

**READING COMPREHENSION STRATEGIES: THE USE OF PRIOR KNOWLEDGE
AS A COGNITIVE STRATEGY BY GRADE 6 LEARNERS IN A PRIMARY
SCHOOL IN THE LEPHALALE AREA**

BY

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DECLARATION

I, KGABO BRIDGETTE LEKOTA, declare that the dissertation entitled **READING COMPREHENSION STRATEGIES: THE USE OF PRIOR KNOWLEDGE AS A COGNITIVE STRATEGY BY GRADE 6 LEARNERS IN A PRIMARY SCHOOL IN THE LEPHALALE AREA** hereby submitted to the University of Limpopo, for the degree **MASTER OF ARTS IN ENGLISH STUDIES** has not previously been submitted by me for a degree at this or any other university; that it is my work in design and in execution, and that all material contained herein has been duly acknowledged by means of complete references.

Signature

Date:

DEDICATION

This study is dedicated to my late mother, Mrs Jermina Lekota, who passed away while I was in my early teenage years. Her confidence in me inspired me to be the woman I turned out to be to this date. My baby girl, Khomotso “Bello” Lekota, who kept me motivated to dream big and to give full focus and commitment to finish this work shares this dedication.

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ABSTRACT

Research shows that successful readers make use of prior knowledge. This is supported by schemata theory (Herczog & Porter, 2012; Xigo-hui, Jun & Wei-hua, 2007; Zhang 1993). In this study, the researcher intended to increase the schema of the selected sample and test the theorem. Two groups were selected as samples comprising an experimental group and a control group. The experimental group had the advantage of being exposed to a topic over a month and on the day of the test the two groups were combined and the results from the test were analysed. The outcomes showed that the experimental group out-performed the control group proving that prior knowledge increases chances of comprehension. In the initial test both groups had performed poorly. Many learners in the experimental group would have performed better if they could comprehend the English language. The students who used their schema on the experimental group did better than those who did not.

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CHAPTER 1

1. INTRODUCTION

1.1 BACKGROUND TO THE STUDY AND PROBLEM STATEMENT

South Africa faces huge problems with literacy as well as numeracy. Some of these problems may have arisen from the old apartheid education system. Trok (2005:59) states that due to the circumstances left by Bantu Education even after apartheid, many South African black families were left with poor writing and reading skills or no skills at all. Results indicated by the Progress in International Reading Literacy Study (PIRLS, 2006:8-19) show that South Africa came last in reading literacy when compared with the performance of some 44 countries.

Reading is an area that has become a major concern for several countries, South Africa being one of those countries experiencing poor reading levels and illiteracy nation-wide. Systematic evaluations done by the National Department of Education (2008), provincial Department of Education, as well as international bodies, revealed that learners in South Africa performed below their age-appropriate levels when tested for reading. The systematic evaluation done on the language competence of the Intermediate Phase produced the following results: 14% of learners were outstanding in their language competence; 23% were partly competent; and the majority (63%) were below the appropriate-age level for the required competence (Department of Education, 2008).

The research conducted by the Department of Education (2008) highlights factors that contribute to poor literacy in South African schools. These problems include the following:

- *The issue of language policy.* The majority of schools use English as a language of teaching, and in some schools Afrikaans is the primary language of teaching. Matjila and Pretorius (2004:2) also allude to this problem. They argue that thousands of South African learners go through years of schooling

in a language that is not their primary language, which leads to their experiencing difficulty in achieving academic excellence.

- *The shortage of libraries.* South Africa is experiencing a shortage of libraries in rural schools, which means that learners do not have access to reading materials to practise and improve their reading skills. This presents a problem to many South African parents who are very poor and cannot afford to purchase reading materials for their children. Reading practice at an early age can enhance children's ability to read in the future. According to Pretorius and Ntuli (2005), pre-school children whose parents read storybooks to them can develop linguistic competence and literacy ahead of the other children when they start school.
- *Teachers' competency levels.* Teachers' low competency levels have also been mentioned as one of the factors that contribute to the poor reading literacy of learners. A research study conducted by the Department of Education (2008) reveals that teachers were confused about whether it was their responsibility to teach learners how to read or if their duties were just to facilitate the learners to teach themselves how to read. The PIRLS (2006) findings on teachers show that there is a need for Intermediate Phase teachers' continuous professional development (Van Staden & Howie, 2007).

Reading has been described as vital to the development of a modern society. According to Igwe (2011:1), "reading adds quality to life, provides access to culture and cultural heritage, empowers and emancipates citizens as well as brings people together". Pretorius (2002) emphasises that reading is an influential learning instrument through which people can create meaning and attain new knowledge. In South Africa, poor reading comprehension has been a central feature of academic under performance. Nel, Dreyer and Klopper (2004) state that many students in South Africa enter higher education underprepared for the reading loads that are being put upon them. Ashton (2012) also states that reading comprehension proficiency is very significant for academic success. Some South African studies reveal that reading comprehension skills are underdeveloped in secondary school learners (Ashton, 2010). Seeing that reading comprehension is a problem, this study aims to investigate the use of cognitive reading strategies to improve learner literacy

levels. The study was conducted in a rural primary school in Shongoane village at Lephalale.

The sources consulted by the researcher are presented below in three sections.

1.2 READING COMPREHENSION STRATEGY

McNamara (2007:6) defines a reading comprehension strategy “as a cognitive or behavioural action that is enacted under a particular contextual condition, with the goal of improving some aspect of comprehension”. Reading with understanding is a key requirement for learners to perform academically. However, reading with understanding can be a challenge at times. According to Pour-Mohammadi and Abidin (2011:238), “reading comprehension is commonly known as an interactive mental process between a reader’s linguistic knowledge, knowledge of the world, and knowledge about a given topic”. This definition can be placed within the schema theory that emphasises the importance of background knowledge on a subject. A simple definition of schema theory given by Axelrod (1976) is that it is a pre-existing knowledge that individuals hold about how the world works. This information they already possess will be released when they come across new information and need to make sense of it.

Carrell and Eisterhold (1983) maintain that within the schema theory, reading comprehension is an interactive process between the reader’s background knowledge and the text. The schema theory basically suggests that knowledge is stored in the reader’s memory, and this knowledge is released during the reading process, making the reader interact with the text effectively. This indicates that one’s prior knowledge of the topic can give the reader the advantage of understanding the text. Van Keer (2004:38) argues that “reading comprehension can be defined as constructing a mental representation of textual information and its interpretation”. Although this statement differs from the previous one in the sense that it says nothing about the use of prior knowledge, it does state that one must be able to interpret a text only after reading it. Reading comprehension comprises numerous skills, such as understanding the meaning of words and being able to create a relationship between what one has the knowledge of and what one is in the process

of learning (Onwuegbuzie, Mayes, Arthur, Johnson, Robinson, Ashe, Elbedour & Collins, 2004:44).

1.2.1 Prior or background knowledge

Background knowledge is described as “an individual’s life experiences and the knowledge of the world acquired through his life” (Pour-Mohammadi & Abidin, 2011:239). According to this definition, background knowledge does not only apply to books that one has read but also involves taking into account real life experiences. There are apparently six dimensions of background knowledge which are: 1) dynamic, (2) available before a learning task, (3) structured, (4) multiple, 5) both explicit and implicit and (6) conceptual and meta-cognitive. The argument has been based on the notion that background knowledge helps not only excellent readers but also poor readers. Simply put, it implies that a higher degree of background knowledge may help one to overcome linguistic insufficiencies (Pour-Mohammadi & Abidin, 2011:239).

1.2.2 Cognitive strategies: the use of prior knowledge

Cognitive strategies have been defined as mental and behavioural activities that include re-reading, activating background knowledge, as well as adjusting one’s reading speed (Van Keer, 2004:38). Reading comprehension is said to be a cognitive processing through which one can apply background knowledge to the comprehension of a text. The use of prior knowledge has been emphasised as a key to comprehending and interacting with a text. Van Keer (2004:38) reports on a survey that was conducted on a group of college students to test their application of prior knowledge. The assessment was on how prior knowledge affected the participants’ performance on Nelson-Denny Reading Tests. Two groups, an experimental group and a control group, were formed. The experimental group had time to be exposed to background knowledge and topics which would be encountered in the actual texts to come. The results revealed that the experimental group outperformed the control group, proving that prior knowledge can be used as an essential reading strategy (Zhang, 1993).

Besides the aforesaid reading strategies, there are others too that can help a learner achieve proficiency in reading as well as understanding a text. These strategies can be applied to all reading situations, whether one is reading a text in English or in other languages. According to the linguistic interdependence principle (Williams & Snipper, 1990:42), as children begin to master reading in one language, they will also learn to read easily in other languages, because they have already acquired the background information on the process and tools of reading which they can use when reading in the other languages.

1.3 THEORETICAL FRAMEWORK

Being a good reader is one thing, but being a good reader and at the same time understanding what you are reading is another thing. Reading comprehension is all about the interaction between the reader and the text, leading to the reader successfully grasping what the text is about (Richgels, 1982:54). According to Richgels (1982:54), schema theory is significant because it sees comprehension as a continuous learning process where applying prior knowledge plays a vital role in one's understanding of the text. Being exposed to or having prior knowledge on the subject gives one a better chance of successful interaction with the text.

Schema theory can be divided into three main parts: **linguistic schemata**, **formal schemata** and **content schemata** (Pour-Mohammadi & Abidin, 2011:238). Pour-Mohammadi and Abidin (2011:238) describe **linguistic schemata** as having the knowledge of letters and their corresponding sounds. Linguistic schemata refers to the knowledge of the letters and their corresponding sounds, both alone and in clusters and the ability to predict, through knowledge of syntax, the word or words that will follow (Pour-Mohammadi & Abidin, 2011). Secondly, there are **formal schemata**. These have to do with the text structure. Having knowledge of the pattern and organisation of the written words influences the rate at which the reader can understand the text. Lastly, there are **content schemata**, which state that the reader's background knowledge has an influence on the reader's acquisition of information. The significance of prior knowledge has been examined by schema theorists. Research has shown that lack of schemata can impair comprehension significantly, and that appropriate content schema application can increase

comprehension (Zhang, 1993). Readers with greater background knowledge stand a better chance of comprehending the text quickly and remembering its contents. The conclusion is therefore that schema theory and the cognitive reading strategy of prior knowledge are interrelated. Schema theory is the theory that the researcher chose to work with because it clearly places its emphasis on prior knowledge as the most effective cognitive reading strategy.

1.4 PURPOSE OF THE STUDY

1.4.1 Aim

The aim of this study was to ascertain whether the Grade 6 learners of Tshukudu Primary School in the rural Shongwane village in Lephalale District used the cognitive strategy of activating prior knowledge for reading comprehension or not.

1.4.2 Objectives

The study aimed to achieve the following objectives:

- To determine if learners were aware of reading comprehension strategies in general.
- To determine if the application of prior knowledge as a cognitive reading strategy in particular can improve the reading comprehension of Grade 6 learners in Tshukudu Primary School.

1.4.3 Hypothesis

Learners in rural areas are not aware of reading comprehension strategies, in particular, applying prior knowledge, and as such they are unable to comprehend the text successfully.

1.5 RESEARCH QUESTIONS

- Are learners aware of the existing reading comprehension strategies that can help them understand a text better when reading it or not?
- Can applying prior knowledge as a cognitive reading strategy help learners better understand a given text?

1.6 RESEARCH METHODOLOGY

This research applied a quantitative research method. Babbie (2010:422) defines quantitative research as “the numerical representation and manipulation of observation for the purpose of describing and explaining the phenomena that those observations reflect”. The reason for choosing a quantitative research method was that the researcher was specifically concerned with finding out how many students (in percentages) would read the text with understanding after being exposed to the materials on a familiar or known subject and how many would understand the text in a group (control group) that would not be exposed to a familiar topic. Leedy and Ormrod (2010), note that descriptive quantitative research involves identifying the characteristics of a phenomenon which is being observed or exploring the relationship of two or more phenomena. The latter is what the researcher aimed to do in this study. The qualitative method was only applied when needed, depending on the results from the quantitative data.

1.6.1 Research design

The research design was the initial phase of the research process when the researcher constructed the plan of how she would test the hypothesis. This included determining the population group and the methods that were used to collect data. This also involved the analysis and interpretation of the results. According to Bless, Higson-Smith and Kagee (2006), a research design is a carefully specified plan of action that is aimed at testing a specific hypothesis. The design of this research followed the correlational research approach in which the researcher determined the

relationship between the development of reading comprehension and the use of background knowledge by using two groups of participants, namely, an experimental group and a control group.

1.6.2 Population and sampling procedures

The study comprised 40 learners from Tshukudu Primary School in the Lephalale area of the Limpopo province. The reason for choosing Grade 6 was that the learners were at the end of their intermediate phase and in the cusp of proceeding to the senior primary phase. This means that their reading should be better than when they first entered the intermediate phase. According to Matjila and Pretorius (2004:5), learners are expected to be able to read and understand about 3000 words and to be able to understand about 9000 words in spoken language at the end of Grade 4.

Sampling in the quantitative research method falls into two categories: probability and non-probability (Leedy & Ormrod, 2010: 205). In probability sampling, the researcher knows in advance that each segment of the population will be represented in the sample, whereas with non-probability sampling the researcher cannot say with certainty that each element of the population will be represented in the sample. In this study, the researcher adhered to probability sampling because the aim was that both genders should be represented equally. The quota sampling method was applied whereby 20 male and 20 female learners were selected. The learners were chosen as follows:

- On the first day, learners were given a text to read and their comprehension was tested thereafter;
- Based on the scores, an experimental group as well as a control group was formed, with 20 learners in each group.

1.6.3 Data collection instruments and procedures

This section outlines the instruments that were used to collect data and also the procedures that were followed.

1.6.3.1 Data collection instruments

Data was collected from the school after the researcher obtained permission from the principal of the school.

The following instruments were used in the collection of data:

- **Questionnaire (self-administered)**

Learners were given a questionnaire before the experiment began and also at the conclusion of the experiment. The results of the data collected from the questionnaires were analysed and the findings are explained in chapter 4 of the current study. The questionnaire was simplified by means of explaining the questions that learners did not thoroughly understand by their native language (Sepedi), especially with terms such as cognitive reading strategies.

- **Reading Comprehension test**

During the experimental process, the experimental group was given a reading comprehension text on the topic that they were later tested on, on the final day. Since the teachers knew the learners better than the researcher, the researcher left the teachers to be responsible for the selection of the text. On the day of the test, both the experimental and the control group were given the same test. They had to answer comprehension questions on a topic that only those in the experimental group had been exposed to for a month. Both groups were treated fairly and equally during the test, with no preferences given to neither group.

