endeavoured to awaken a sound curiosity about cognition processes related to language acquisition and to provide concrete examples of processing mechanisms governing second language learning, such as language transfer and generalisation principles applied to meaning deduction of second language cognates (Escribano 2004:87).

Proficient reading is equally dependent on two critical skills: the ability to understand the language in which the text is written and the ability to recognise and process printed text. Each of these competencies is dependent on cognitive abilities. Children who readily understand spoken language and who are able to recognise printed words fluently and easily do not usually have difficulty with reading comprehension. However, learners must be proficient in both competencies to read well, a difficulty in either domain undermines the overall reading process. Reading researchers define a skilled reader as one who can understand written text as well as understand the same passage if spoken. Print recognition requires the ability to perceive printed text and translate it into spoken language. This aspect of reading is the crux of much of the reading debate.

6.2. BACKGROUND OF THE STUDY

Second language learners experience more linguistic and reading barriers than home language learners. The researcher's awareness of this tendency played a pivotal and decisive role in this research.

6.3. THE PURPOSE OF THE STUDY

The study was undertaken to determine whether insights from cognitive domains and development could serve as a possibility for the establishment of a credible beginning reading instruction method. This could only be achieved by determining the operation of cognition after which memory and language processing were studied as cognitive domains. The ultimate purpose of the study was to determine whether second language learners with an average intelligence, but with a reading disability could improve through participation in a cognitive reading programme. Before the ultimate purpose of the study could be reached, a thorough theoretical foundation by means of a literature study was required. The study includes a literature study as well as an empirical investigation.

6.4. SUMMARIES OF FINDINGS

To undertake the research, a literature review was followed by an empirical investigation. Accordingly, this section is divided into two subsections: the findings from the literature review in the first subsection and the findings of the empirical investigation in the second subsection.

6.4.1. THE LITERATURE REVIEW

The major findings from the review of literature were discussed by means of a discussion of a valid cognitive method and of the findings on cognitive formulas. A literature study was also undertaken to acquire knowledge with regard to reading methods. The literature reflected opposing views, each with its advantages and disadvantages. This debate has been raging for more than a century. It has raised a question whether research with regard to cognitive

development relating to language and reading, a relative new field of study, can shed light on the establishment of a credible beginning reading method.

Through the exploration of the literature study in Chapter 1, the possibility of utilising both the two opposing beginning reading methods in schools can be recommended. It is possible to combine the two opposing reading methods. The phonological and the whole language approaches differ widely from each other's perspective. Chapter 2, 3, 4 of the literature study focused on cognition and cognitive domains in an attempt to establish how the opposing methodologies could be used as a foundational framework or as a baseline structure for reading acquisition. A cognitive reading programme was compiled. The reading programme can be defined as a combined reading method due to the fact that both the phonological and the whole language approaches are included in the programme. After the compilation of the cognitive reading programme, an empirical study was done.

6.4.2. EMPIRICAL INVESTIGATION

In chapters 5 and 6 an empirical quantitative study was conducted. The empirical study was conducted with 20 Grade 1 learners who were average overall performers, but underachievers in reading. Ten Second language (i.e. IsiXosa and Sesotho) learners comprised an experimental group as indicated in chapter 5. The control group consisted of 10 home language (i.e. Afrikaans speaking) learners.

The experimental group were tested and compared with the control group. The results generally indicate better reading results for the learners who were exposed to a cognitive reading programme. All statistically significant differences were in favour of the experimental group. The experimental group reflects a pre-score mean of 14.8 and a post-evaluation score of 19.2 with an improved score of 4.4 and an improved percentage of 43.3.

The results of the control group reflect an 18.5 (mean) pre-score and post evaluation score reflects 21.5 with an improved score of 3.0. The findings of the empirical investigation suggest that learners in the experimental group outperformed the control group in contrast with the control group who received the teacher-directed reading instruction.

In the light of the insights gained from the review of literature the results of the empirical study suggest that a well-conducted cognitive reading programme (CRP) may be able to make a significant impact on reading proficiency in the Foundation Phase even when learners are of below average level. However, it should be noted that despite their impressive gains, learners in the experimental group were still reading below grade level, as indicated by their scores. Perhaps continued extensive reading would be part of the necessary elements of a cognitive programme for overcoming this deficit. From a research perspective, the two groups should, ideally, have continued the control and experimental treatments for a longer period to see if the effect remained and if the experimental group continued their progress.

6.5 GENERAL

It was my observation that the cognitive reading programme (CRP) motivated the learners to participate positively. This reading programme, according to the National Association for the Education of Young children NAEYC (Bredekamp & Copple, 1997 cited in Gordon & Browne 2000:387), is developmentally appropriate and activities are based on knowledge of normal child development within a given age span. The individual appropriateness of this programme is based on respect for the individual child, the individual rate of growth and the unique learning style. The social and cultural appropriateness provides meaningful and relevant learning experiences for the learners that are respectful of their backgrounds and their families. The experimental group who participated in this reading programme has achieved foundational integration of cognitive skills, analysing strategies, abstract thinking, creative expression, contextualised matching, pre-reading and pre- writing skills.

According to the research results, it would appear that the application of the cognitive strategy reading instruction method can improve the cognitive reading abilities of the second language Foundation Phase learner. The foundation of this reading programme content is historically rooted in John Dewey's vision that schools must prepare learners to think critically and reason and promote critical thinking in order to participate in a democratic society and to secure the ends of economic stability (Dewey 1915:34).

This reading programme can be applied in differentiated groups and has the ability to be a valuable asset in foundational practice.

6.4.3. LIMITATIONS OF THE STUDY

The findings of this study should be interpreted in the light of its limitations. One limitation is that most action research is restricted to one or two classrooms or a school, which means that the results cannot be generalised to other classrooms or schools. Another drawback of this study was related to the measure of reading comprehension. As Sousa (2007:15) points out, every type of reading measure has its own strengths and weaknesses. To comprehend the learner must know what the words in that lexicon mean and be able to decode with reasonable fluency.

The adoption of multiple reading measures in investigating the effects of reading models is necessary to provide a multidimensional picture. Therefore, a wider range of assessment methods would be valuable to investigate the effects of the cognitive reading programme on English second language learners' reading proficiency. In addition, this study was bound to a particular context and the research sample was not representative; however, it was believed that this study could provide valuable insights to those who are interested in adopting a cognitive reading programme (CRP) in other similar classroom settings.

6.5. RECOMMENDATIONS

The sample used in this investigation consisted of 20 subjects taken from second language and home language classes of the school consisting of a variety of learners including mother-tongue learners and non-mother tongue learners This research shed some light on the impact of a cognitive reading programme (CRP) on English second language learners.

6.5.1. COGNITIVE STRATEGY INSTRUCTION READING METHOD

Cognitive-assisted method instruction has a positive influence on learners' reading proficiency. This research project validates the effect that cognitive-assisted reading method

instruction has on second language first graders' reading development during a crucial time when they are learning to read.

6.5.2. DEVELOPMENTAL READING LEVEL

To improve upon this study, a concentrated effort should be made to determine the developmental reading level of each learner. Learners could then receive more individualised instruction at their appropriate reading level.