- **Structured interview**

The researcher conducted a structured interview with the teachers. The teachers chosen were those who taught English as a subject from Grade 2 to Grade 7. A structured interview is an interview where questions are structured beforehand, are presented in a fixed format, and are put in the same order for all the interviewees. To

simplify the questions the researcher explained to the teachers what cognitive reading strategies are in their native language so that there would not be confused.

1.6.3.2 Data collection procedures

After the sample was collected, the research proceeded as follows:

- The experimental group was given a text to read on their own, or sometimes with the help of the researcher. The text was chosen by the teachers.
- The final step was to administer the test during which both groups were tested on their knowledge of the same text. The researcher then analysed the results of the test.

1.6.4 Data analysis

Since the sample was small the researcher used Microsoft Excel to analyse data. Data from the questionnaire was given values and entered onto Microsoft Excel and the results were calculated. Data from the structured interview was coded into categories and then analysed also using the same software.

1.6.5 Validity and reliability

According to Lawson and Philpott (2008:70), validity in quantitative research concerns itself with these two questions. The first is concerned with whether the chosen sample examined is valid or not, that is, does the sample represent a reasonable cross-section of the whole population? The second is concerned with whether the particular type of measurement that is being used is related to what is being measured? Reliability is said to be a division of validity. For one's data to be considered valid, one has to use reliable techniques (Lawson and Philpott, 2008:70). The validity and reliability of the results of this study were determined by the techniques used and by whether the research would produce the same results if the same techniques were used again on the same population. The researcher ensured

that her sampling method was appropriate and that the measuring instruments actually measured what she intended to measure.

1.7 ETHICAL CONSIDERATIONS

Many academic disciplines have professional bodies that publish guidelines to assist researchers to act ethically as they carry out their research (Bless, Higson-Smith & Kagee, 2006:141). For this study, the researcher complied with the ethical principles that are involved in dealing with human subjects when conducting academic research. These principles included protecting the participants from any harm and respecting the privacy of the participants regarding anything that they may reveal about themselves in the course of the research. The researcher explained the purpose of the research to the participants and the participants signed a consent form before providing any of their information. The researcher promised the participants their anonymity, should they have wished to remain so, and informed the participants of their rights to choose not to continue with the research before involving them in it. Finally, the researcher made sure that all the participants involved for the duration of data collection were comfortable and content. The researcher acted with beneficence at all times.

1.8 SIGNIFICANCE OF THE STUDY

The study is significant as it will help enlighten some of the educators and learners in Lephalale about the importance of teaching and learning reading comprehension strategies which will assist them in the comprehension of texts. The study will also help the teachers to realise that by regularly exposing their learners to reading materials and encouraging them to practise reading constantly, they will help the learners to become better readers who will gain more knowledge as they will be able to comprehend texts better. Learners will, therefore, recognise the importance of reading and become motivated, and develop an interest in reading even when their teachers do not compel them to read.

1.9 OUTLINE OF THE STUDY

Chapter 1 gives background information to the study, the problem statement, aim and objectives as well as the research methodology of the study.

Chapter 2 presents a review of literature relevant to the study.

Chapter 3 provides detailed research methodology used in the study.

Chapter 4 presents the analysis and interpretation of the data collected in chapter 3.

Chapter 5 concludes the study by giving a summary, recommendations and suggestions for further research.

CHAPTER 2

2. LITERATURE REVIEW: PRIOR KNOWLEDGE AND ITS IMPACT ON READING COMPREHENSION.

2.1 INTRODUCTION

The ability to read and write may mean a better and brighter future and gives one an added advantage in a competitive corporate world. As such it should become a priority to most people. Reading is an area that has become a major concern for several countries, with South Africa being one of those countries experiencing poor reading levels and illiteracy nation-wide. According to Zhang (1993:10), many research studies done on reading strategies or reading comprehension strategies have been focusing on older children and older people whereas there is little focus on children below the age of 12 or those in primary school. However, some scholars argue that children should be taught reading strategies when they are still at their youngest (Zhang, 1993). Merisuo-Storm (2010) emphasises that a child who does not learn to read and comprehend in the early years of schooling will experience difficulties in other subjects also. The concept of Matthew effects springs from the discovery which states that individuals who have advantageous early educational experience are able to use new education experiences more effectively. In simple terms those who are already good will excel even more and those whose educational background is already poor will become even poorer. The Matthew effect calls this process “The Rich Get Richer” (Stanovich, 1986). Chen (2008) argues that learners who lack strong reading skills in elementary grades will be less likely to be able to understand secondary school texts. They are even less likely to succeed in colleges which may later affect their careers. Schools should be the ones accountable in imparting the knowledge through a rich, common grade-by-grade curriculum. In this way teachers will be able to build on their learners’ knowledge and reading skills concurrently (Chen, 2008).

Reading has been said to be a vital proficiency required for a modern society. According to Igwe (2011:1), “reading adds quality to life, provides access to culture

and cultural heritage, empowers and emancipates citizen as well as brings people together". Pretorius (2002) emphasises that reading is an influential learning instrument for the way in which people can create meaning and attain new knowledge. The power of reading is emphasised by many scholars, and as such, it is an area which should not be overlooked in any country. Through the ability to read, one can have a better view of the world and acquire wisdom. Ashton (2012) also states that reading comprehension proficiency is very significant for academic success. In South Africa, poor reading comprehension has been a central feature of academic underperformance (Pretorius, 2002). Nel, Dreyer and Klopper (2004) argue that many students in South Africa enter higher education underprepared for the reading loads expected from them. South African studies reveal that reading comprehension skills are underdeveloped in secondary school learners (Ashton, 2010). This problem may result from the fact that learners leave primary school unable to read and also without reading comprehension skills when they proceed to secondary schools.

It is often said that reading constitutes learning. According to Hamdan, Ghafar, Sihes, and Atan (2010), reading is an important ability for one to have in life. They further argue that reading is interlinked to a person's knowledge, maturation of thoughts, innovative abilities, modernisation and so on. Similarly, AD-Heisat, Mohammed, and Krishnasamy (2009) argue that reading is significant for achieving academic success. Failure to learn to read adequately at a primary level will lead to students having a decreased ability to read in secondary school and university. Moreover, the students' deficiency in literacy may result in low self-esteem, behavioural problems and less motivation to learn, amongst other things. A lack of reading abilities also presents a problem to university professors (Fitzhugh, 2011: 412). Students who enrol at universities are said not to be able to read and write. A survey conducted by professors discovered 91 percent thought that their students were not adequately prepared to write, 89 percent said some were not adequately prepared in reading and that 91 percent stated that some were not well-prepared to engage in research (Fitzhugh, 2011: 412). Although the area of reading has been researched and addressed, reading proficiency remains a challenge in many countries. Amongst other countries, Nigeria, Singapore, as well as South Africa have reading problems (Zhang, 1993).

Problems with reading literacy in some countries might have resulted because of colonialism. In Singapore, the situation is that children who speak languages other than English have to learn English as a first language. This leads to students failing to achieve academic success. All the children are required to learn English as their first language (L1) and learn their native tongue as a second language (L2) (Zhang, YongqiGu & Hu, 2008). In Post-colonial South Africa, English has been retained as the official language of the country and in many government schools children have to learn English as a second language. They also have it used as the language of teaching and learning when they enter the immediate phase (grade 4). To some learners, this becomes an obstacle: to learn and read in English while still adjusting to the transition from learning in their native tongue to learning in an additional language. Herczog and Porter (2010:10) state that English learners face more difficult challenges when they have to read and understand academic texts. Even with these obstacles, there are possible solutions that may help minimise the problem of reading illiteracy, namely, teaching learners to use reading comprehension strategies. There are a number of cognitive reading strategies that improve learners' reading comprehension of the learners. However, this study only focused on prior or background knowledge as one of the cognitive reading strategies.

Reading alone might not be enough. A person has to be able to read and also grasp the meaning of the text. Such a process is called reading comprehension. A reader becomes a successful reader if he or she has an efficient interaction with the text. Hamdan, Ghafar, Sihes, and Atan (2010) point out that "accomplished readers have to use a flexible repertoire of strategies and cues to comprehend texts and to solve problems with unfamiliar structure and vocabulary". This implies that readers have to deal with the text whether the text is simple or complex in order for the reader to derive meaning from that text.

2.2 DEFINITION OF A READING COMPREHENSION STRATEGY

McNamara (2007:6) defines a reading comprehension strategy "as a cognitive or behavioural action that is enacted under a particular contextual condition, with the

goal of improving some aspect of comprehension". This simply means that a reading comprehension strategy is a device that one uses when faced with a text with the aim of understanding it. Reading with understanding is the key to performing successfully academically and beyond that. However, reading with comprehension can be a challenge at times. According to Pour-Mohammadi and Abidin (2011: 238), "reading comprehension is commonly known as an interactive mental process between a reader's linguistic knowledge, knowledge of the world, and knowledge about a given topic". The definition emphasises the word knowledge. This could imply that understanding comes with some kind of knowledge that the reader already possesses. As such, the definition can be placed within the schema theory that emphasises the importance of background knowledge of a subject. A simple definition of schema given by Axelrod (1976) is that, it is a pre-existing knowledge that an individual holds about how the world works. This information they already possess will be released when they come across new information to make sense of it.

Carrell and Eisterhold (1983) state that schema theory sees reading comprehension as an interactive process between the reader's background knowledge and the text. Schema theory suggests that knowledge is stored in the reader's memory which then will be released during the reading process hence making the reader interact with the text effectively. This indicates that one's knowledge of the topic can give one the advantage of comprehensively understanding the text. On the other hand, Van Keer (2004:38) argues that "reading comprehension can be defined as constructing a mental representation of textual information and its interpretation". This definition explains that the reader must be able to connect the recent information with the one present in the mind for the purpose of correctly interpreting the text. Reading comprehension comprises numerous skills such as understanding the meaning of the words and being able to establish a relationship between what one already has knowledge of and what one is in the process of learning (Onwuegbuzie, Mayes, Arthur, Johnson, Robinson, Ashe, Elbedour & Collins, 2004).

2.3 READING COMPREHENSION

Reading comprehension can be achieved with the assistance of cognitive reading strategies. Reading comprehension has been defined in many different ways over the past years. It has been said that the main reason for reading is to get the correct interpretation of a message from a text; the message that the writer intended the reader to receive (Gilakjani & Ahmadi, 2011). This definition gives a narrow view. It does not take into account the elements that are necessary for comprehension to be successful. One must be competent in the language the text is in and also must be able to use reading strategies. The causes underlying the phenomenon of struggling readers differ and are very complicated. Three of these causes are:

- 1) It may be that the learner comes to school with little or no background knowledge (the learner may have limited schemata),
- 2) She struggles to link past learning with new learning (had engaged in cramming and pass-rote learning),
- 3) It might be that some students are English learners with little proficiency in oral English learning as a second, third or foreign language. They learn English but are not competent in the language (Herczog & Porter, 2012). Hence, reading alone is not enough as an exercise but comprehension is key.

Herczog and Porter (2012), state that decoding only signifies half of the reading framework. According to them, a balanced reading instruction extends to comprehension as well. They further argue that “comprehension of instructional text requires a higher level of skills, including an understanding of academic language and strategies to make meaning of academic text” Herczog and Porter (2012). Zhang (1993), on the other hand, states that reading comprehension is a cognitive process. For one to be able to read and correctly interpret the text, that is decoding the text correctly, the reader will need to apply cognitive skills and strategies. Skills and strategies are, therefore, very important in the process of reading comprehension. Several studies have been conducted over past years which indicate the significance of reading comprehension and they have illustrated a direct relation between strategy use and reading comprehension performance (Yussof, *et al.*, 2012). This suggests that reading comprehension requires reading strategies. The reader must use strategies to improve his chances of comprehension.

According to Yussof *et al.* (2012), reading comprehension is a dynamic and constructive meaning making process, involving reader-text interaction. It is a complex activity between the reader and the text, with the reader attempting to derive the meaning from the text. The process is not only of decoding the words but that of interpreting the text successfully. Snow and Sweet (2003:1) define reading comprehension “as the process of simultaneously extracting and constructing meaning”. Words cannot just be read, the reader has to extract clues from the text to be able to come up with the meaning of what has been read. They elaborate that the comprehension process involves three crucial aspects, the reader, the text and the activity. Researchers have indicated and acknowledged that reading comprehension is a multi-faceted aspect, and as such, there are multiple definitions of what makes efficient reading comprehension (Kendeou, Papadopoulos, and Spanoudis (2012). According to Kendeou *et al.* (2012), a general element is that reading comprehension includes the making up of a sound mental representation by the reader in his or her mind. With this mental representation the reader is able to engage in an activity or assessment task such as answering open-minded questions, recalling the text, filling the blank by applying the knowledge acquired from the text (Kendeou *et al.*, 2012). Although comprehension of a text is complex, reading comprehension strategies can assist the reader. Hassan (2003) points out that, efficient readers who use strategies perform better than those who do not. Efficient use of reading skills by learners has been linked to academic success (Merisuo-Storm, 2010). When it comes to reading comprehension, the use of cognitive reading strategies cannot be ruled out because the strategies lead to efficient reading with comprehension. They help the reader succeed with the job at hand, which is having a meaningful interaction with the text.

The process of comprehension is not as easy as accessing word meaning and combining those words (Moss, Schunn, Schneider, McNamara& VanLehn, 2011). According to Moss *et al.* (2011), the process of comprehension includes the construction of a mental image representation of a text, referred to as a situational model. The creation of the model needs a lexical process to retrieve the meaning of the word, memory retrieval to expand on the text and create connections to background knowledge and an inferences process to incorporate the present sentence with a prior sentence and prior knowledge. The emphasis is on reading

comprehension strategies because of their ability to improve and enhance the reader's understanding of the text (Moss *et al.*, 2011). Yussof, Jamian, Roslen, Hamzah and Kabilan (2012) define strategy as a flexible system or plan employed by the reader in the effort to comprehend the text. According to Ozek and Civelek (2006), reading strategies can be classified into two classes namely, cognitive and meta-cognitive reading strategies.

2.4 COGNITIVE READING STRATEGIES

Cognitive strategies are defined as a mental process that is concerned with the direct processing of information in order to learn through obtaining, storing and retrieving or using the information (Ozek & Civelek, 2006; Hamdan *et al.*, 2010). The two binary divisions of cognitive strategies has been categorised as: bottom up and top-down models. The bottom up approach suggests that reading should be a decoding process, that is, identifying letters, words, phrases as well as sentences in order to derive the meaning. Contrary to this, the top down approach states that the identification of letters to form words, and the acquiring of meaning from these words are not efficient for reading. Instead, it presumes that efficient reading needs the readers to make predictions and assumptions about the text content by relating new information to their prior knowledge and by using few language clues (Hamdan *et al.*, 2010).

Some of the cognitive strategies that can be used include prediction. Prediction is a skill that one applies guided by prior knowledge. The person reads the text and understands the text because the topic is similar to the knowledge that he or she possesses (Zhang, 1993). The other cognitive strategy involves using statements to check comprehension, analysing the text and self-questioning. The most discussed cognitive strategy is the usage of prior knowledge when reading a text. Many researchers assert that the process of interaction between the reader and the text enhances reading. The use of relevant prior knowledge is significant in the interaction process (Zhang, 1993). One of the surveys that was conducted to prove the notion that application of prior knowledge to the text is important was done on a group of university students. The assessment was on how prior knowledge affected the subjects' performance on Nelson-Denny Reading Tests. Two groups, the

experimental group and control group, were formed. The experimental group had time to be exposed to background knowledge and topics which would be encountered in the actual coming texts. The results revealed that the experimental group outperformed the control group, proving that prior knowledge and its relevance can be used as an essential reading strategy tool (Zhang, 1993). As such, it can be concluded that prior knowledge and reading comprehension are interlinked. Some studies show that successful comprehension does not occur automatically; it depends on certain skills or reading strategies classified under cognitive and meta-cognitive strategies (Mehrdad, Ahghar & Ahghar, 2012).

Furthermore, cognitive strategies have been defined as mental and behavioural activities that include re-reading, activating background knowledge, as well as the adjustment of reading speed (Van Keer, 2004:38). Reading comprehension is said to be a cognitive process, where one can apply background knowledge to the comprehension of the text. The use of prior knowledge has been emphasised as a tool to comprehending and interacting with the text. The possession of enough prior knowledge gives one the advantage of having a higher chance of having an efficient meaningful interaction with the text. Prior knowledge can be obtained not only in a classroom or books, but life experiences and the world can also give an individual more knowledge that is needed for better comprehension. Seeing the importance of prior knowledge in relation with reading comprehension, it is pivotal that cognitive reading strategies should not be left out of the school syllabus. Cognitive reading strategies are core to reading comprehension efficiency.

2.4.1 Deep processing and surface processing

According to Botsas and Padeliadu (2003), “cognitive strategies involve all those actions that assist students in completing learning tasks”. In other words, students can employ cognitive strategies if they are faced with difficulties in comprehending a given task in order to access the message of that task. With regard to cognitive strategies, a distinction can be made between **surface** and **deep processing**. In the case of surface processing this type of reading only assists students to refer back or look-back in a text. Deep processing, on the other hand, compels students to use more cognitive materials and actively engage in a reading activity. The manifestation

pattern of surface processing is known as rehearsal strategies and that of deeper processing is known as elaboration strategies (Botsas & Padelidiadu, 2003). Botsas and Padelidiadu (2003) state that elaboration strategies permit students to dynamically engage and execute cognitive tasks in depth and this in turn leads to best and sophisticated accomplishments. In contrast, students who simply engage in re-read and look-back methods when reading a task tend to be engaged in surface processing and consequently, they lack success. The best option may be to practise both surface and deep processing to increase chances of success.

2.5 META-COGNITIVE READING STRATEGIES

The basic function of meta-cognitive strategies is to monitor or control cognitive reading strategies. This involves thinking about the learning process preparation for learning, observation of the learning outcomes or comprehension as it takes place and lastly, the self-evaluation process after the task is completed (Ozek & Civelek, 2006). The definitions of meta-cognition by Hamdan, Ghafar, Sihes and Atah (2010) consist of the following: 1) meta-cognition theory deals with what is termed cognitive self-knowledge; this simply refers to what one knows about one's state of mind. 2) It also involves the awareness of the learners and their controlling process during learning. These definitions suggest that meta-cognition is concerned with the cognitive awareness of the individuals as they read. One has to think about what one is learning and constantly keep analysing one's cognitive state. Mehrdad *et al.* (2012) emphasise that "successful comprehension depends on directed cognitive effort referred to as meta-cognitive process". This is the effort by the reader who is willing or prepared to use reading strategies. During reading, it is said that the meta-cognitive process is conveyed through strategies which are procedural, purposeful, wilful, and important as well as effortful (Mehrdad, 2012). Sheorey and Mokhtari (2001) maintain that in order for the reader to accomplish the task of reading with comprehension the reader must use meta-cognitive knowledge and must apply strategies consciously and deliberately.

According to Merisuo-Storm (2010), meta-cognitive simply means "to think about thinking". It means that the readers' awareness and control of reading strategies that

they employ when reading a text in order to meaningfully understand the meaning and to attain information from the text. The use of a meta-cognitive strategy is often activated by the readers as they constantly assess their own state of thinking and reading. This process occurs be when readers slow themselves down when reading a topic not understood. Skilful readers always will opt to skim read the text before the actual reading and then they will activate their prior knowledge to make predictions. Excellent readers often apply comprehension strategies to retrieve the meaning of the text and may consciously or automatically (because of practice) always make use of these strategies (Merisuo-Storm, 2010:267). The use of meta-cognition strategies, planning and regulating ones, has been linked to accomplishments and improved performance more especially in the area of reading comprehension (Botsas & Padeliadu, 2003). According to Botsas and Padeliadu (2003), research has explicitly indicated that students, who employ meta-cognition strategies, are able to manage, regulate and master their individual reading comprehension. It is crucial that students become aware of these strategies to help with their understanding when engaged in reading. They must be aware of what should be done in order to achieve comprehension.

During the 1970s, meta-cognition was introduced by Flavell and attracted many in the area of education. It highlighted how readers will plan, monitor and even repair their own comprehension (Maasum & Maarof, 2012). It is said that strategic awareness and monitoring of the comprehension procedure, whether the individual is reading in a second language or mother-tongue language, remains a significant element of skilled reading (Sheorey & Mokhtari, 2001). According to Maasum and Maarof (2012), meta-cognition has generally been acknowledged as a higher order of intellectual activity which includes one's ability to evaluate and control one's learning process. Previously conducted research on learners' meta-cognition indicates that successful readers show a higher degree of meta-cognition awareness which allow them to employ reading strategies more correctly and successfully than poor readers. Herczog and Porter (2012) state that decoding only signifies half of the reading framework. According to them, a balanced reading instruction extends to comprehension.

There is evidence which shows that in reading comprehension, meta-cognition plays a very crucial role and should not be overlooked. One needs to be able to assess and evaluate one's learning process and make adjustments to improve one's learning. There is also evidence in the field of reading which suggests that poor readers are not strategic. It has been said that even if they might use some of the strategies, which in most cases are surface ones, those are not appropriate for their age and reading experiences. In such cases, they apply fewer and less complicated ones and use them in an inadequate manner. Contrary to this notion, excellent readers hold a well-established collection of strategies which together with their adjusted way of using them assists them to understand the text well (Botsas & Padeliadu, 2003).

2.6 BACKGROUND OR PRIOR KNOWLEDGE

The terms background knowledge and prior knowledge, according to Chen (2008), are in general used interchangeably. The knowledge about the world and the understanding of it, which the students have retrieved through their daily experiences such as riding in cars or buses, playing with other children and adults, and talking to others help them to make a meaningful interpretation of the texts that they read (Chen, 2008). Reading has been argued to be an interactive process. Some definitions of reading comprehension centre on the interaction between the text and prior knowledge (Tarchi, 2010). Researchers, such as Applegate, Quinn and Applegate (2002), state that the principle of reading is the skill of integrating past experience and prior knowledge with the text. Tarchi (2010) states that in research on the strategies of reading comprehension, it is often prior knowledge that becomes the most important one. The ability to construct the main idea from the given text may be influenced by the background knowledge of the reader of the content domain of the text (Afflerbach, 1990).

In order for one to understand linked discourse, one must be able to infer that which was not presented in the text. This can be done by linking the dots of the text or by using additional background knowledge to grasp the text (Lipson, 1982). Lipson (1982), states that some authors expect readers and speakers (excluding listeners) to fill-in and connect information in some-what predictable manners. Decisions on

what to fill-in and how to connect chunks of the text are made on the source of verbal knowledge, knowledge of text structure, knowledge about social interaction and human intentionality and knowledge of underlying relations. The reader has to bring this knowledge to the task in hand and the learning will be preceded by the context of the prior knowledge structures. According to Fisher and Frey (2010), background knowledge is the most important aspect of acquiring new knowledge. A study of students' reading comprehension discovered that the two strongest predictors of success in reading comprehension are background knowledge and vocabulary, and the two have indirectly paved a way to pursue ways in which a learner would employ problem-solving strategies when they lose the meaning (Fisher & Frey, 2010). They further argue that the most well-known impact of background knowledge is its effective influence on one's ability to understand the text. Alfassi (2004) states that the wider one's background knowledge is the simpler it will be for them to grasp the meaning or obtain new information that the text is offering. In addition, prior knowledge has been said to be a multi-faceted construct. The difference of construct is mainly between topic knowledge, the depth of an individual's knowledge on certain subject matters and also the breadth of knowledge of an individual on a specific subject area (Tarchi, 2010). The skill of using prior knowledge may lie in one's ability to activate the relevant knowledge with regard to the text in hand and knowing which background knowledge to apply will be effective.

Prior knowledge or background knowledge is widely discussed as an important element in the learning process although it is not as widely discussed as it should be (Fisher & Frey, 2010). According to Herczog and Porter (2012), most successful readers set an intention for reading and make use of prior knowledge, experiences and different strategies to come up with the meaning of the text. The importance of prior knowledge importance for reading comprehension has been emphasised by several scholars (Axelrod, 1976; Van Keer, 2004; Zhang 1993). Learners can draw on their prior knowledge, and teachers, although they cannot direct knowledge and experiences learners bring to the classroom, can assist learners or students to retrieve knowledge on a specific subject by assisting them to link prior knowledge to new knowledge to which they will be introduced (Herczog & Porter, 2012). According to Roschelle, (1995), "readers' meaning making process has long been a focus of

reading research”. However, it is often not easy to construct meaning from a text although it is very important (Afferbach, 1990).

2.6.1 Components of prior knowledge

Tarchi (2010) suggests that prior knowledge comprises two main components namely, domain and topic knowledge. Gilakjani and Ahmadi (2011) also state that prior knowledge should comprise two main components. These are “assimilation of direct life experiences and its manifold activities, as well as assimilated verbal experiences and encounters”. Surber and Schroeder (2007), on the other hand, argue that there are at least three crucial ways to look for prior knowledge. The two ways distinguished by Tarchi (2007) and Gilakjani and Ahmadi (2011) are prior topic knowledge and prior domain knowledge. Topic knowledge may come from a single text whereas domain knowledge may come from various multiple sources that one has been exposed to for some time (Tarchi, 2010). Topic knowledge further constitutes two sub-components that describe the growth of comprehension, that is, knowledge of facts and knowledge of meaning. Ozuru, Dempsey and McNamara (2009) speak of topic-relevant prior knowledge. According to them, this refers to the “the reader’s pre-existing knowledge related to the text”.

The above authors stated that there is empirical evidence which indicates that the reader’s prior knowledge facilitates and enhances text comprehension, especially that of expository materials. A third possible way of viewing prior knowledge may result from general knowledge. This might be the general knowledge that the reader has of a text structure. These factors of prior knowledge represent the knowledge that the learner takes with to the task (Surber & Schroeder, 2007). Tobia (1994) also distinguishes between topic knowledge and domain knowledge. Topic knowledge refers to prior awareness of content that is closely linked to the material covered in a specific text or a portion of instructional material. Domain knowledge, on the other hand, is concerned with the awareness of general information in a field, although it might not even be specifically indicated in a particular passage. For example domain knowledge will be having knowledge about the politics of the world and how they operate. This will make it easier for one to be able to understand texts that are on politics by applying prior knowledge that one has accumulated on politics.

2.6.2 Background knowledge: knowledge of form and knowledge of substance

Lin (2002) suggests that, since present reinforcement of reading research centres on the use of background knowledge, it would be of assistance to get a clear picture of what background knowledge to use or what background knowledge the readers assume they have applied in reading comprehension. According to Zheng (2002), the reader's prior knowledge is very relevant to reading. He states that a reader's prior knowledge is knowledge that is very important to reading. A clear distinction has been made between the two types of prior knowledge: **knowledge of form** and **knowledge of substance**. Knowledge of form is concerned with the language of the text and assists in identifying correct forms in reading. It is said to be linguistic in its nature and involves the identification of lexical, semantic and rhetorical patterns of the language. On the other hand, knowledge of substance incorporates cultural, pragmatic and subject-specific information and gives the reader an expectation about the whole concept of the structure of the text (Lin, 2002). In other words, knowledge of substance looks at the text as a whole and applies knowledge grounded in a specific subject.

Where reading comprehension is concerned, the importance of prior knowledge cannot be emphasised enough. The two are related. Reading has been described as an interactive process in which the reader must interact with the text using prior knowledge and cultural background (Lee, 2012; Sheorey & Mokhtari, 2001). Lee (2012) noted that several research studies have pointed out the importance of applying reading strategies on students' reading comprehension, and also that the very same strategies can distinguish between good readers and poor readers. A Goodman-like psycholinguistic model of second language reading was adopted by Clarke and Silberstein (1977) and Coady (1979). This model describes reading as an active process of text comprehension made easy when readers make use of their background knowledge and also relevant strategies such as reviewing the text, using contextual clues, or making inferences (Sheorey & Mokhtari, 2001). The Goodman (1976) psycholinguistic model states that reading is a psycholinguistic guessing game. It involves an interaction between thought and language. Efficient reading does not result from precise perception and identification of all elements, but from

the skill to select the fewest, most productive cues necessary to produce guesses which are right in the first time (Goodman, 1976).

Many scholars have emphasised that comprehension is a constructive process (Spiro, 1980; Yussof *et al.*, 2012); and (Reutzel, Smith & Fawson, 2005). According to Spiro (1980), the explicit information in a text is not sufficient to specify the correct interpretation of the meaning of the text. As such, the complete meaning is made out by merging information from different sources that consist of the context of the text, that is, prior knowledge, linguistic, situational, and task contexts. In all the different contextual factors, the one that plays the most significant role belong to pre-existing knowledge that the reader brings to understand a given text (Spiro, 1980). Gilakjani and Ahmadi (2011) argue that readers establish meaning of a text from clues found in a text which is related to the use of prior knowledge in comprehending the meaning of the passage.