6.5.3. INDEPENDENT LEARNING

Additionally, educators and researchers need to move learners from dependent direct instruction to more independent learning. A natural follow-up to this study could be to see if the move to independent learning is facilitated by stimulation and exploring of cognitive processes in second language acquisition.

6.5.4. LONGITUDINAL NATURE OF COGNITVE READING INSTRUCTION

Thus, it is important for English second language educators to recognise the longitudinal nature of cognitive reading instruction. Training learners to become cognitively strategic is a long-term process. It takes long-term efforts and practices for English second language learners to fully develop their strategic reading abilities. The effect is especially strong when such programmes are allowed to last for one year or longer. Learners' effective use of reading strategies requires educators' thoughtful planning to help them reconceptualise the nature of the reading process and raise their awareness of the necessity for a shift in reading behaviours. Developing learners' cognitive reading is not simply a matter of introducing them to a number of reading strategies. Mastery of the cognitive strategies should be promoted not only at the beginning but also through the whole implementation of cognitive strategy instruction.

6.5.5. COMBINED LITERACY CONSTRUCT METHODS

Educators should be able to modify or combine methods appropriately and systematically and utilise different methods in order to meet individual's changing needs. Selecting the

appropriate programme to apply to the learner is not a simple matter and requires a careful assessment of where the learner is in the developmental process (Learning Disabilities Association of America (LDA) News briefs Education Committee 1998:2)

The Department of Education (2010:11) recommends the following combined approaches, which can assist educators with the teaching of reading:

- The phonics approach – based on teaching learners to use sounds to decode words
- The "whole word" or "look and say" approach based on the principle of recognising an individual word 'on sight' through the use of continued repetition of a word. Words that appear frequently in text (high frequency words) (cf. addendum 4) can be learnt in this way. English, unlike many other languages, contains a large percentage of irregular words, that is, words that are not spelt as they sound.

6.5.6. EXPLORING OTHER APPROACHES TO ENHANCE LEARNERS' READING ABILITY

There are many other possible approaches that, if used wisely in the Foundation Phase can enhance learners' reading ability to read and establish creativity. These approaches include:

- The language experience approach
- The sentence approach
- The story approach
- The psycholinguistic approach

6.5.7. ECLECTIC APPROACH

The Department of Education (2010:11) maintains that using an eclectic approach means that you choose a variety of approaches that complement one another. This approach will cater for the needs of all second language learners during group and guided reading time. Therefore, educators can possibly teach learners other word attack skills such as:

- Reading to the end of the sentence;
- Rereading the sentence;
- Using the picture.

6.5.8. RESEARCH EXTENSION OF POPULATION

Another obvious possibility for future research is to extend the sample to include all first grade entrants at the school. Widening the research to all the schools and possibly to the district schools could also further extend the population.

6.5.9. MEASURING COGNITIVE VARIABLES

Another possibility for future research would be to find or devise some way of measuring other cognitive variables that would be appear to be important from the literature study but which were not measured in this particular investigation, namely reading diagnostic assessment, mother tongue instruction, inclusive education reading abilities and reading intervention instruction and strategies.

6.5.10. PRIMER: FUTURE CONSIDERATION

This study could provide valuable insights to those who are interested in adopting a cognitive reading method in other similar settings. Thus, this study could serve as a step-by-step primer for future consideration.

6.5.11. PREVIOUS FINDINGS

Some of the findings in this investigation might concur with previous findings. All research, whether the findings agree with or differ from previous findings, contribute to our knowledge so that we may understand all aspects of second language learning as fully as possible and thus be in the best position to give effective help and guidance to the second language learner in totality. In addition, this study was bound to a particular context and the research sample was not representative. However, it was believed that this study could provide valuable insights to those who are interested in adopting a cognitive reading programme (CRP) in other similar classroom settings.

6.6. CONCLUSION

Learners who are not currently skilled, enthusiastic readers face unnecessary and serious obstacles to realising their potential contributions to themselves, their families, and to society

in general. In this information age, they will be shut off from the power gained through obtaining and providing information and from the splendour and inspiration of good fiction. The overlapping nature of language disabilities occurring in the relevant literature, as well as in the empirical investigation, suggests a need for an integrated holistic cognitive strategy instruction approach to the intervention in learners diagnosed as having problems in the second language field. Therefore, educators need to create and implement programmes to help learners who fall behind in reading. The accumulated wisdom embodied in the current study and the many, which came before it strongly suggests that a cognitive reading programme can play an important role in helping learners gain in their level of reading skill. Reading skills and the benefits that flow from them are essential if learners are to become adults who, to paraphrase Friere (1970 cited in Lituanas, Jacobs and Renandya, 1999: 89–104), use the word to know and change the world.

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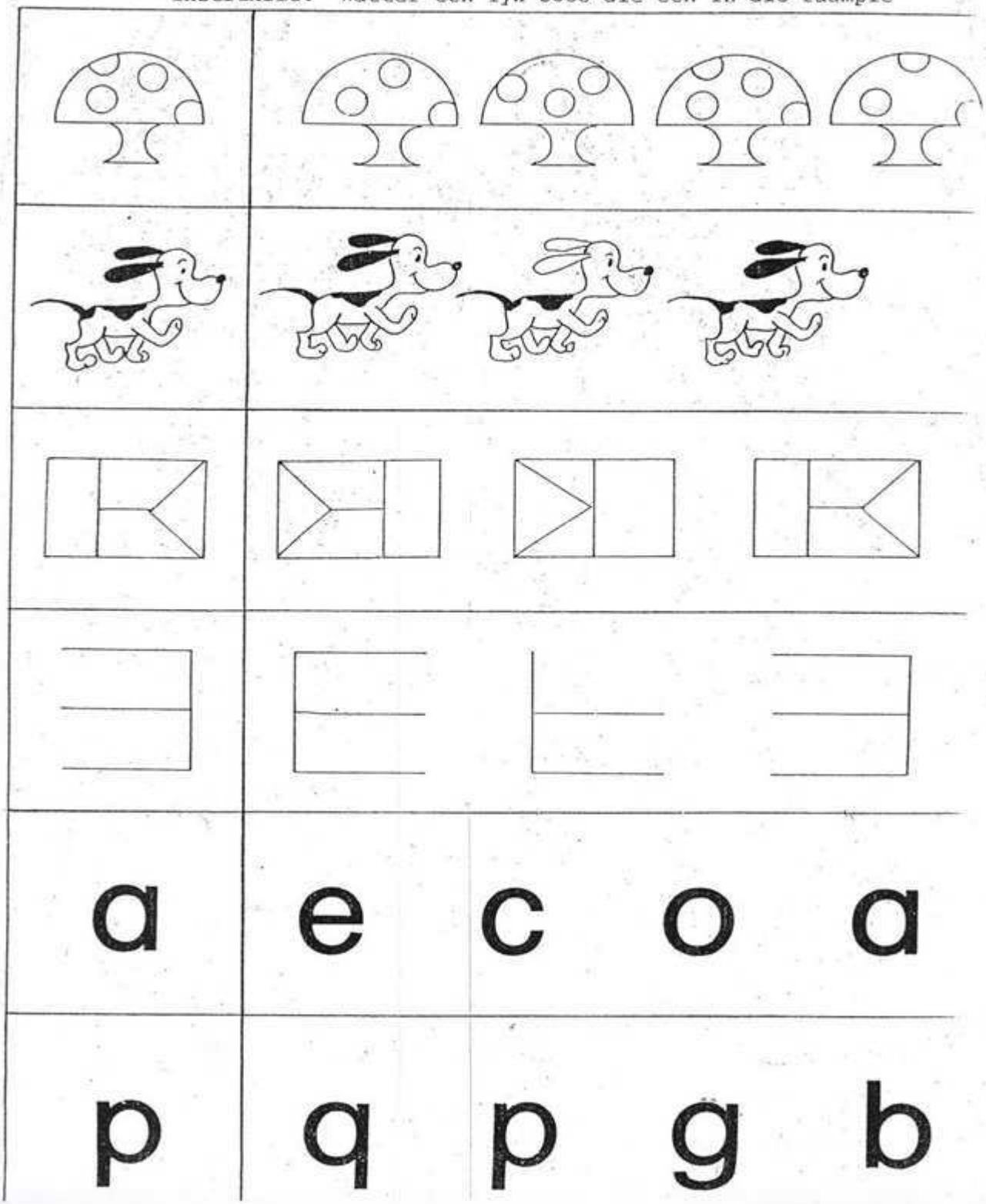
Annexure

Annexure	**1**	Form A	Individual Diagnostic Test
		Form B	Reading Skill Tool
Annexure	**2**	Cognitive Reading Programme (CRP**)**	
Annexure	**3**	Cognitive Reading: Daily Lesson Plan Structure	
Annexure	**4**	Cognitive Phonics Plan: Yearly Structure	
Annexure	**5**	High Frequency words	
Annexure	**6**	Letter of Consent	
Annexure	**7**	Parental Consent	

1.1 Visuele Persepsie

1.1.1 Visuele Diskriminasie

Instruksie: Watter een lyk soos die een in die raampie



1.1 Visuele Persepsie

1.1.1 Visuele Diskriminasie

Instruksie: Soek almal wat lyk soos die eerste een in die ry. (Nie benoeming)

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a	o	d	g	a	d	a
f	t	j	f	g	k	f
ou	oe	uo	ou	eu		
eu	qu	ue	iu	eu		
ie	ie	ei	ie	ui		
oe	ou	eo	ue	oe		
rm	nm	rn	rm	rm		

1.1 Visuele Persepsie

1.1.1 Visuele Diskriminasie

Instruksie: Watter twee lyk dieselfde

tf	ft	t ł	tf	ff
ie	io	ei	ie	oi
die	dei	bie	dei	eid
suen	neun	neus	neus	

Die perd	Die perb
Dei perd	Die perd

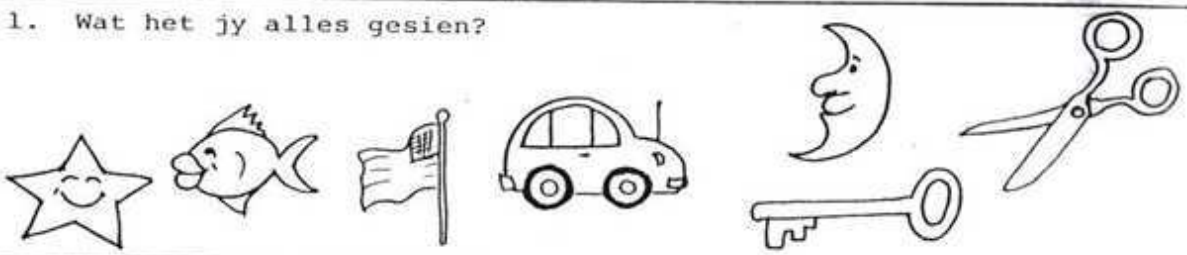
Die	man	was	siek
Die	man	was	seik
Die	nam	was	siek
Die	man	was	siek

1.1 **Visuele Persepsie**

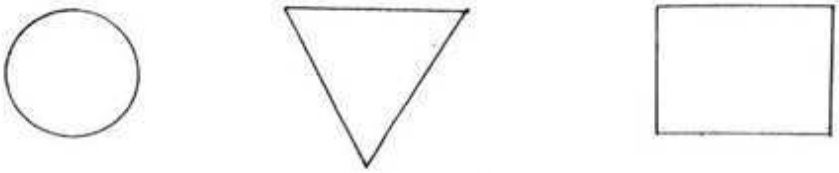
1.1.2 Geheue en Volgorde-geheue

Instruksie: Kyk na die prentjies bv 1,2 en 3. Bedek na 30 sekondes. (Sê of skryf die antwoord)

1. Wat het jy alles gesien?



2. Wat was eerste? laaste? tweede? (Vanaf linkerkant is eerste)



3. Wat was eerste? tweede? laaste?

d e a

4. Maak 'n flitskaart van elk van die volgende simbole. Flits dit vir een sekonde. Die leerling moet dieselfde een uitwys uit die reeks voor hom.

o f g t n

5. Maak 'n flitskaart van elk van die volgende woorde. Flits dit vir 2 sekondes. Die leerling moet dieselfde woord uitwys uit die reeks voor hom.

Sub. A - St. 1	man	bed	daar	dam
St. 2 - St. 5	daarom	bedaar	brood	draad

6. Skryf die volgende reekse op flitskaarte. Flits vir 5 sekondes. Die leerling skryf of sê dit in die regte volgorde.

a 3 5 t pen mes appel loop

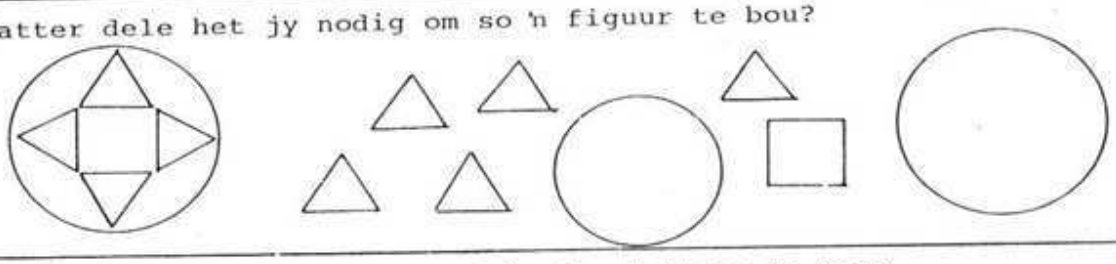
7 9 3 2 5 8 6 1 9 2 7 4 9 5 1

1.1 **Visuele Persepsie**

1.1.3 Analise en Sintese

Instruksie: Vind die dele van die geheel

1. Watter dele het jy nodig om so 'n figuur te bou?



2. Watter dele het jy nodig om hierdie letters te bou?

R r

3. Watter letters het jy nodig om hierdie woord te bou?

baie

d a o i e b

4. Watter letters het jy nodig om hierdie woord te bou? (Vir groter leerlinge).

nuuskierig

k e c n t g s a u i u r i

5. Watter dele het jy nodig om die woord te bou?

kinder-boek

doek kin lik der ber boek

6. Verdeel die volgende woorde in lettergrepe. (Wys die woorde aan die leerling).

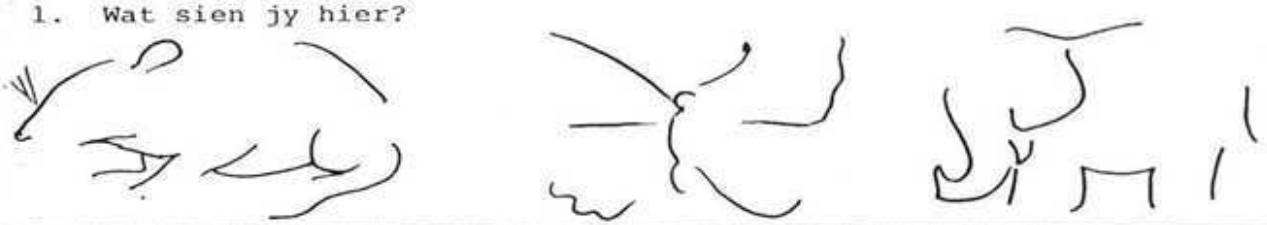
tafeldoek
boeketas
waterskilpad
dennebome
blommetjie
dadelik