Reading comprehension is a complex process that requires the use of prior knowledge in order to comprehend the meaning of the text. Merisuo-Storm (2010) argues that because of the complexity of reading comprehension the reader interprets the message of the text by interacting with the text employing his or her existing previous knowledge and experiences with the information that the text offers. Depending on the prior knowledge that the reader has, it will determine how successful he or she will be with the text. Readers use this prior knowledge to integrate new information (Lipson 2012). Lipson (2012) further states that prior knowledge can be used to disambiguate or make the meaning clear of text, and also that background and prior knowledge about a subject facilitates comprehension. According to Adams and Bruce (1980), comprehension is the application of prior knowledge to generate new knowledge. Without prior knowledge, a difficult object like a written text will not just be complex to interpret; it will be meaningless as well (Adams & Bruce, 1980).

Background knowledge is described as “the knowledge and one’s life experiences attained through the world” (Pour-Mohammadi & Abidin, 2011:239). According to this definition, background knowledge does not only apply to books that one reads but it takes into account real life experiences. There are apparently six dimensions of

background knowledge. These shows that background knowledge is 1) dynamic in nature, 2) available before a learning task, 3) structured, 4) can exist in multiple states, 5) both explicit and implicit in nature, and that 6) it consists of both conceptual and meta-cognitive knowledge components. The argument has been based on the notion that background knowledge not only helps excellent readers but also poor readers. Simply put, this implies that a higher degree of background knowledge may overcome linguistic insufficiencies (Pour-Mohammandi & Abidin, 2011:239). Chen (2008), states that the highest level of reading depends on a solid base of prior knowledge and vocabulary. He argues that without prior knowledge and vocabulary it is more difficult for children to progress into proficient readers. Students or learners should learn to apply reading comprehension strategies which also involve accessing and utilising background knowledge when they are reading since prior knowledge is the key to the comprehension of the text (Chen, 2008).

2.6.3 Activation of prior knowledge

According to Closs (2006), activation of prior knowledge constitutes a great deal of the reading comprehension procedure. Teachers should try to activate as much prior knowledge as they can before reading the text, permitting students to employ prior knowledge as they read. Furthermore, they need to teach students how to distinguish between useful prior knowledge to any general prior knowledge (Closs, 2006). Brooks, Hamann and Vetter (1997) states that brainstorming, predicting, pre-reading, questioning and talking about the topic are efficient strategies to effectively activate background knowledge. Also helpful is to think aloud and read aloud, together with the teacher, activating schema and connecting to other schema. This allows the readers to use the information while they read (Closs, 2006). Reading comprehension has been described as the process of deducing meaning from written texts. For this to happen, the words in the text and their meanings must be reachable to the reader. In addition, readers must as well teach themselves to use comprehension strategies, which also include accessing and utilising background knowledge when reading a text. The reason for this is that using prior knowledge is considered as one of the most crucial comprehension strategy that students or learners need to excel in to become proficient and excellent readers (Chen, 2008).

2.6.4 Topic interests and prior knowledge

According to Baldwin, Peleg-Bruckner and McClintock (1985), research has illustrated that children have a better understanding of the text or reading materials on subjects in which they have a high interest. The issue investigated was whether or not the obvious effect of topic interest on reading comprehension was due to the fact that individuals tend to develop more prior knowledge on the subjects that they are more interested in. In the quest to prove this notion false, they conducted a study with the intention to separate the effects of prior knowledge and topic interest on reading comprehension. Their results showed that there is no correlation between prior knowledge and topic interest, that the two are autonomous. The results conflict with the notion which states that prior knowledge and topic interest should be highly correlated (Baldwin, Peleg-Bruckner & McClintock, 1985). According to Baldwin *et al.*, (1985), this is an adult perception which derives from adults' prerogatives in education. The notion is that as people grow older prior knowledge and increased specialised interest will become closely interrelated. They argue that the situation differs with school children who in most instances are forced to study a variety of topics whether they like them or not. The study results not only showed that prior knowledge and topic interest are separate but that, both phenomena have an additive effect on reading comprehension.

2.7 SCHEMA THEORY IN READING COMPREHENSION

Over the past years, reading research has been dominated by schema theory, which hypothesises the existence of abstract structures for the representation of knowledge in the memory (schema) (Sadoski, Paivio & Goetz, 1991). A significant hypothesis of schema-theoretic approaches to language comprehension is that spoken or written text does not exist in have meaning by itself. On the contrary, a text only gives directions for the listener or reader as to how she/he should retrieve or generate the intended meaning from his own, previously accumulated knowledge (Adams & Collins, 1977). According to Anderson (1984), in schema-theoretic terms, a reader understands a message when he is able to bring to mind a schema that gives a good account of the objects and events described in the message. In other words, one will

be able to successfully comprehend the text if one activates the appropriate prior knowledge relevant to the text in question.

2.7.1 Types of schema theory

Schema theory can be divided into three main types namely, **linguistic schemata**, **formal schemata** and **content schemata** (Pour-Mohammadi & Abidin, 2011:238; Xigo-hui, Jun & Wei-hua, 2007) (See p5).

- **Linguistic schemata** are described as having knowledge of the letters and their corresponding sounds (Pour-Mohammadi & Abidin, 2011). Xigo-hui, Jun and Wei-hua (2007) state that linguistic schemata refer to the existing language proficiency in terms of vocabulary, grammar and idioms of the reader and that these are the foundation of other schemata. Letters alone, when combined with other letters and the ability to predict what word or words will follow, using knowledge syntax, are the basis for schemata and are very important to decode and understand the text during the process of reading (Pour-Mohammadi & Abidin, 2011). Linguistic knowledge is argued to play a vital role in the comprehension of a text. Without linguistic schemata, it will be impossible for the reader to interpret and understand a text. As such, the more linguistic schemata a reader has, the faster the reader attains information and the better the comprehension of the text for the reader (Xigo-hui, Jun & Wei-hua, 2007).
- The second type, are **formal schemata**. This has to do with the text structure. Having knowledge of the pattern and organisation of the written words influences the speed at which the reader can understand the text. According to Toledo (2005), the formal schemata relate to the use of knowledge the learner possesses about the structures of a written text. Xigo-hui, Jun and Wei-hua (2007) support the statement made by Toledo (2005), namely, that formal schemata refer to the structural form and rhetorical arrangement of written texts. This includes the knowledge of the various text types and genres as well as language structures, vocabulary and grammar. Readers use their knowledge of the organisation of texts such as fictions, poems, essays, newspaper articles, and academic articles in magazines and journals to help

them with the understanding of information in the text (Xigo-hui, Jun & Wei-hua 2007). Studies indicate that the knowledge of the type and genre of the text can simplify reading comprehension for readers because the kind of the text will give detailed evidence of the text's content.

- Lastly, there are **content schemata**, which state that the reader's background knowledge has an influence on the reader's ability to acquire information (Pour-Mohammadi & Abidin, 2011). According to Xigo-hui, Jun and Wei-hua (2007), content schemata are the background knowledge of the content area of a text or the topic that the text is all about. This may include topic familiarity, cultural knowledge and previous experience within the field. Content schemata work with the content sphere of the text, which is important to the understanding of the text. At some level content schemata can cover up for the lack of language schemata and as such can be helpful in the understanding of the texts by predicting, selecting information and omitting ambiguities (Xigo-hui, Jun & Wei-hua, 2007). Xigo-hui, Jun and Wei-hua (2007) argue that generally the familiarity of the topic has a direct bearing on the reader's understanding of a text.

Xigo-hui, Jun and Wei-hua (2007) maintain that if an individual wants to become a good reader, he or she needs to attempt to know the knowledge about more fields and subjects. Learners with more background knowledge can better understand and recall the text. Lipson (1982) argues that individuals have a good comprehension of textual material when they have accomplished the coordination of the information presented in a text with their existing knowledge and also when they have learned the new information from the text. According to Lipson (1982), the only way that new information is comprehended is with new reference to the numerous schemata theories situated in one's memory. When it is time to remember, individuals use their schema to reconstruct meaning from the new information. Therefore, one's ability to understand a text is then obviously dependent on one's ability to use schema, that is, prior knowledge structures.

Reading comprehension has been described as the process of selecting and verifying conceptual schemata for the text (Zhang, 2008). A schemata is defined in

the thesis of Zhang (2008:198) as “a cognition template against which new inputs can be matched and in terms of which they can be comprehended”. In other words, a schema is necessary in helping with the understanding of a written text. The schema theory indicates that not only is the reader’s prior knowledge of linguistic schemata and level of proficiency of the second language important, but also the reader’s background knowledge of content schemata (content of the work) and of the formal schema (rhetorical structure) of the text (Zhang, 2008). Chen (2008) argues that linguistic schemata are associated more with reading problems (not having the ability to recognise letters and their sound), whereas content schemata are associated with the comprehension problems (not being able to understand what one has read). Nonetheless, all these type of schemata are necessary and crucial for the reader to be able to comprehend the written texts even though they are not equal in terms of their contribution to the comprehension. In conclusion, a schema-theoretical point of view suggests that the reader is the one who plays an active part in reading and that comprehension is an interactive process that includes the existing background knowledge of the text. Proficient comprehension needs the reader to relate the reading material with their background knowledge. Readers rely on their prior knowledge to comprehend the written text (Chen, 2008). As such, scholars argue that the use of prior knowledge is one of the major components in reading comprehension (Chen, 2008; Chou, 2011).

2.7.2 Schema theory and cultural background

Several studies have shown that prior knowledge affects the amount of information which can be remembered from a text. The argument is that, the more an individual knows about a specific subject, the more likely he or she is to have a better understanding and recalling of the text that is related to a subject in hand (Altarriban& Forsythe, 1993). According to Altarriban and Forsythe (1993), it is the schema theory that has constantly been used to elucidate how the comprehension procedure functions. The term “schema” can be defined as past experiences and past reactions actively organised to be released for better understanding. Schema are said to be theoretical imagery formations which co-ordinate general knowledge into units of structure (Altarriban & Forsythe, 1993). Altarriban and Forsythe (1993), state that cultural background and schema theory may be interlinked. Both cultural

background and prior knowledge have a great impact on the comprehension process. The argument is that, a person has a better chance of understanding information effectively if they have the cultural background to that information. In other words, the more one has an appropriate understanding of the cultural background of the information, the better his or her understanding of the text.

Cultural schema was the term given to describe the relation between cultural knowledge and reading comprehension (Chen, 2008). According to Altarriban and Forsythe 1993), studies by a number of scholars (Lipson, 1983; Reynolds, Taylor, Steffensen, Shirey, & Anderson 1982; Steffensen, Joag-dev & Anderson, 1970) discovered that people can understand texts better when they are, in actual fact, culturally familiar with those texts, but there has not been clarity on how unfamiliar cultural information can be processed. A study conducted by Reynolds, Taylor, Steffensen, Shirey and Anderson (1982) which sought to investigate the relations between cultural schemata and the reading comprehension amongst urban black and agrarian¹ white eight-grade learners showed that there is a relationship between cultural schemata and reading comprehension. The two groups were asked to read a letter about an accident which had occurred at the school cafeteria which dealt with an instance of “sounding” or “playing the dozens” which is a kind of verbal customary insult which is most common in a black community. The interpretation of the black learners on the passage was that it was verbal aggression, whereas the white students interpreted it as being about physical aggression (Chen, 2008).

Another study done on learners in elementary schools by Anderson and Gipe (1983) concluded with similar results as a demonstration of a solid relationship between cultural groups and performance on measures of inferential reading comprehension of sixth-graders. The learners, according to the results, indicated improved inference of information for the passage that was related to their culture (Chen, 2008). These findings on the relationship between cultural schemata and reading comprehension clearly indicate the strong relationship and as Chen (2008) points out, their relationship cannot be avoided in a model of reading. The conclusion is that readers should, when coming across a written text, retrieve prior knowledge rooted in their

¹ Agrarian is farming or cultivated land owned by someone

culture and their language to comprehend that particular text. Therefore language is a reflection of culture hence to understand the cultural content of what an individual reads is very important in the process of reading comprehension (Chen 2008).

2.8 Conclusion

Reading comprehension is more complex than just reading. With reading comprehension the reader has to be able to read and also derive meaning from that activity. This is more difficult as one must be able to use appropriate skills and strategies in order to accomplish that process. This may be the case why most learners lack the skill of reading comprehension. The results by PIRLS clearly indicate that South Africa needs to work extra hard to eradicate the problem of reading illiteracy. It is often argued that comprehension reading strategies are necessities that will ensure that the problem with reading comprehension is minimised. According to Moss *et al.*, (2011), reading comprehension strategies have the ability to improve and enhance the reader's understanding of the text. Teachers' confusion as to whether to teach reading comprehension strategies should also be addressed. This could be done by covering reading comprehension in the school curriculum to ensure that teachers know that it is their responsibility to teach learners the reading comprehension strategies as well as their use in the reading class. If they themselves do not apply reading strategies in their own reading, it may require DoE teacher training courses on reading comprehension strategies and how to teach them.

As for the use of prior knowledge as one of the reading cognitive strategies, its impact on reading comprehension has been made clear. Research that aims to investigate the predictors of reading comprehension find that prior knowledge is the one that comes to the surface (Tarchi, 2010). As such, teachers should put much emphasis on prior knowledge but on other strategies equally as all can contribute to enhancing reading comprehension. As it comes to light that there are many domains and areas of prior knowledge, it is vital that one should know which to release in what particular time. Teachers themselves also must know how prior knowledge can affect learning. According to Roschelle (1995), teachers focus is the ideas that they want to impart to their learners. They must come to the understanding that in most

cases, it is prior knowledge that the learners have which ensures that the message by the teacher is best delivered.

The importance of reading or reading comprehension in our society cannot be overlooked. Through reading, people get to learn much about their world and improve their knowledge which leads to the development of wisdom that is very crucial to have in today's culture that is dominated by technology and the competitive corporate world. Good reading comprehension should start at the primary level so that when learners get to the secondary level they merely build on that, creating a better opportunity to proceed to tertiary education. This has the potential to build a better society of intellectual and literate people.

CHAPTER 3

3. RESEARCH METHODOLOGY

3.1 INTRODUCTION

The aim of this study was to ascertain whether the Grade 6 learners of Tshukudu Primary School in the rural area Shongwane village in Lephalale District use the cognitive strategy of activating prior knowledge for reading comprehension. This chapter describes the research methodology for the study. Research methodology involves how the researcher will collect data. That includes the sampling methods and how to deal with the population involved, instruments that will be utilised and how the results obtained from data will be analysed, as well as questioning the validity and reliability of the instruments.