1.1 **Visuele Persepsie**

1.1.5 Sluiting

Instruksie: Kyk of jy kan sien wat dit is.

1. Wat sien jy hier?



2. Watter letters kruip hier weg?

3. Herken jy hierdie letters?

4. Voltooi die woorde:

p – pp –	b -- m
t – f – l	dr -- d

5. Voltooi die woorde:

kl ------	----- nk	---- tjie
tr ------	----- nd	---- ng
str ------	----- ste	---- like

6. Voltooi:

Di – m – n met die g – weer is in die w -- rm – g.

My ---rs sorg vir my k – s en kl – re.

By alle ouditiewe toetse moet die leerling slegs op die ouditiewe stimulus reageer en nie bv. die toets-afnemer se mond sien nie.

Indien die leerling probleme ondervind in 'n sekere area bv. ouditiewe geheue, vind uit of hy/sy beter vaar wanneer die stimulus gelyktydig ook visueel waargeneem word.

Kontroleer hierdie bevindings en maak 'n aantekening daarvan.

1.2 OUDITIEWE PERSEPSIE

1.2.1 Ouditiewe diskriminasie

1.2.1.1 Kort en lang klinkerklanke.

Instruksie:

Hoor jy 'n kort of 'n lang klankie in die woord?

bv. som - kort

soom - lank

bus - kort

vuur - lank

jas	klaas
roos	hond
tent	steel
skuur	sug

L.W. Luister mooi na die klinker. Hoor jy 'n lang of 'n kort klank?

blomme

bome

rakke

skape

skepe

rekkie

vure

busse

1.2.1.2 Ouditiewe diskriminasie

Fyn verskille in woorde

Instruksie:

Klink hierdie twee woorde presies eenders of anders?

teen - tien;	mak - man;	rooi - mooi
oor - oor;	neus - seun;	goed - goed
hoop - loop;	beur - beer;	bed - met

1.2 Ouditiewe Persepsie

1.2.1 Geheue

Instruksie: Luister mooi en herhaal dit wat jy hoor in dieselfde volgorde.

1.2.1.1 Ritme: (Tik 'n reeks onder die tafel of gebruik 'n mondfluitjie).

____ . .

____ . ____

. . ____ ____

. ____ . .

____ ____ . ____ ____

1.2.2.2 Klanke (Klankname vir Sub A en B)

t;	k;
s, p;	t, p;
y, m, o;	n, s, g;
l, f, k, a;	e, m, w, i, t, s

1.2.2.3 Syferreekse

7, 2;
1, 8, 3;
9, 2, 5, 6;
7, 2, 5, 4, 8;
1, 6, 9, 4, 2, 8

1.2.2.4 Woorde:

rol, skaap
vas, staan, boek
sand, tuin, gordyn, pot
papier, skêr, potlood, winkel

1.2.2.5 Sinne

6 jaar (8 lettergrepe)

(a) Sy maak vir haar 'n koppie tee.
(b) Wanneer kom Ouma weer kuier?

7 jaar (10 lettergrepe)

(a) My pa het so pas 'n motor gekoop.

(b) Oom Gert boer met beeste in die Transvaal.

8 jaar (12 lettergrepe)

(a) Ouma Sannie brei 'n lieflike poprokkie.

(b) Juffrou wil hê ek moet met 'n skerp potlood skryf.

9 jaar (14 lettergrepe)

(a) Mamma het vir ons 'n baie mooi storie-tjie vertel.

(b) Die vangwa hou voor die winkel stil en laai die dief op.

10 jaar (16 lettergrepe)

(a) Jy moet jou oë laat toets by die oog-arts in die groot gebou.

(b) Jan jaag die skape in die kraal en vang die vet ooi om te slag.

11 jaar (18 lettergrepe)

(a) 'n Swart mamba se gif kan jou binne twintig minute laat doodgaan.

(b) Rina bewe van kop tot tone toe sy die deur agter haar toetrek.

12 jaar (20 lettergrepe)

(a) Jy moet asseblief nie weer dorp toe gaan sonder jou ouers se toestemming nie.

(b) Die klein kindertjies geniet dit om elke middag in die speelparke te speel.

13 jaar (22 lettergrepe)

(a) Terwyl jy vanoggend geswoeg het om die motor aan die gang te kry, het ek gestap.

(b) Die skoolhoof het onlangs besluit dat die leerlinge voortaan nuwe skooldrag sal dra.

1.2 **Ouditiewe Persepsie**

1.2.3 Analise en Sintese

1.2.3.1.1 Klanke (Sintese)

Instruksie: Gebruik die klanke wat jy hoor om 'n woord mee te maak.

bv. M - a - t = mat

(Klank vir Sub. A en B)

l - a - g

n - e - k

l - ee - s

r - oe - p

sk - oo - l

m - e - ns

str - aa - t

m - a - k - l - i - k

1.2.3.1.2 Klanke (Analise)

Instruksie: Breek die woorde op in klanke (Ouer leerlinge spel dit met alfabetname)

bv. speel = sp - ee - l (of "es-pe-ee-ee-el")

baba

pappa

trop

steen

groet

motor

dadelik

juffrou

1.2.3.2.1 Woorde (analise)

Instruksie: Sê die volgende woorde in letter-grepe (Tik-vee dit op die tafel terwyl jy dit sê)

bv. Verjaarsdag: . ____ .

hoender	meneer
potlood	boodskap
hennetjie	kleuterskool
bobbejaan	inkleurboek

reddingsgordel rekenkunde
koperbeker betekenis

1.2.3.2.2 Woorde (sintese)

Instruksie: Gebruik die woorddele wat jy hoor om woorde mee te maak). (Toetsafnemer sê die lettergreep stadig en afgemete).

bv. vrien-de-lik - vriendelik

klok-kie ha-mer
le-pel spy-ker

mi-kro-skoop pa-pier-sak
aan-me-kaar ta-fel-tjie

bob-be-ja-ne tuin-ge-reed-skap
sok-ker-bal-le mo-tor-sleu-tels

1.2 Ouditiewe Persepsie

1.2.4 Sluiting

1.2.4.1 Reekse

Instruksie: Luister na die reeks en voltooi wat weggelaat is.

....3, 4, 6, 7, 8 .....
....17, 19, 20, 21, 23, 24 .....

....d, f, g, h, i, ...
....m, o, p, r, s, t, ...

1.2.4.2 Woorde

Instruksie: Luister na die sin en voltooi die woord wat onvoltooi is.

'n --likopter vlieg laag oor die berg.

Mamma sny tama--- in die slaai.

Ek hou van wis---de in die skool.

Ek koop 'n seël by die pos---toor.

1.2.4.3 Sinne

Instruksie: Luister na die sin en voltooi wat weggelaat is.

Sy vang die ------ en gooi dit weer.

Ek ------ ek kon gister see toe gaan.

Dit kos ----- om met 'n vliegtuig te reis.

Die predikant ---- oor liefde vir jou naaste.

2.1.3 Simboolherkenning vir groter leerlinge.

Instruksie: Soek die <u>syfers</u> uit.

6 v m 4 s 8 t
3 9 b c 5

Instruksie: Soek die <u>letters</u> uit en benoem dit.

g 2 h i 9 7 a
e p 5 w k n 8
c t 9 b 6 d 1 3

Instruksie: Lees net die kleinletters.

M t 9 V s 4 3
G n 2 g 7 T 8 a

Instruksie: Lees net die hoofletters.

T 3 m g A 2 b D
4 b 5 6 E

2.1.4 Klanksamevoegings

2.1.4.1 Vokale (klinkers)

Instruksie: Lees vir my die klankies of sê dit in 'n woordjie.

Dubbele vokale:

aa	ee
oo	uu

Tweeklinkerklanke:

oe	eu	ou
ui	ie	ei

Drieklinkerklanke

eeu	ooi
oei	aai

2.1.4 Klanksamevoegings

2.1.4.2 Konsonante

Instruksie: Lees vir my die klankies of sê dit in 'n woordjie.

Aanvangsklanke

Voorbeelde: br(oord) dr(a)
sp(eel)

vr-	be-
kn-	ge-
pl-	str-
gr-	spr-
st-	skr-

Woordeindes:

Voorbeelde: (he)ld (ha)nd
(pe)rd

-rk	-ls	-rm
-ks	-rg	-lm
-mp	-ng	-rf

2.2 **Woordherkenning (sigwoorde)**

(Sien ook by elke standerd 'n lys van gegradeerde sigwoorde)

Instruksie: Lees die woordjies van links na regs.

Drieletter-sigwoorde

dit	was	het	dat
een	van	tot	met
sal	jou	kan	kom
vyf	man	vis	tot
aan	sal	ook	nie

Vierletter-sigwoorde

soos	teen	doen
wees	maar	neem
self	hier	baie
mooi	woon	loop
waar	huis	moet

3. LEES EN SPELLING

Gegradeerde leesstukkies vir voorlees,
en luidlees,spelwoorde en dikteer

Voorbeelde van die mees algemene leesfoute

Woord-vir-woord lees

Foutiewe of geen intonasie en frasering

Weglatings

Herhalings

Invoegings

Plaasvervangende woorde

Gebrekkige sigwoordeskat

Swak woordontleding (struktuuranalise)

Gebruik geen konteks-wenke

Swak begrip
- voorlees
- stillees
- luidlees

Swak herroeping van fyner detail

Stadige tempo

Subvokalisering

Leesspoed pas nie aan by leesvlak

Uitspraakfoute

Swak aanpaktegnieke

Verontagsaming van leestekens

Beweeg die kop

Slaan reëls oor

Voorbeelde van die mees algemene spelfoute

Klankverwarrings. (f, v; d, t)

Oop en geslote lettergrepe

Uitspraakfoute

Woordeindes

Omkerings (inversies, reversies, rotasies)

Homofone

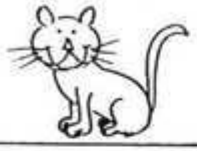
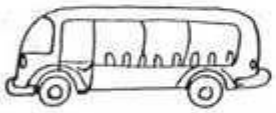
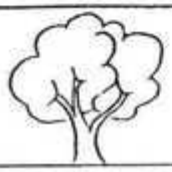
Fonetiese spelling

Kappie, deelteken, koppelteken

Nalatige foute

Woordherkenning

Instruksie: Watter woord pas die beste by die prentjie.

	kaf	kat	
	nos	som	son
	bis	bus	dus
	naam	maan	meen
	paar	peer	reep
	doom	boom	boon

ECD452-R/101

Foundation Phase Grades 1 – 3

Name: …….

Grade: ……

Reading Skill	Yes	No
1. Phonetics awareness		
2. Segmenting		
3. Blending		
4. Alphabetical principle		
5. Letter- sound correspondence		
6. Irregular verbs		
7. Spelling		
8. Reading fluency		
9. Reading comprehension		
10.Story grammar		
11. Integrated reading and writing		
12. Skills covered orally		

General remarks:

……
……
……
……
……
……
……
……

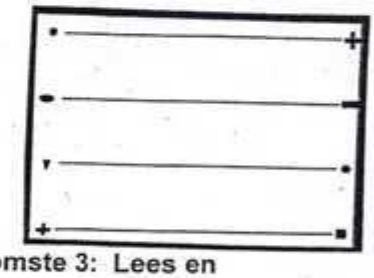
Hou deurentyd die volgende in gedagte:

ELKE kind is uniek en leer op sy eie manier en volgens sy eie tempo.

Wees dus groot verskille te wagte by die onderrig van lees.

ELKE leerder moet volgens sy eie leesgereedheidsvlak en tempo kan voortgaan.

Die kind se vordering hang ten nouste saam met die onderwyseres se
-simpatieke houding
-vindingrykheid
-leesmateriaal
-verskeidenheid
tegnieke wat aangewend word.

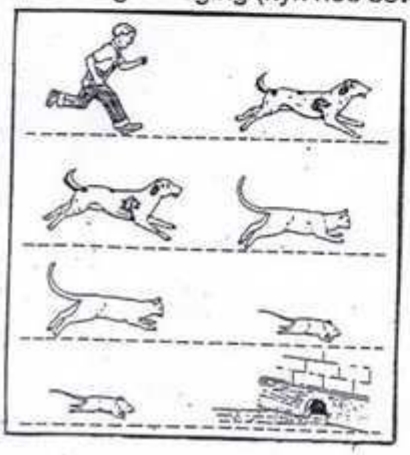


SUBFASE 1:

LEESGEREEDMAKING
Hierdie lees vorm deel van die aanvangsonderrigprogram
Elke les behoort met die volgende oefeninge te begin.

1. **Ontwikkeling van oogbeweging van links na regs: Leeruitkomste 3: Lees en kyk**

Oogbeweging (kyk hoe beweeg hulle)

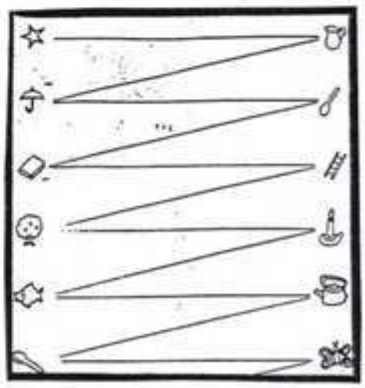


Die seun jaag die hond.