The chapter also explains the methods and procedures carried out to achieve the purpose of the study. Sub-sections of the chapter include discussions about the: research design, population, sampling, data collection, data analysis, limitations and ethical considerations relevant to the study

3.2 RESEARCH METHODOLOGY

In this study, the researcher decided to apply a quantitative research methodology because the researcher wanted to ascertain how many teachers actually taught or made learners aware of the reading comprehension skill of prior knowledge and how many learners used cognitive reading strategies. The study was mainly intended to show if prior knowledge could improve the reading comprehension of the learners.

Quantitative research involves measurement and uses scales and numerical values to explain the findings from the data that have been collected. Quantitative research data can be recorded by means of numbers. Some data, however, cannot be recorded by the use of numbers, and so language is used in that case. Babbie (2010:422) defines quantitative research as “the numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena that those observations reflect”. Quantitative data can be manipulated

by the computer. With quantitative analysis the data is almost always manipulated by computer programmes such as SPSS and MicroCase (Babbie, 2010:422). The researcher tested how prior knowledge could improve the reading comprehension of the learners. The groups that were formed included an experimental group and a control group. At the end of the programme, the researcher wanted to see how many in the experimental group could outperform those in the control group after being exposed to prior knowledge on the same topic.

3.2.1 Research design

The research design is the researcher's plan of how she tested the hypothesis. The research design is part of the research methodology that gives specifics as to how data is going to be collected and how it will be analysed. This includes determining and selecting the population group, methods that were used to collect data, and it also involves how the data was analysed. According to Bless, Higson-Smith and Kagee (2006), a research design is a specified plan of action that is aimed at testing a specific hypothesis. The design of this research study followed the correlational research approach in which the researcher determined the relationship between the development of reading comprehension and the use of background knowledge or any other cognitive reading strategy that could enhance their reading comprehension.

3.2.2 Population and sampling

A sample is a subset of the population. Moustakas (1994) suggests that all participants in the sample should be interested in the meaning of the study, and to have an interest in participating. The population was made up of 94 learners. The sample comprised 40 learners in grade 6 from Tshukudu Primary School, in the Lephalale area in Limpopo Province. The reason for choosing grade 6 was that the learners were at the end of their intermediate phase and in the process of proceeding to the senior primary phase. Thus, their English language competency should be better than when they first entered the intermediate phase. Their reading, too, should be better than when they first entered the intermediate phase. According

to Matjila and Pretorius (2004:5), learners are expected to be able to read and understand about 3000 words and about 9000 words at the end of grade 4.

Sampling in the qualitative research method falls into two categories; probability and non-probability (Leedy and Ormrod, 2010: 205). In probability sampling, the researcher knows in advance that each segment of the population will be represented in the sample whereas with non-probability she cannot foretell that each element of the population will be represented in the sample. The researcher adhered to probability sampling because the aim was that all genders must be represented equally. The quota sampling method was applied by selecting 20 males and 20 females through the score test. Twenty learners got the lowest and 20 learners got the highest in the test that they wrote for sampling.

3.2.3 Selection of experimental and control groups

The sample was chosen as follows:

- On the first day, learners were given a comprehension text. Without reading and explaining the text, the learners had to read independently and answer the questions. Thereafter, the researcher marked the scripts and stacked them starting from the learner who obtained the lowest to the learner who obtained the highest in the test. Males' and females' scripts were separated but were stacked in the same manner.
- Based on the scores, 40 learners were selected with 20 of them having obtained the lowest scores and another 20 selected from the highest scores. Males' and females' scripts were separated, which means that 20 of the samples were males and 20 females. From the sample of 40, the experimental group, and as well as the control group, were selected. Both groups comprised equal numbers of both genders (10 females and 10 males each).

After selecting the sample, the researcher then proceeded as follows:

- For a month the researcher had 20 minutes with the experimental group each day. The topic that they were given was related to “inventions”, such as “The telephone” and “the sewing machine”. For the purpose of comprehending the comprehension passage the researcher had to explain it in the learner’s home language which is Sepedi. She explained what the text-“*the telephone*” was about and what the term “*invention*” meant. For almost a month she gave them even more materials on the same subject, for example “*the sewing machine*”- a story about a man named *Elias Howe* who invented a sewing machine after being motivated by his mother as he saw how his mother struggled with the household chores and after that still had to sew garments. Another story was that of “*Galimoto*” (a Malawi word for a vehicle). It is a story about a young boy who wanted to invent a car made of wires. Learners were also given tasks regarding the stories, for example one of the tasks included the learners having to select one invention that they liked the most and further expand on why they liked that particular invention. Learners were also asked to go and come up with their own inventions and to explain why they liked those particular inventions. When it came to the practical task, learners seemed excited and energised to do the task.
- The final step was on the last day when groups, the experimental group and the control group, were combined and given a comprehension task on the same topic. The topic was still on inventions. The comprehension test was about “*the motorcar*” story. It was a story about Mr Karl Benz who designed a three-wheeled-car. The test was out of 25 marks and the time allowed to finish writing the text was 30 minutes. Questions involved 5 complex questions, 5 true and false questions, 5 multiple choice questions and the last question involved categorising particular objects under the heading “invention” and “natural”.

3.2.4 Research site and context issues

The school is located in Shongwane 3 in Lephalale, Limpopo Province. The school has no library for the learners and the area itself has no library for the community. During an informal discussion with the teachers, those who taught English as a subject said that some of the learners come from poor families, hence they did not have books to read at home. They could only rely on the books provided by the government, which was only one or two textbooks per learner. Because of the conditions of poverty, the learners did not pay school fees and they were provided with lunch at the school for free. The researcher observed that most of the parents are illiterate and therefore the majority of the learners had no help with homework nor any other school tasks that they had to do at home. This could explain the rationale behind why many learners could not read - they lacked the necessary support at home. Home literacy or parental support has been said to influence the level of learning of the learners and if not practised (home literacy) could hinder effective learning. Most learners in the school were being condoned to progress to the next grade even when they were not ready for a higher level or had not passed. One teacher stated that it was because of the Departmental policies that some learners were being pushed to the next grade, hence the level of reading and writing was unsatisfactory. Learner reading literacy fell below the required level that is aligned with their age.

3.3 DATA COLLECTION PROCEDURES

Data collection involves the instruments and procedures that the researcher uses to collect data. The researcher used the following three instruments to collect data; a test and questionnaires for the learners and a structured interview for the teachers. They are described below.

- **Structured interview**

The researcher conducted a structured interview with the teachers. The teachers chosen were those teaching English from Grade 2 to Grade 7. The interview consisted of 15 questions. A structured interview is an interview where questions are structured beforehand, are presented in a fixed format, and are put in the same order

for all the interviewees. To simplify the questions the researcher explained to the teachers what cognitive reading strategies are in their native language so that there would not be confused.

- **Questionnaire (self-tailored)**

Learners selected as part of the sample were given questionnaires after writing the initial test. Some of the questions were designed to reveal if the learners already knew about the topic and if they were familiar with cognitive reading strategies. The questionnaire has been piloted using only five learners in the same grade. The questionnaire was simplified by means of explaining the questions that learners did not thoroughly understand by their native language (Sepedi), especially with terms such as cognitive reading strategies.

- **Reading comprehension test**

About 69 learners wrote a test and from that sample only 40 learners were selected. Furthermore, two groups were selected consisting of 20 learners each, forming the experimental group and control group. The initial test that they wrote was about “*inventions*”. The story was on Alexandra Graham Bell and his invention, the telephone. The next task was to assign the experimental group under a programme that ran for a month. The purpose was to increase their schema on the subject they would later encounter combined with the control group to see if they can recall using their prior knowledge to outperform the control group.

Major questions of the comprehension test included:

Examples:

Question 1: *What did Mr Bell invent?*

Question 2: *What does the word invention mean?*

Some of the questions required a true or false answer. This section consisted of 5 questions:

Question 1: *The waterfall is part of an invention.* True ☐ False ☐

Other questions (were multiple choice questions (5 questions) with the option of 4 answers and the learner had to select the best or correct answer.

Examples:

Question 1: *Which of the following is not part of an invention?*

- A. *Mount Everest*
- B. *Telephone*
- C. *Car*
- D. *Television*

Question 2: *Which of the following is part of an invention?*

- A. *Victoria Falls*
- B. *Africa*
- C. *Mount Everest*
- D. *Telephone*

The last test was on the same subject, but a different story. The story was about *Mr Karl Benz* who designed a three-wheeled-car. Some of the questions were from the initial test. What was different in this test was that learners had to categorise objects that they were given under the heading “*invention*” and “*natural*”. The selected comprehension text was selected based on the grade of the sample and the researcher was assisted by the teacher who taught English in that particular Grade.

3.4 DATA ANALYSIS

Since the sample was small the researcher used Microsoft Excel to analyse data. Data from the questionnaire was given values and entered in the Microsoft Excel and results calculated. Data from the structured interview was coded into categories and then analysed also using the same software. This led to the results which the researcher explains in more detail in the next chapter, which contains an analysis of the results. Data from the structured interviews and the questionnaire were coded into categories and given values so that they could be easily manipulated by this software programme.

3.5 ETHICAL CONSIDERATIONS

Many academic disciplines have professional bodies that publish guidelines to assist researchers to act ethically as they carry out their research (Bless, Higson-Smith & Kagee, 2006:141). The researcher complied with the ethical principles that were involved in dealing with the participants when conducting academic research, such as protecting the participants from any harm and respecting the privacy of the participants regarding anything they revealed about themselves. The researcher explained the purpose of the research and obtained the consent of the participants before utilising any of their information. The researcher promised the participants anonymity and informed them of their rights before engaging with the study. The researcher worked with the participants in a friendly and humane manner. The researcher had a good rapport with the participants since she is an employee of the very same school. She made sure that the participants were comfortable to approach and question her whenever they had queries. Before collecting data, the researcher consulted with the headmaster of the school and asked for his permission to use the school for collecting data. The researcher promised not to distract the learners from their lessons. The learners were the ones that selected the time when they could have a lesson with the researcher. The researcher acted with non-maleficence and beneficence.

3.6 LIMITATIONS OF THE STUDY

The researcher could have considered a bilingual study, testing the use of prior knowledge in reading comprehension in both the learners' native language, which is Sepedi, and English as well. Most of the learners did not comprehend English; and the progress was slow as the researcher had to rely on code switching so that the other learners could catch up with others who were more proficient in English. The programme with the experimental group could have been extended to more than a month as the learners were young and the researcher needed more time to explain and give more attention to the struggling learners. Nonetheless, the results confirmed that if the learner had prior knowledge and knew how to activate it for the purpose of comprehension, the learner could improve his or her ability to read a comprehension test.

3.7 INTERNAL AND EXTERNAL VALIDITY OF THE STUDY

According to Lawson and Philpott (2008:70), the validity of quantitative research concerns itself with whether the sample being examined is valid to represent a reasonable cross-section of the whole population. Secondly, it is concerned with whether the particular type of measurement that is used relates to what is being measured. Reliability is said to be a division of validity. For one's data to be considered valid, one has to use reliable techniques (Elton-Chalcraft, Hansen & Twiselton, 2008: 70-71). Validity and reliability of the results for this research project could probably be determined by the techniques used, and if used again on the same population and still show the same results. The researcher ensured that her sampling method was appropriate and that the instruments measured what she intended to measure.

3.8 CONCLUSION

This chapter looked at the methodology that the researcher applied, including the instruments that were used to collect the data. The methodology that the researcher used was quantitative and data was analysed by computer software known as Microsoft Excel. Three instruments were used to collect data was structured interviews, a questionnaire and a comprehension test. The next chapter presents an analysis and interpretation of the study results.

CHAPTER 4

4. DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

The aim of this study was to ascertain whether the Grade 6 learners of Tshukudu Primary School in the rural Shongwane village in Lephalale District used the cognitive strategy of activating prior knowledge for reading comprehension. This chapter presents the analysed results and their interpretation. Each data variable was presented and treated separately and the conclusion was given at the end to summarise the discussion of the findings.

4.2 STRUCTURED INTERVIEW FOR TEACHERS

The researcher was engaged in a structured interview with the teachers. The questions were intentionally designed to yield information that would reveal the teachers' knowledge of cognitive reading strategies. Nine teachers were sampled. All the sampled teachers were teaching English as a subject from Grades 2 to Grade 7 at the time when the data was collected. Grade 3 had 4 teachers and grade 5 two teachers. All the other grades (2, 6, and 7) had one teacher each. Three teachers had been at Tshukudu Primary School for 5 years or less; one teacher had less than 10 years. The other 3 teachers had been at the school between 21 and 25 years. Only one had been teaching at the school for more than 31 years, and the last participant in the sample had been with the school for more than 26 years. The tables below show the results.

Table 1. How long have you been teaching English as a subject? Experiences and challenges.

Categories	Number of participants	Percentages %
English as a language of learning and teaching problem to the learners	3	33.3
Reading a problem	4	44.4
Writing a problem	1	11.1
Not familiar with the English language	1	11.1
Total	9	100

The teachers were asked to give their experiences of teaching English in their school. As indicated in the above table (Table 1), 33.3 percent indicated that English in itself was a problem, whereas 44.4 percent of the teachers stated that the main problem was that learners could not read. Some of the reasons also mentioned that learners could not read in English because they were encountering the language for the first time. One educator explained that the challenge that he faced was that reading and writing were a problem altogether when it comes to L2 (English in their case).

Table 2. How would you rate learners' reading ability?

	Number of participants	Percentages %
Irrelevant	4	44.4
Learners cannot read	2	22.2
Limited few can read	2	22.2
Total	8	88.9
Missing System	1	11.1
Total	9	100

The teachers were asked to give their thoughts on their learners' reading competency. Forty-four point four percent of the teachers did not understand the question. One teacher opted not to answer the question at all. The other 22.2

percent of the teachers said that reading remained a bigger problem and 22.2 percent answered that those who could read were fewer than those that cannot read. The researcher's assumption was that these learners' problem could be that in the Foundation Phase (Grade R-2), they were taught in the first language (L1), which is Sepedi. When they made a transition to grade 4, most of them fell behind in reading English because they were being taught in English for the first time. The majority of the learners adjusted slower than others. Some of them even had to rely on Departmental Policy which states that no learner will repeat a certain grade for more than two times to proceed to the next grade.

Table 3. Do you teach reading to the learners?

	Number of participants	Percentages %
No	1	11.1
Yes	8	88.9
Total	9	100

Teachers were then asked if they taught learners to read. Of the nine (9) teachers, 88.9percent said that they taught learners how to read. Only, 11.1.percent responded with a “no” to the question. And all the teachers taught English as a subject in their schools. According to the internal policy at their school (Tshukudu 02 Primary School), teachers are required to start their lessons by having the learners read one or two sentences or a paragraph to start off the lesson each day. Since many indicated that the majority of the learners did not read, it became questionable whether teachers ever taught reading during the first few minutes of the period. If they did why were the majority of the learners still struggling with reading? Following this, it was important to find out whether there were strategies in place to improve their learners' reading abilities.

Table 4. What are some of the challenges that you are faced with when teaching reading?

	Number of participants	Percentages %
Lack of concentration	1	11.1
Pronunciation a problem	6	66.7
Cannot read at all	2	22.2
Total	9	100

In table 7, the teachers were asked to share the challenges that they were faced when teaching reading. The majority (66.7%) of the teachers labelled pronunciation as the prime problem. They explained that when learners had to read, they pronounced words wrongly. The other 22.2 percent said that the learners could not read at all. One teacher said that when she asked some learners to read they would get amazed and could not try to read even one word. Some (11.1%) said that a number of the learners lacked concentration. She also said that when she attempted to teach reading, the learners were very playful and could not focus on what they were being taught. The fact that some learners lacked concentration and were playful could be attributed to the possibility that the learners had no linguistic schemata, that is, recognising letters to make meaning out of words. Pour-Mohammadi & Abidin (2011) state that linguistic schemata can be described as having the knowledge of the letters and their corresponding sounds. This could explain why learners lacked concentration when they were supposed to read and why some of the learners mispronounced words, owing to their little or no knowledge of linguistic schemata. When they were asked if they taught learners these cognitive (thinking) reading strategies, they all responded that they did try to teach them. However, they stated that the problem was that the learners were still too young to understand these strategies and to apply them. They may have stated that they teach the strategies because it would have embarrassed them to admit to the readers that they did not know how to teach reading comprehension strategies.

Table 5. Is there something that you as a teacher do to minimise the learners' reading difficulties?

	Number of participants	Percentages %
No	1	11.1
Yes	8	88.9
Total	9	100

Table 6 indicates how many teachers said they had intervention strategies to deal with the challenges that they came across when teaching reading. Some said that they gave them some extra reading after school. Some teachers said that they used teaching aids, but did not specify or name which kind. Only one teacher said that she did nothing and just left the learners with their reading difficulties alone. During an informal discussion, the teachers argued that they did not have the support of the parents. They said that the parents were not urging the learners to study at home or support them with their reading. This brings up the phenomenon of "Home Literacy" and its role or impact on the learner's education.

Table 6. Have you ever heard of cognitive (thinking) reading strategies?

	Number of participants	Percentages %
No	5	55.6
Yes	4	44.4
Total	9	100

Table 7 represents the results of the teachers regarding cognitive (thinking) reading strategies. About (55.6%) of them said that they had never heard of anything about reading strategies. One of them said that maybe he might know them but had no idea if they are cognitive reading strategies. The other 44.4 percent of the teachers indicated clearly that they knew something about reading strategies. When asked to name just a few, it was evident that they did know reading strategies as they were able to name the correct ones. Some of the strategies that they named included: recalling, use of pictures to predict the story, and the use of prior knowledge to infer meanings.

Table 7.If you don't know about reading strategies how do you teach learners to comprehend what they are reading?

	Number of participants	Percentages %
Irrelevant	1	11.1
Repeat and explain words	2	22.2
Value 3 and 5	2	22.2
Total	5	55.6
Missing System	4	44.4
Total	9	100

The teachers who did not know reading strategies were asked a follow up question on how they taught learners to comprehend what they were reading. Some of them (22.2%) said that they did so by repeating the words and explaining the words in their native language. Others (22.2%) said that they read the story to the learners and interpreted it for them (value 3) and explained words in their native language as well (value 5). The other 11.1 percent gave an answer that showed that teachers lacked the understanding of what the question required of them. The other (44.4%), of the missing system (as shown on the table above) represents the teachers that said they knew about cognitive (thinking) reading strategies (see table 6). Teachers who knew about cognitive reading strategies were able to name the correct strategies. But since the majority of the learners had a reading problem, this suggested to the researcher that the teachers knew cognitive reading strategies but did not know how to teach learners how to activate those strategies for the purpose of comprehending a text.

Table 8. Do you think there is a way which can help improve learners' poor reading skills in South African's educational system?

	Number of participants	Percentages %
No	4	44.4
Yes	2	22.2
Definitely	3	33.3
Total	9	100

Table 9 presents teachers' answers to the question they were asked if they thought there was something that could be done to minimise learners' poor reading. Several participants (44.4%) felt that there was nothing that could be done about minimising poor reading at their school whereas 22.2 percent said there was something that could be done, but did not specify what it could be. The other 33.3 percent felt strongly about it and said that there was need for effective interventions. Some suggestions that were given by the teachers were that the school needed more reading and teaching materials and additional infrastructure such as a library. Others said that more teachers needed to be recruited to share the work so that there could be time to give more attention to the learners. Some of the teachers suggested the use recurring workshops for the teachers.

All the teachers were asked to share any information they had in relation to the study. Most of them felt that the public schools suffer from overcrowding of classes and that the school needed to employ more teachers. They felt that the teacher-pupil ratio (which is 1 teacher to every 30 learners in each class) was working against the teachers and learners. One teacher mentioned that the 1:30 ratio was not working because this meant that there was not enough time to give each learner enough attention. Only one teacher mentioned the competency of the teachers. She said that some teachers did not have the competence to teach English and that they were scared to ask for help in areas where it mattered. The overall results showed that reading in this school was poor because the learners had difficulty with the language, not only with the reading skills. English was a problem as learners were only introduced to it at a later stage in the foundation phase. This language problem accompanies them to the senior phase, said the teachers. This has provoked a big debate among teachers. From an informal debate, the researcher discovered that most of the learners were even condoned from the first grade to the last grade (grade 7) in primary because of the policy that a learner must not repeat one grade more than 2 times and that a learner of a certain age should be in a certain grade despite of the learner's performance.

4.3 INITIAL TEST SCORE RESULTS

Levels	Number of participants	Percentages %
Level 1 (0-29)	33	35.1
Level 2 (30-39)	6	6.4
Level 3 (40-49)	29	30.9
Level 4 (50-59)	6	6.4
Level 5 (60-69)	11	11.7
Level 6 (70-79)	3	3.2
Level 7 (80-89)	6	6.4
Total	94	100

The above table (9) reveals the learners' comprehension test scores. This test was written at the beginning of the project before the selection of the sample for the study. There were 94 learners from grade 6A and grade 6B combined. They wrote the test together. From the test scores 40 samples were selected to represent the class. Twenty were selected from the group that got the lowest scores and 20 were selected from the group that got the highest score. Table 12 shows that most learners did not do well. Several (35.1%) learners performed below the required level. They failed the test by obtaining level 1. The level that followed was level 3 with a percentage of 40-49 which was the average level. Thirdly, 7 percent of the learners managed to get to level 5 between 60-69%. Level 2, level 5 and level 7 had 6.4 percent of the learners in the category. Level 6 (70-70%) had the least number of learners (3.2%). This indicates that most of learners were not familiar with or had little background knowledge on the topic at hand and so did not adequately comprehend the text to answer the questions successfully.

4.4 RESULTS FROM THE LEARNERS' QUESTIONNAIRE

The 40 learners that were sampled were given a questionnaire to complete. The researcher helped the learners to answer the questions by explaining the questions and the answer options in Sepedi. The table below (10-22) reveal the results. Some of the vital questions to the study involved asking if the learners were familiar with cognitive (thinking) reading strategies and how often they practised them in reading.

Table 9. How often do you read?

	Number of participants	Percentages %
Everyday	6	15.0
Very often	24	60.0
Only in school	8	20.0
Not as all	2	5.0
Total	40	100.0

Table 10 reveals that 60 percent of the sampled learners practised reading very often. Fifteen percent said that they read every day. Only 20 percent of them stated that they only read in school and about 5 percent said that they did not read at all. Those who said they did not read, had their scripts marked separately to see if they could be able to answer some of the questions from the comprehension test, and they obtained zero percent in their test. It was also evident from their scripts that their writing was not on par with learners who should be in grade 6. Furthermore their reasoning capacity lacked logic. Instead of answering the question, they would copy the question itself. This indicated that they could not read and understand the question hence they opted to re-write the question as their answer possible due to the fact they didn't understand the language (language barrier occurred).

Table 10. What material do you like reading?

	Number of participants	Percentages %
Magazines	9	22.5
Newspapers	5	12.5
Storybooks	7	17.5
School books	14	35.0
Others	1	2.5
Total	36	90.0
Missing System (those that didn't answer the question)	4	10.0
Total	40	100.0

Of those who indicated that they did read, 35 percent gave school books as the reading material that they liked to read. Another 22.5 percent named magazines as their preferred reading material while 17.5 percent said that they preferred reading newspapers. A small section of the sample (2.5%) did not specify what kind of material they liked reading. To get the learners to read, teachers should not only let the learners read content books. There should also be an after-school-study where they are presented with reading materials such as newspapers, magazines, story books et cetera. Learners should be encouraged to pick any reading material and read. Where they do not understand should ask their reading friends or consult with their teachers.

Table 11. Do you like reading?

	Number of participants	Percentages
Very much	9	22.5
Sometimes	28	70.0
Not really	1	2.5.
Not at all	2	5.0
Total	40	100

The above table represents responses of learners to question whether or not they liked reading. Seventy percent said that they liked reading “sometimes”, whereas only 5percent revealed that they did not like reading and the other 22.5 percent answered that they did like reading very much. The researcher assumed that those learners who did not like reading said so because they didn’t know how to read or the habit of a reading culture was not instilled in the from an early age.

The tables below represent the results of the questions that were specific about the topic they wrote about.

Table 12. Have you ever come across this topic before or something similar?

	Number of participants	Percentages %
No	10	25.0
Yes	30	75.0
Total	40	100.0

Seventy-five percent of the learners declared that they had read about or had some knowledge of the topic. Twenty-five percent said that they had never come across the topic. Test scores revealed that more than 40 percent did not pass the test, while more than 70 percent of the learners said that they were familiar with the topic. The researcher assumed that it could be that the learners never came across such a topic before in the previous grades or that they had but had forgotten. Alternatively, learners may have known about the topic but could not understand it in English.

Table 13. How much do you think having background knowledge related to the topic has helped you?

	Number of participants	Percentages %
Very much	14	35.0
A fair amount	15	37.5
Not much	3	7.5
Total	32	80.0
Missing System	8	20.0
Total	40	100

In the above table, most learners said that they found prior knowledge helpful to. Thirty-five percent of the learners said that they found prior knowledge very helpful to them in comprehending the text. Only about 7.5 percent said that they did not find the use of prior knowledge to be helpful to them. The researcher concluded that those who did not find prior knowledge to be helpful could have been unable to correctly activate prior knowledge to effectively comprehend the text or it could be that they did not have prior knowledge of the topic at all.

Table 14. How did you learn or acquire background knowledge on the topic?

	Number of participants	Percentages %
Teacher	29	72.5
Myself	1	2.5
Peer teaching	2	5.0
Total	32	80.0
Missing system	8	20.0
Total	40	100

Table 15 indicates that 72.5 percent of the learners choose the teacher as their source of information about background knowledge based on the test given to them. Taking the test scores into consideration, it could only mean that the learners had short memory because the scores suggest that a majority of the learners were not aware or did not understand the topic. Only 2.5 percent selected themselves as the source from which they learned the topic. Five percent listed peer teaching as the source from which they acquired their knowledge on the topic. However, the researcher could not ascertain if the learners knew about peer teaching because when they were asked to work in groups they got confused. The learners were also used to working individually as they hid their notes from each other all the time. The researcher recommends that the teachers should start encouraging learners to work in pairs or groups. There should also be after-school-study groups where they get the learners to teach each other the subject that they know best. The parents at home should also start encouraging the learners to limit their play time and start focusing on their school work. Although this could be a challenge as most parents are not educated or literate themselves, meetings can be held at schools. Teachers can use these meetings with the parents to teach them about the significance of the parent in his/her involvements in the child's education.

Background knowledge is very important when it comes to reading comprehension. According to Roschelle (1995), it is the responsibility of the teachers to know what prior knowledge learners already possess. Roschelle (1995) states that teachers' focus is the idea that they want to impart to their learners as such they must

understand that prior knowledge ensures that learners best comprehend the message delivered by the teacher (see Chapter 2, section 2.8).

Table 15. Do you think you would have understood the topic better if you had some kind of background knowledge related to it?

	Number of participants	Percentages %
No	1	2.5
Yes	8	20.0
Total	9	22.5
Missing System	31	77.5
Total	40	100.0

Of those that said they did not understand the topic, 20 percent of them thought that they could have understood the topic better had they had prior knowledge of it before. A small number (2.5%) of respondents still thought that even if they had had prior knowledge about the subject they still would not have understood it better. This suggested to the researcher that some learners at this school were less motivated. With respects to the participants, some of the learners grow up with parents that are less or not educated, so the learners have no one to look up to. One learner was asked what she wanted to be when she grew up and she answered “to sell tomatoes”. Most of the boys chose working on farms as their future careers. The learners seemed to lack information about the real world and only got motivated by what they saw around their community. They were not exposed to different careers and other countless possibilities. The school could help by taking the learners out to career guidance and school trip sand to have different people who succeeded under similar conditions coming to motivate them.

Table 16. Are you familiar with reading strategies?

	Number of participants	Percentages %
No	12	30.0
Yes	27	67.5
Total	39	97.5
Missing System	1	2.5
Total	40	100.0

The learners were asked if they knew about reading strategies and most of them, about 67.5 percent, said they had an idea about reading strategies. Thirty percent said that they had no idea of what reading strategies are. Those that said they knew about reading strategies were asked to name some of the strategies. None of the learners could name even one correct reading strategy. Some would name “I can read English” as a strategy. Some would name the “teacher” as a strategy. The researcher thought of two possible reasons why the learners did not know reading strategies: 1) It could be that the learners were taught cognitive reading strategies but did not understand them or had forgotten about them or 2) It could be that the teachers may have not taught them at all.

Table 17. Do you use cognitive (thinking) reading strategies to help you understand what you are reading?

	Number of participants	Percentages %
No	6	15.0
Yes	25	62.5
Total	31	77.5
Missing System	9	22.5
Total	40	100.0

Even though learners failed to name the correct reading strategies, 62.5 percent continued to say that they used reading strategies when they read to help with comprehension. About 15 percent said that they did not use any reading strategy. This led the researcher to conclude that either the learners did not know cognitive

reading strategies or that they were too young to understand what the researcher required of them or were too embarrassed to show their ignorance of the strategies.

Table 18. How often do you use these reading strategies?