Die hond jaag die kat

Die kat jaag die muis

Die muis hardloop na sy huis



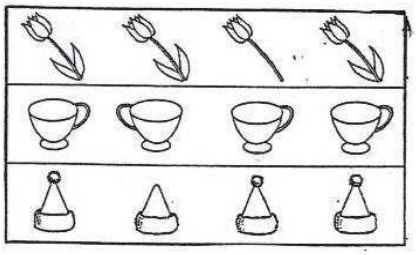
2. Laat leerders 'n potlood se punt volg met hul oë, wat op horisontale vlak van links na regs beweeg word. Ook in sirkelbewegings. (hou kop stil)
3. Leerders fokus op 'n voorwerp op die bord. Draai die kop sover moontlik na weerskante terwyl oë gefokus bly op die voorwerp.
4. Volg 'n tennisbal met die oë terwyl die leerder op sy rug lê en die bal bokant sy oë geswaai word.
5. Oë volg 'n flitslig wat horisontaal/vertikaal/diagonaal en sirkelvormig beweeg word terwyl die kop stil gehou word.
6. Pak prente in rye en laat leerders die prente "lees" van links na regs en weer terug na die beginpunt.

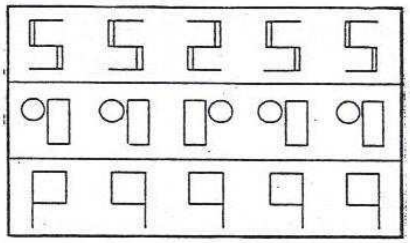
2 **Visuele Diskriminasie**

Om die kind oplettend te maak om die verskil in prente – later in woorde en letters – gou raak te sien

Leeruitkoms 5: dink en redeneer **AS 5.2:** Identifiseer ooreenkomste en verskille deur gepaste taal te gebruik

Verskil in prente en figure (wat is anders en wat is eenders)





Verskil in letters. (wat is anders en wat is eenders)

d	d	d	b	d
e	e	e	e	e
r	r	r	r	ɾ
s	s	ƨ	s	s

a	a	ɒ	a	a
n	u	n	n	n
g	g	a	g	g
t	t	t	ɟ	t

Daar word nie van die leerlinge verwag om in hierdie stadium die klanke of letternaam te ken nie.

Soek almal wat dieselfde lyk.

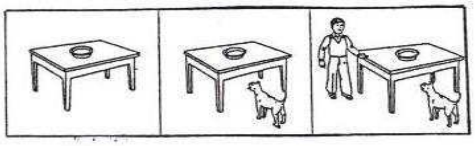
o	e	o	o	c	e	o	a
ad	da	pa	ad	ab	ad		
n	m	n	h	m	n	h	n
sc	sc	cs	ƨc	sc	cs		

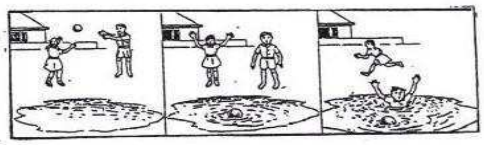
Verskil en ooreenkomste in woorde. (wat is dieselfde) Leerders hoef nie in die stadium die woorde te lees nie

die	dei	die	pei	die
en	eu	en	eu	en
pos	dos	pos	poz	pos
sit	sit	sij	sit	fis

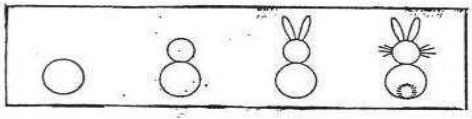
loop	loop	looq	lood	loop
was	mas	was	saw	was
bal	bal	dal	bal	pal
ek	ek	ėk	ek	eƙ

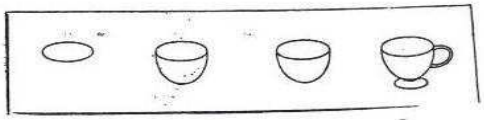
Om die verbeelding te stimuleer deur die interpretasie van prente, en om die kind te leer om afleidings te maak en 'n geskikte einde vir die storie te probeer vind.
Interpretasie en afleiding (Wat gaan nou gebeur?)





Om noukeurige waarneming aan te moedig van lyn en vorm in die ontwikkeling van prente en later van woorde.
Lyn en vorm (Kyk hoe groei hulle)

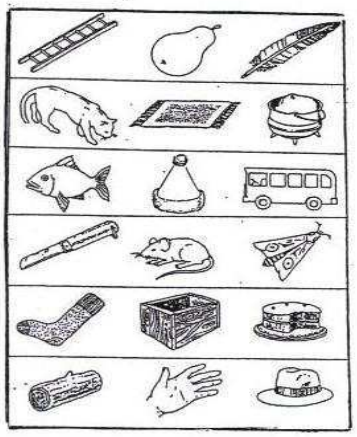




3. **Ouditiewe diskriminasie**

Leeruitkoms 1: Luister
AS 1.6: Ontwikkel klankbewustheid: Onderskei tussen klanke, veral aan die begin en einde van woorde

Die ontwikkeling van koördinasie tussen gehoor en spraak deur die herkenning van rymende woorde, en om eenders end- of beginklanke uit te ken.
Gehoor- en spraakkoördinasie (kyk,sê en luister)



Leer, peer, veer (eindig almal op **r**)

Kat, mat, pot (eindig almal op **t**)

Vis, mus, bus (eindig almal op **s**)

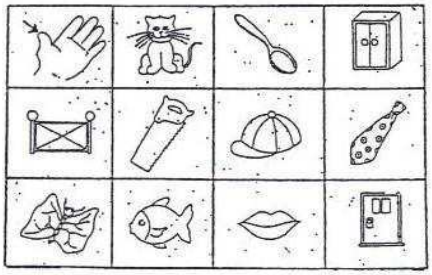
Mes, muis, mot (begin almal met **m**)

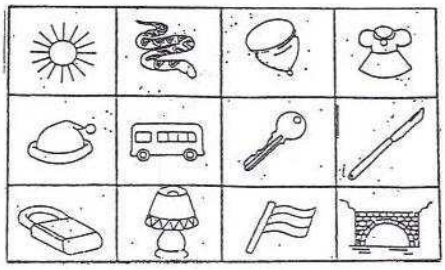
Kous, kas, koek (begin almal met **k**)

Hout, hand, hoed (begin almal met **h**)

*Wenk: Eers wanneer 'n leerder die begin en eindklank goed kan onderskei, word die middelste klank aangespreek.

Gee opdragte soos volg:
Sit 'n teller op 'n woord wat met 'n **m** begin. 'n Woord wat op 'n **s** begin. 'n Woord wat op 'n **s** eindig. Watter woord het 'n **a** in die middel?
(Die leerders hoef nog nie die klanke te ken nie. U maak net op hulle ouditiewe (gehoor) onderskeiding staat. Later herhaal u die oefening soos hulle die klanke aanleer, dan kan hulle sommer die klank ook skryf. Later ook die woord)





4. **Ouditiewe analise en sintese**

Leeruitkoms 3: Lees en kyk
AS 3.5: Ontwikkel klankbewustheid: Verstaan die letter-klank-verhouding van die meeste enkelkonsonante en kort vokale in woorde soos "mat", "bal"

'n Leerder sal nie gereed wees vir die volgende oefening as sy ouditiewe onderskeiding van begin- middel-en-eindklanke nie goed ontwikkel is nie.
U gebruik weer prente soos hierbo en vra die volgende:
Sit 'n teller op die volgende prent: U klank nou die woord bv. " **k..a..t...**"
Die kind moet die klanke self saamvoeg en " **kat**" vorm en die teller dan op die prent van **"kat"** sit. U doen baie soortgelyke oefeninge.