	Number of participants	Percentages %
Always	10	25.0
Very often	4	10.0
Sometimes	11	27.5
Never	6	15.0
Total	31	77.5
Missing System	9	22.5
Total	40	100.0

Twenty percent (20%) of the respondents further said that they always used “those” strategies when reading. Furthermore, 27.5 percent said that they sometimes used the strategies whereas 10 percent said that they frequently used the reading strategies. Since the learners did not mention a single correct strategy, this made the researcher question whether the learners did really understand cognitive (thinking) reading strategies.

Table 19. How did you learn about those reading strategies?

	Number of participants	Percentages %
Teacher	26	65.0
Myself	2	5.0
Total	28	70.0
Missing System	12	30.0
Total	40	100

When asked from whom they learned the reading strategies, 65 percent of the respondents named the teacher as their source. Only 5.percent said that they taught themselves. In table 9, 44.4 percent of the teachers indicated that they knew cognitive reading strategies. All teachers said that they taught learners the reading strategies. Since the learners could not name any of these strategies the researcher

then concluded that the teachers either taught the reading strategies but the learners could have been too young to understand what cognitive reading strategies were or teachers did not teach these strategies because they did not know how.

Table 20. Would you like to know more about cognitive (thinking) reading strategies that can assist your reading comprehension?

	Number of participants	Percentages %
No	1	2.5
Yes	27	67.5
Never	1	2.5
Definitely	11	27.5
Total	40	100.0

About 67.5percent of the respondents said that they wanted to know more about reading strategies. Some (27.5%) felt strongly about learning strategies with 2.5 percent saying that they did not want to learn about the reading strategies. The other 2.5 percent of the respondents said they would never learn reading strategies, and these were the respondents that did not understand the topic. This could mean that some of the respondents may have answered the question with little or no understanding or just did not care much.

Table 21. Do you think teachers should be responsible for teaching you cognitive (thinking) reading strategies that can assist your reading comprehension?

	Number of participants	Percentages %
No	15	37.5
Yes	25	62.5
Total	40	100.0

The majority of the learners (62.5%) felt that it was the duty of the teacher to teach them reading strategies, whereas 37.5 percent felt that they should not teach them. When asked to provide justification for this most of them failed to give a valid or

logical reason. However some of the respondents stated that they wanted to be responsible for their own learning and not depend too much on the teachers.

4.5 EXPERIMENTAL GROUP TASK SCORES

After the sample was selected and the two groups (experimental and control group) were formed, the experimental group was put under a programme of about a month. All this time, the group exposed to reading materials and was being taught. During this time they were given tasks and exercises that talked about things that were invented. Below are the results of the formal tasks that they were given after two weeks.

Table 22. Task scores

Scores	Number of participants	Percentages %
6-10	2	11.1
11-15	4	22.2
16-20	12	66.7
Total	18	100.0

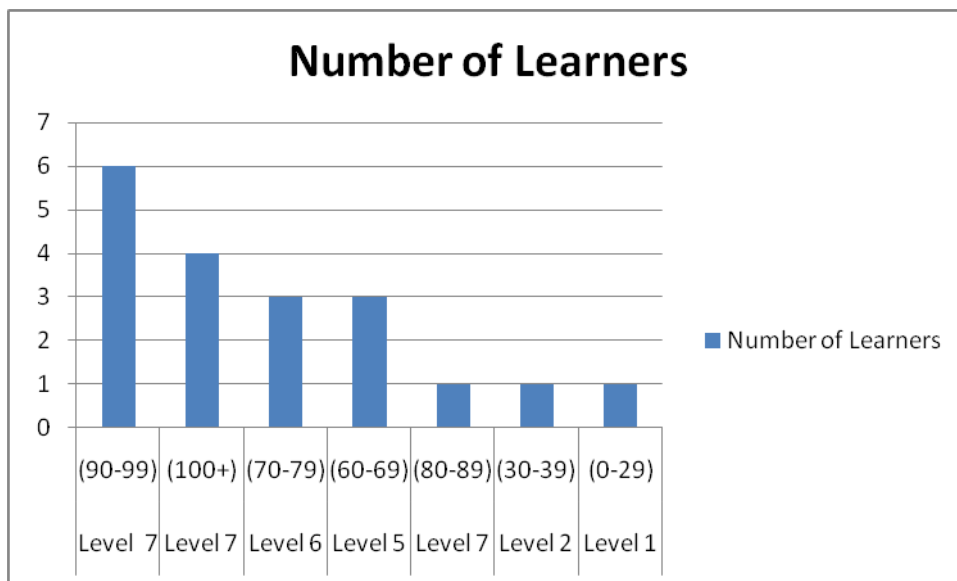
After two weeks of being given numerous exercises, the experimental group was given a task to see if they were grasping what they were being taught (formative assessment). The task required them to sort items and place them under the appropriate category. The categories were “inventions” and “naturals”. About 66.7 percent of the learners did splendidly well. A sample of 22.2 percent also managed to do good with the task obtaining between 11 and 15 of 20 marks of the task. Only 11.1 percent of the sample got below 10 marks but still managed to fall under the average by scoring between 6 and 10 of 20 marks of the task. The results (improved results of the task scores) came after days of trying to explain the subject to them. Initially, most of the learners did not understand the subject. Some caught up only later. The two that scored the least showed that they had understood the topic when they were taught, even when it meant being taught in their native language. When tested orally using their native language, the learners could understand what the researcher was talking about. This led the researcher to conclude that prior

knowledge of a subject might be useful, if it is accompanied by an understanding of the language that learners read.

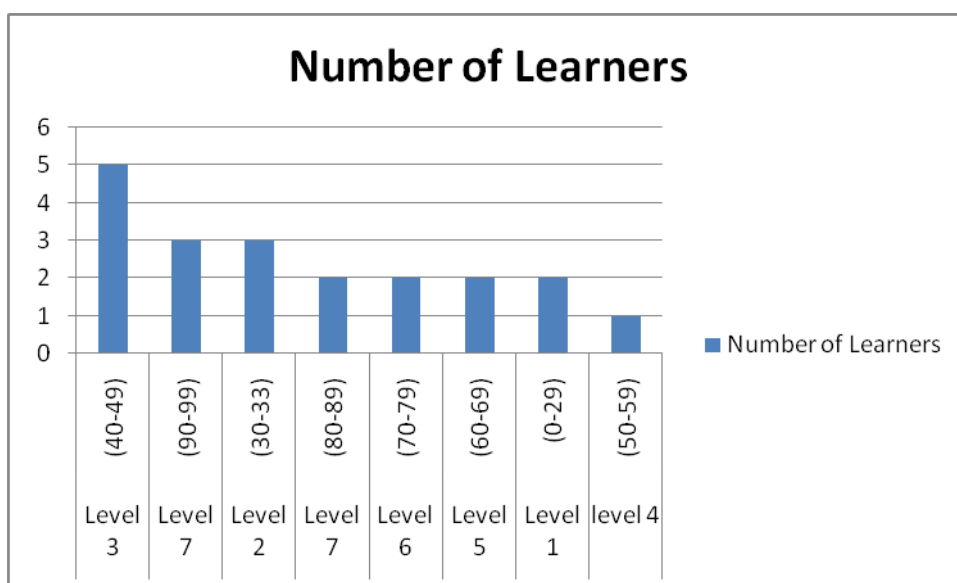
4.6 FINAL TEST SCORE RESULTS

Below are the two charts which represent the scores of the two categories: experimental group and control group.

Experimental group



Control group



The above bar-graphs demonstrate the results of the final test scores. The test was written on the last day and both the experimental group and control group took the test. The experimental group was put into a programme that ran for about four weeks. The test given to both groups was on the same subject. The experimental group had the advantage that they were exposed to the same topic for several weeks. The results show that the highest number of learners (experimental group) scored between 90 and 99 of 100 marks of the test followed by those who obtained full marks (100). In the control group learners obtained between 33-39 percent and 90-95 percent. The lowest percentage obtained in the experimental group was between 0-29 percent. In contrast, the lowest percentage obtained in the control group was between 50-59 percent. To sum up, most learners in the experimental group had managed to perform well and their scores were better than most learners in the control group. The control group did not all do poorly, but an assumption could be made that had they been exposed to the topic as the experimental group, they would have been at the same level as the latter. This study produced the same results as the study that was reported by Van Keer (2004:38) in which a survey was done to test how prior knowledge affected the results of a group of college students. The experimental group outperformed the control group. The only difference is that this present study was done on primary school learners. Nonetheless the findings are similar (see Chapter 1, section 1.2.2).

4.7 CONCLUSION

The researcher observed that while she was busy with the experimental group, the language issue appeared to be a barrier. Since the study was conducted using English as the medium of instruction, the researcher was compelled to code switch regularly so that the learners could understand what the researcher was teaching them. Most learners in the experimental group appeared to do well with other tasks (practical work that did not require writing and reasoning), such as drawing any invention which they liked most. But when asked to explain why they liked such an invention, they failed to explain the reason why they liked the invention which they chose and drew. They could only attempt to explain when directed to explain it in their own language (Sepedi). In the final text, it was shown that some of the learners could have done better if they had comprehended the questions. In simple terms,

reading comprehension was the major stumbling block for most of the learners. Prior knowledge seemed to have worked in most of the learners, especially the experimental group, with regard to the initial test scores where there were of marked improvements. This led the researcher to conclude that prior knowledge and reading comprehension could be related and in order for one to activate their prior knowledge for learners to be able to read and understand what they were reading. The issue of proficiency in the second language was always a factor and to rely on code switching and translation to the native tongue (Sepedi).

CHAPTER 5

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This study sought to test one of the reading cognitive strategies, namely, prior knowledge, to see if it worked for learners in the primary level. The study was prompted by the studies that showed that prior knowledge worked in improving the reading comprehension of learners. According to scholars such as Altarriban and Forsythe (1993), it is the schema theory that has constantly been used to elucidate how the comprehension procedure functions. The schema theory builds up prior knowledge that readers release when reading to make comprehension of the text easier. It is this prior knowledge that helps them to understand the text. It is suggested that a learner who lacks prior knowledge will have difficulty understanding the text or will not understand the text at all. On the other hand, a learner whose prior knowledge is advanced will understand the text better. Learners have to keep building up their schema theory by increasing their prior knowledge to enhance their reading comprehension. Therefore, the aim of the study was to see if Grade 6 learners in Tshukudu Primary school in Lephalale could improve their comprehension competence after being exposed to adequate information (that is to increase their schema) on one topic for several weeks before being assessed by means of a comprehension test. In chapter 4, the researcher analysed and interpreted the findings of the data, and in this chapter, the researcher provides the summary of the study, conclusions and recommendations based on the outcome of the study.

5.2 STUDY AIM AND OBJECTIVES

The study aim and objectives were necessary in order to guide the investigation of the awareness or knowledge of and the use of prior knowledge by Grade 6 learners. The aim of this study was to ascertain whether the Grade 6 learners of Tshukudu Primary School in the rural Shongwane village in Lephalale District used the cognitive strategy of activating prior knowledge for reading comprehension. The

researcher noted that learners had no knowledge of any of the cognitive reading strategies and also, that their reading was not on par with the level of the grade that they were in. They were below the expected average. Some of the learners struggled to read whereas others could not read at all, especially in English which was the main medium of instruction in the school

The following two objectives directed the study:

- To determine if learners are aware of and apply reading comprehension strategies to enhance their reading comprehension.
- To determine if the application of prior knowledge as a cognitive reading strategy in particular, can improve the reading comprehension of Grade 6 learners in Tshukudu Primary School.

Objective 1: Through analysis of data, the researcher observed that the learners were not familiar with the cognitive reading strategies which would help them to improve their comprehension competency. The study also revealed that most of the learners could not read, especially in English. The researcher also discovered that most of the learners in Grade 6 had a problem with reading and writing from the foundation phase. The reason why they were in grade 6 was that the departmental policy condoned them to the next grade. This led to the problem of them not knowing, or understanding cognitive reading strategies as they could not read or understand. This suggested to the researcher that, the Department of Education may be after statistics as opposed to quality. The researcher suggests that the departmental policy be reviewed. Another assumption that the researcher made about what leads to poor reading is that the social and economical aspects of this village limit the learners to go out and be exposed to a variety of things, which explains why their schema is limited. Another factor was that a number of teachers (55.6%) had no knowledge of reading strategies; hence they could not instil the knowledge in the learners, let alone instruct them on how to activate reading strategies to help them with comprehension when engaging in the activity of reading. According to Klapwijk (2012), teachers rarely teach reading strategies explicitly in South African schools because they feel that teaching reading comprehension strategies takes a great deal of their classroom time. In addition teachers revealed that they were not sure how to teach comprehension and that they required a great

deal of support to understand and implement comprehension strategies (Klapwijk, 2012). This finding may indicate a shortcoming in teacher training in South Africa.

Objective 2: This objective tested only one strategy namely, prior knowledge. In order to test the strategy the researcher had to divide the sample into two groups. The two groups were the experimental and control group. The experimental group was exposed to extensive knowledge input on the same topic daily for a month. The test scores showed that the experimental group outperformed the control group proving that prior knowledge provides readers with an advantage because prior knowledge aids comprehension. The findings were influenced by a major obstacle of language. Some of the learners could have done better had they had a better understanding of English. Since some of the learners could not read and understand the English, prior knowledge failed to work for some of them (only 3 learners got below 40).

5.3 SUMMARY OF THE STUDY

Chapter 1

This chapter highlighted some of the issues topics that were necessary to execute the study. It highlighted the aims and the objectives of the study that listed the reasons for the researcher to undertake the study. The main problem elucidated in chapter 1 was that the majority of learners in South Africa struggle with reading and reading comprehension. Some of the factors that contribute to this problem include; the old apartheid system, few or no schools with libraries, teacher competence amongst others. Trok (2005:59) states that due to the circumstances left behind by Bantu Education, even after apartheid, many South African black families were left with poor writing and reading skills or no skills at all. Results indicated by the Progress in International Reading Literacy Study (PIRLS, 2006: 18-19) show that South Africa came last in reading literacy when compared to the performance of some 44 countries. For this reason, the researcher undertook the task to test prior knowledge as one of the cognitive reading strategies as part of the intervention to improve the reading comprehension of learners. The strategy was tested on Grade 6 learners in Tshukudu Primary School in Lephalale, Limpopo Province.