Later wys u net die prent en die kind moet weer die woord vir u in klanke opbreek. U wys bv. die prent van die son en die kind breek die woord in klanke **"s..o..n.."** Albei hierdie oefeninge word slegs op gehoor gedoen. Soos u leerders hulle klanke aanleer, kan u hulle dit laat uitpak met letterkaartjies bv.
Pak vir my die woord "s..o..n.." Leerder pak s o n

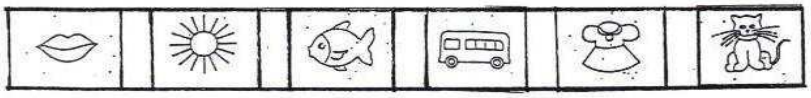
Leeruitkoms 4: Skryf
AS 4.5: Skryf sodat ander kan verstaan: Gebruik letters om enkele woorde te vorm
Leerders kan ook die woorde op hulle leie skryf wanneer hulle gereed is en die aangeleerde letters korrek kan vorm en skryf.

son
vis
mes

5. **Ouditiewe geheue**

Leeruitkoms 1: Luister
AS 1.1: Luister aandagtig na instruksies en reageer op 'n gepaste manier.

Gee aan elke leerder ses prente.



* U gee nou opdragte bv. Pak vir my 3 prente. 'n Vis, son en rok.
Die leerders soek nou die prente en pak dit in die volgorde.
* Vra nou vrae bv. Met watter klank begin/eindig jou eerste prent? Sit jou vinger op die prent wat met 'n **s** begin. Watter prent se middelste klank is 'n **o**? s**o**n Soos hulle dit bemeester kan u die prente meer maak.
* U kan dieselfde doen met bv. unifix blokkies, deur 3 of 4 kleure te sê. Die leerders pak dan hulle blokkies dieselfde

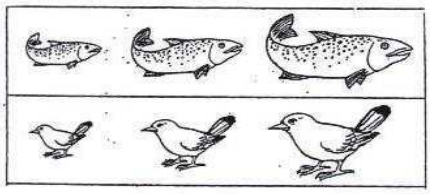
Visuele geheue/volgorde
U pak nou 3 prente/kleure/voorwerpe op die bord. Die leerder kyk vir ongeveer 3 sekondes daarna. Maak dit toe.Leerders pak die korrekte volgorde.
Sodra hulle dit bemeester het, maak u die prente meer.

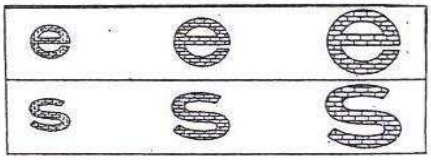
6. **Vormkonstantheid**

Leeruitkoms 5: Dink en redeneer
AS 5.1: Gebruik taal om konsepte te ontwikkel: Toon ontwikkelende kennis van begrippe van hoeveelheid, grootte, vorm, rigting, kleur, spoed, tyd, ouderdom, volgorde.

Herkenning van eenderste prente en woorde, afgesien van die grootte van die druk

Vormkonstantheid (klein, groter, grootste)

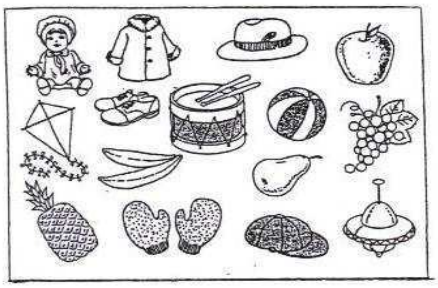


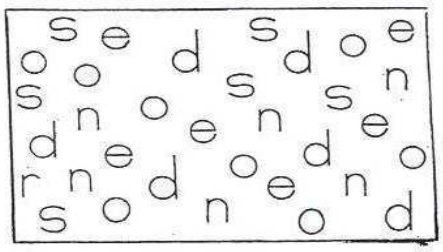


Opdragte: Watter vis is eerste, laaste,die kleinste,grootste?Watter rigting wys vis,voël?

Oefening in die uitken van soortgelyke voorwerpe en later van soortgelyke letters en woorde.

Klassifisering volgens soort (watter pas /pas nie bymekaar?)





Annexure 3 exemplar of one day's cognitive literacy lessonplan:

An example of a **cognitive** lesson – plan, showing how different language components can integrate with each other Department of Education (2010:126).

STEP 1:

Starting the day with learners sitting on the carpet

- Take the register, change the day, month and weather charts, check for birthdays.
- Talk about special happenings or days.
- Listen to a few learners tell news, targeting 1 or 2 specific learners for assessment purposes.
- Write either the class or one learner's news on the board.

STEP 2

Share Reading linked to Phonics

Pre- reading

- Tell learners that you have a new book to read to them today. *(e.g. My School)*
- Show them the cover with two learners walking to school.
- Ask them questions such as: *"Where do you think the two learners are going?" "Who is the older girl leading the younger one by the hand?" "What do you think is in the cases they are carrying?"*
- Explain that they are going to learn a new sound today, *"s"*, and draw the letter on the board. As you read the story they must listen for any words that begin with this letter.

During reading

- Read the story emphasizing the *"s"* words.
- Stop two or three times to ask questions

STEP 5

After reading

- Ask learners to tell you words from the story beginning with *"s"*. They might give you for example: *school, sister, sandwiches, soon, socks, and snake*. Write these words on the board, putting *"s"* in colour.
- Then ask them if they know any other words beginning with *"s"*. List these on the board as well. Read them with the learners, emphasizing *"s"*.
- Draw a very large *"s"* on the board, making it look like a large, upright snake. Talk about the letter name and then the sound it makes (like a snake spitting). They can pretend to be a snake that stands up straight and spits *"s"*. (They'll enjoy that!)
- Tell them that they must draw a similar snake and copy 3- 4 *"s"* words along the snake's body. Show them how to do it. This will be **Task 1 for Writing.**

STEP 6:

Handwriting

- Teach the formation of the letter *"s"* explaining where it starts (at the snake's head), the direction of movement, where it finishes (with the snake's tail pointing up), how the snake stand straight **on** the line (if you are using lined books). Emphasize the tight curl of the snake, like going around a tight bend in a road.

- Learners first practice by writing by writing the letter with their finger in the air, on their desks and on their partner's back
- Write on the board what learners have to copy for Handwriting – the day/ date, 2 rows of the letter, a pattern (e.g. a row of *"s"* adding the snake's head and tongue) and finally their name.
- Learners copy this into their books, using writing strips if possible. Walk around to check that learners are beginning in the right place in the book, holding the pencil and forming the letter correctly, spacing the letters etc.

STEP 3

Writing

- Show learners the front page of the story book again. Ask them *"How do you go to school- on foot, by car or by taxi?"* Write their responses on the board: *"I go on foot." "I go by taxi."* For **Task 2 for Writing** the learners copy one of the sentences and draw a picture of how they go to school.

STEP 4

Group Reading

- Once learners are busy doing the two written tasks, call a reading group to come and work with you and the carpet.
- Begin by revising words on flashcards and teaching a new word. Show it first in a sentence and the separately (on different sides of a flashcard.) Talk about the letters in the word, what it means and ask them to give you a sentence using the word.
- Tell learners to turn to a page in their reading book. Ask them if they can point to any words beginning, and then ending with *"s"*.
- Ask them if they remember what happened in the story so far and possibly read the last paragraph they read before. Then read a paragraph or two together with the learners, modeling how to read and stopping at the full stops. Point out new words and ask questions to check comprehension and link to their own experiences.
- Let different learners read one or two sentences from the same paragraph and finish by everyone reading it again.
- Call the second group to the carpet, checking at the same time that the rest of the class are getting on with their work
- Work with the second reading group in the same way as you did with first group. When you have finished with the groups check again on learner's progress and give help where necessary. Learners who have completed the two tasks can either do a third task or can read in pairs.

STEP 7

End of the day: Listening to a story

- Finish the day (or your Literacy time) by reading or telling a short story or part of a longer story to learners.

Reflection

- Learners have:
- Spoken (telling news/ responding to questions,)
- Listened (to stories and phonic sounds)
- Practiced handwriting
- Read (words on the board, on flashcards, in books)
- Written (words for phonics/ drawing and copying a sentence)
- Enjoyed their learning

ANNEXURE 2: EXAMPLE OF A PHONICS PLAN FOR GRADE 1

	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10
TERM 1	Auditory discrimination/ phonetic awareness		**Teaching of remaining single sounds**							
			Teach: **c, a**	Teach: **d, s**	Teach: **i, r**	Teach: **n, m**	Teach: **t, l**	Teach: **b, o**	Teach: **h, e**	Teach: **u**
TERM 2	**Teaching of remaining single sounds together with 3- letter blends**									
	Teach: **p** Revise: **c, o** Blends: _op	Teach: **g** Revise: **s, a** Blends: **ca_,ga_, _ap**	Teach: **f** Revise: **d, t** Blends: **_ot, _ad, _od**	Teach: **y** Revise: **l, r** Blends: **_it, _id, _ip**	Teach: **w** Revise: **e, l** Blends: **_et, _eg, _ed**	Teach: **k** Revise: **n, m** Blends: **_an, _en, ra_, sa_**	Teach: **u** Revise: **h, b** Blends: **bu_, cu_, gu_, mu_, ru_, su_**	Teach: **v & j** Blends: **ja_, jo_ and blends with o and a**	Teach: **x, q** Blends: **_ox, _ax, fl_, bi_**	Teach: **z** Blends: **i, e, u**
TERM 3	**Teaching of consonant blends at the beginning and ending of simple words***									
	Revise 2 single sounds per day + **st** at the beginning of a word	Revise 2 single sounds per day + **st** at the end of a word	Revise 2 single sounds per day + **_ss, _ll**	**_ff, -ack, _eck**	**_ick, _ock, _uck**	**_ng** blends: **_ang, _ing, _ong, _ung**	**-r: br_, cr_, dr_, gr_, pr_, tr_**	**_l: cl_, fl_, gr_, pl_, sl_ + _mp**	**_nd, _nt**	**_ld, _lt, _ft**
TERM 4	**Teaching of common consonant diagraphs at the beginning and ending of simple words***					**Teaching of magic e**				
	Teach: **sh** at beginning and end of a word	Teach: **ch** at beginning and end of a word	Teach: **th** at beginning and end of a word	Teach: **wh** at beginning and end of a word	Revision	Teach **magic e** as in **a_e**	Teach **magic e** as in **i_e**	Teach **magic e** as in **o_e**	Teach **magic e** as in **u_e**	Revision

NB Although the Assessment Standards for Grade 1 mention only the building and breaking down of words <u>beginning</u> with consonant blends/ consonant diagraphs it is valuable to also include the teaching of consonant blends/ consonant diagraphs at the <u>end</u> of words in this grade. Therefore these have been included in the exemplar Plan for terms 3 and 4, in line with the Milestones.

ANNEXURE 5: 100 MOST COMMON HIGH FREQUENCY WORDS

A	B	C	D	F	G	H	I	J	L
a	back	came	day	first	get	had	I	just	like
about	be	can	did	for	go	has	if		little
after	because	come	do	from	going	have	in		look
all	been	could	down		got	he	into		
am	big					her	is		
an	but					here	it		
and	by					him			
are						his			
as									
at									

M	N	O	S	T	U	V	W	Y
made	no	of	said	that	up	very	was	you
make	not	off	saw	the			we	your
me	no	on	see	their			well	
more	now	one	she	them			went	
my		only	so	then			were	
		of	some	there			what	
		our		they			when	
		out		this			which	
		over		to			who	
				two			will	
							with	
							would	

ALHEIT van der MERWE PRIMêRE SKOOL / PRIMARY SCHOOL

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Phone/Fax: 051 -6341440

Email: avdmps @ lantic.net

Prinsipaal : C.T Roberts

To: The Circuit Manager
The Principal of Alheit Van Der Merwe Primary School
The Educator of the grade – participatory class Alheit Van der Merwe
The Vice-Chairperson of the SGB

From: Mrs. L. September

Letter of Consent

I hereby request your permission as Departmental officials to conduct an action research at our primary school. The research has been undertaken as part of my studies in Education at the University of South Africa.

The purpose of my research is to investigate reading problems experience by the grade 1 new entrants in the foundation phase, and to set up cognitive formulas for predicting success in advance of instruction.

The subjects were selected in such a way as to give as accurate a sampling as possible of the entire grade I learners at the school. The learner population is multicultural, reflecting the diverse groups at our school setting. The names of the learners will be kept strictly confidential. The researcher will have access to individual data or the names of the subjects.

Collection data procedures will be anonymously, and confidentiality is ensured by making certain that the data cannot be linked to individual subjects by name. The nature of this research will be quantitative-experimental and the subjects will be therefore linked to numbers. The parents of the learners will complete an application form for participation.

Your approval to conduct this research will be much appreciated

Yours for Education

Mrs. L. September

_____ _____

Educator Grade 1 class Vice-Chairperson SGB

_____ _____

Principal Circuit Manager

ALHEIT van der MERWE PRIMêRE SKOOL / PRIMARY SCHOOL

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Prinsipaal : C.T Roberts

Letter requesting participation

Dear Parents

Your child has been selected to participate in a research program based on Literacy development in the Foundation phase. The focus of my research is to improve learner's proficiency in reading.

The research is being undertaken as part of my studies in Education at the University of South Africa. The research will assist me on how to understand educational processes and to make professional decisions, in the classroom situation. Participation in this study is voluntary. Learners may withdraw from the study at any time. The names of the learners will be kept strictly confidential.

I hereby given permission that my child _____ can participate in the action research that will be undertaken at Alheit Van der Merwe primary school.

_____
Parent's signature

Please do not hesitate to contact me if you have questions or concerns

I am looking forward to work with your children

Sincerely
Mrs. L September