Chapter 2

This chapter presented the findings and theories of other studies from relevant literature addressing reading comprehension. The major theory this study is based on is the Schema Theory. According to Richgels (1982:54), schema theory plays a significant role in comprehending a text because it sees comprehension as a continuing learning process where applying prior knowledge plays a vital role in one's understanding of the text. Being exposed to or having more knowledge of the subject gives one a better chance of having a successful interaction with the text. According to Adams and Bruce (1980), comprehension is the application of prior knowledge to generate new knowledge. Scholars maintain that, without prior knowledge, a difficult object like a written text will not just be complex to interpret but will be meaningless as well (Adams & Bruce, 1980). According to Xigo-hui, Jun and Wei-hua (2007), the more the reader knows about the topic, the more the reader will effortlessly and quickly comprehend the text. Readers with more background knowledge stand a better chance of comprehending and remembering the text quickly. The conclusion is therefore that, schema theory and prior knowledge as one of the cognitive reading strategies are interrelated.

Chapter 3

This chapter outlined the methodology and the researcher's design to collect data, guided by the study objectives. The research methodology utilised was the quantitative approach. The researcher was concerned with the number of learners that were going to improve their reading comprehension after being exposed to prior knowledge, therefore proving the theorem that prior knowledge enhances the learner's ability to comprehend a text better. Babbie (2010: 422) defines quantitative research as "the numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena that those observations reflect". Data were manipulated and analysed using computer software known as Microsoft Excel, explained below.

The research design was the part where the researcher constructed a plan of how she was going to find answers to the research questions. According to Bless, Higson-Smith and Kagee (2006), a research design is a carefully, specified plan of action that is aimed at testing a specific hypothesis. In the research design, the

researcher included the instruments she was going to use and how the researcher was going to select her sample to manipulate the data.

➤ Instruments

The instruments that were used to collect data included structured interview, test scores and questionnaires.

➤ Sample selection

The sample was selected from the initial test scores that the learners had to take. Only 40 learners were selected from the test; 20 learners who obtained the lowest mark and the other 20 learners who got the highest mark. From the 40 learners, two groups were formed, an experimental group and a control group. Each group consisted of 10 learners from the group who obtained the lowest marks and 10 learners from the group with the highest mark.

➤ Ethical considerations

As an employee at the targeted school, the researcher discussed the plans with the principal, and guaranteed that she would not disturb the lessons and the procedures of the school. The learners were told of their rights and that their anonymity would be guaranteed. The teachers were also assured of their anonymity.

➤ Data analysis

Since the sample was small the researcher used Microsoft Excel to analyse data. Data from the questionnaire was given values and entered in the Microsoft Excel and results calculated. Data from the structured interview was coded into categories and then analysed also using the same software.

5.4 SUMMARY OF THE FINDINGS

The major findings of the study are presented below per variable.

➤ **Teachers' results**

Most of the teachers stated that they taught children to read, but indicated that English in itself is a problem; hence most learners could not read and write because

it had to be done in English. Teachers teaching the Intermediate Phase and Senior Phase cited problems in English teaching. Their argument was that the learners start learning English in grade 4 (Intermediate Phase) and that presented a challenge to teachers as they have to build a foundation from the start. Teachers found that having to build the foundation from the ground on (teaching English) works against them because there are many learners in the school and they had numerous subjects to teach. Some of the teachers said that they had to teach large classes at a time, which they found difficult as they could not give individual attention to learners who need it. In terms of cognitive reading strategies about 44.4 percent of the teachers stated that they knew about cognitive reading strategies whereas 55.6 percent were not aware of the reading strategies.

➤ **Initial test scores (experimental group and control group combined)**

Most learners (47.5%) failed the initial test obtaining between 0 and 29%. Only 15 percent of the learners obtained between 80% and 100%. 27.5 percent of the learners obtained between 60% and 69%, followed by 25 percent of the learners who obtained between 30% and 35%. Only 7.5 percent of the learners obtained between 70% and 79%. Of the 47.5 percent that failed, half of them were grouped under the experimental group to see if their results would improve after a month while the other half was grouped under the control group.

➤ **Results from the learners' questionnaire**

Learners were given a questionnaire to answer. The researcher's aim was to test if learners were aware of cognitive reading strategies. Only 30 percent of the learners said they did not know about cognitive reading strategies. Close to 67.5percent said that they were aware of cognitive reading strategies. However, none of the learners who said that they were aware of cognitive reading strategies could name one correct strategy when asked to identify them.

➤ **Experimental group's task results**

Three weeks into their programme, the experimental group wrote a task to test how far they were with their knowledge. The task was out of 20 marks. A total of 66.7 percent of learners did very well, obtaining between 16 and 20 of the total 20 marks. Only 22.2 percent of the learners obtained between 11 and 15 of the total of 20

marks, whereas only 11.1 percent obtained between 6 and 10 of the total of 20 marks. None of the participants obtained less than 6 in the task.

➤ **Final test scores (experimental group compared to control group)**

There was an improvement on the experimental group, with most learners obtaining between 90 and 98 percent. In the control group, most learners obtained between 40 and 49 percent. The least percentage that was obtained in the experimental group was between 0 and 39 percent, whereas in the control group, the least percentage obtained was between 50 and 59 percent. No one in this group obtained 100 percent. Most of the learners who passed in the control group indicated guess work. When the question was re-phrased differently, the learners could not get it, for example, most learners could not explain what the word “invention” meant, but in the multiple question section, most of them chose the correct option for the similar question. In the experimental group, 20 percent of them managed to obtain 100 percent. The results proved that prior knowledge is useful in improving comprehension. The sample in the experimental group could have done better if all of them understood English. The strategy did not work on some of the learners because they could not read in English. Those that were able to activate prior knowledge were among those who had some understanding of the English language.

5.5 RECOMMENDATIONS

During the process of collecting data the researcher noted that prior knowledge could assist comprehension provided that the learners had a better comprehension and command of the language of instruction, which is English. The study was conducted using English as the medium of communication between the learners and the researcher. The study observed that language and cognitive reading strategies may be related. A child who cannot read and write in a certain language may not be able to apply reading strategies for the purpose of comprehension. To that learner, everything may seem foreign. Other factors that were noted were that, in grade 6 some learners could neither read nor write especially in English. The researcher had to rely on code switching most of the time when discussing ‘inventions’ in order for the learners to comprehend what the researcher was teaching them. In fact, more of the native language was used during the lesson than the language of instruction.

However, the last test scores proved that prior knowledge indeed works to help learners improve their reading comprehension, especially for those who already possess an understanding of the language.

This study indicated that reading and writing in English, should become prime factors, especially in rural schools because most of the learners in these schools go to secondary level with little or no competency in reading and writing proficiency. A learner in a rural school starts learning English or using English as a medium of instruction in grade 4, which, according to the researcher, may be a major reason why many learners fall below the required level when it comes to reading and writing in English. According to the language in education policy, the underlying principle is to maintain the use of home language as the LOLT, especially in the early years of learning, while providing access to additional languages (Department of Basic Education, 2010). In some schools, it has been discovered that some teachers feel that the present South African LiEP, which calls for the switch to English instruction in Grade 4 in schools which have the majority of learners speaking English as a second language, adds to the educational failure among learners (Dryer, 2003). The researcher recommends that the teaching and learning of the English language starts at an earlier level, namely, the first grade, Grade R. The researcher sees this fit because, in as much as home languages are important, English as a global language opens many doors to the outside world such as universities, workplaces, travelling et cetera. Being affluent in English, as such, is a vital tool for survival. Poor reading comprehension may also occur due to the fact that teachers used the native language most of the time in class, even when teaching required the use of English. Therefore, the researcher recommends that code switching be kept to a minimum level and only be used when necessary. Learners should be used to being taught and spoken to in English and the teachers should always encourage the learners to read on their own. Learners should be taught to be independent readers. This will not only make them fluent readers but it will not increase their schema thereby adding to their prior knowledge which will in turn increase or enhance their comprehension. Not only should learners be encouraged to read English written materials but they should also read fluently in their native language as this will form basis to the ability to read in a second language. This is in view of the possibility that a learner who knows how to read in his or her native language may apply the strategies that she or he learned when reading in a different language.

This study indicates some areas that may need further investigation, such as the relation between the following:

- cognitive reading strategies and age;
- cognitive reading strategies and language;
- cognitive reading strategies and teacher competency in teaching reading;
- as well as cognitive reading strategies and topic interest.

Since the researcher worked with a small sample, the researcher may work with larger sample in a future study, and include learners from secondary schools too. The study may also be bilingual, comparing learners' reading skills in the native language and English.

5.6 CONCLUSION

The aim of the study was to test prior knowledge, as one of the cognitive reading strategies, to see if applying the strategy works for learners in the primary level. The study consisted of the experimental group and the control group in which the experimental group was exposed to a teaching intervention to build up prior knowledge for a period of a month. The researcher predicted that prior knowledge would enhance the understanding of the learners, as it was suggested and proved by other scholars who conducted the same study. The study noted that prior knowledge does improve comprehension provided that the learner understands the language of instruction.

The results from the teachers revealed that teachers are also not familiar with the reading strategies and that although they teach the learners to read fluently, they are not concerned about the learners comprehension of what they are reading. This became evident from the data where some of the teachers had no idea of cognitive reading strategies and how to activate cognitive reading strategies on the learners. This brought about the question on whether the teachers who teach languages were really competent to teach the learners to read with comprehension. The researcher assumes that if the teachers had better knowledge of cognitive reading strategies, they could have taught the learners those strategies and how to use them. Furthermore, it was proven that prior knowledge enhances comprehension as some

learners (in the experimental group) were able to interpret what the comprehension test given to them was about leading some getting their test scores improved.

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APPENDIX 1: QUESTIONNAIRE FOR THE LEARNERS

Demographics details

Name: _____

Surname: _____

Gender: _____

Age: _____

Home language: _____

Grade: _____

Name of school: _____

1. How often do you read?
a) Everyday b) very often c) only in school d) not at all

2. What materials do you like reading?

3. Do you like reading?
a) very much b) sometimes c) not really c) not at all

Now answer these questions about the topic you just read?

4. Have you ever come across this topic before or something familiar?
a) Yes b) No

If you answered yes answer question 5, 6, 7, 8 and 9.

5. Did you understand the topic?
a) Yes b) No

6. How was the topic?
a) Very difficult b) difficult c) easy d) very easy
7. Do you think you understood the topic because you have knowledge of similar happenings in the topic?
a) Yes b) No
8. How much do you think having background knowledge related to the topic has helped you?
a) very much b) fairly c) not much
9. How did you learn about the topic?
a) teacher b) myself c) peer teaching d) other people

If you answered no answer question 5, 10 and 11.

10. If you understood the topic, what helped you to understand the topic? If you didn't understand the topic explain why?
-
-

11. Do you think you would have understood the topic better if you had some kind of background knowledge related to the topic?
a) Yes b) No c) Maybe d) definitely

Now answer these questions on Cognitive Reading Strategies

12. Are you familiar with reading strategies?
a) Yes b) No

13. If yes, name those that you know.

14. Did you use them to help you understand what you were reading?

- a) Yes b) No

15. How often do you use these reading strategies?

- a) Always c) very often b) sometimes c) Never

16. How helpful do you find reading strategies?

- a) Very helpful b) helpful c) not helpful

17. How did you learn or become aware of reading strategies?

- a) Teacher b) Myself c) peer teaching d) other people

18. If you do not know any reading strategies what do you do in order for you to understand when reading?

19. Do you think you would have understood the topic better had you had an idea of cognitive reading strategies?

- a) Yes b) No

20. Would you like to have a better knowledge of cognitive reading strategies (strategies that helps you to understand what you will be reading)?

- a) Yes b) No c) Never d) Definitely

21. Do you think teachers should be responsible for teaching you cognitive reading strategies?

- a) Yes b) NO c) Never d) Definitely

22. Why do you think so?

NB// YOU MAY NOT FILL IN YOUR DEMOGRAPHICS SHOULD YOU WISH TO MAINTAIN YOUR ANONIMITY. THANK YOU FOR YOUR PATIENCE AND TIME!!!

APPENDIX 2: STRUCTURED INTERVIEW QUESTIONS FOR THE TEACHERS

The questions may change depending on the answers given by the interviews.

1. How long have you been a teacher here?

2. Which grade have you been teaching?

3. How has it been teaching the English subject? Experiences and challenges?

4. How will you rate the level of reading for your learners?

5. How often do you teach the learners how to read?

6. What are some of the challenges that you are faced with when teaching learners how to read?

7. What are you doing to improve the conditions of poor reading?

8. Are you aware of the cognitive reading strategies (strategies that help the learner to comprehend the text effectively)?

9. What are some of the cognitive reading strategies that you know?

10. Do you teach learners these strategies?

11.If you don't know reading strategies how then do you teach learners to comprehend what they are reading?

12.What other skills do you teach the learners to improve on their reading comprehension?

13.Do you think there is way which can help eradicate the level of poor reading in South African educational system, especially in primary schools?

Thank you for your time.

APPENDIX 3: COMPREHENSION TEST (A SHORT STORY ABOUT “THE TELEPHONE”- ALEXANDER GRAHAM BELL)

Name & Surname : _____

Grade : _____

Date : _____

Examine : _____

Moderator : _____

TEST #01

Read the story about *The Telephone* and answer the questions that follows:

1. Who invented the telephone?

2. Do you think it was a good invention? Say why.

3. Think of an invention that you like, and tell us why you like it.

4. Do you think the first word that he said were unforgettable? Say why.

5. What do you think the word *invention* means?

Say whether the following statements are true or false.

1. Mount Everest was invented by a man. _____
2. A person is part of the invention. _____
3. Invention can also be said to be man-made. _____
4. Someone very far away can hear us when we talk over the phone. _____
5. The word *invention* means to create. _____

Choose the correct answer

1. What is another word for invention?
 - i. Equipment
 - ii. Baby
 - iii. Creation
 - iv. Play
2. Which is the other word for invention?
 - i. Equipment
 - ii. Baby
 - iii. Man-made
 - iv. Natural.
3. Which one of these is not part of an invention?
 - i. Mount Everest
 - ii. Telephone
 - iii. Car

- iv. Television
4. Who invented the telephone?
- i. Alexander Graham Bell
 - ii. The Telegraph Company
 - iii. Thomas Watson
 - iv. Mr Senwa
5. Which one of these is part of an invention?
- i. Victoria Falls
 - ii. Africa
 - iii. Telephone
 - iv. Mount Everest

APPENDIX 4: COMPREHENSION TEST (A SHORT STORY ABOUT MR KATZ AND A THREE-WHEELED-CAR)

Name & Surname _____ :

Grade _____ :

Date _____ :

Examine _____ :

Moderator _____ :

TEST #02

Read the story about *The Motorcar* and answer the questions that follows:

1. What did Mr. Benz invent?

2. Do you think it was a good invention? Say why.

3. Think of an invention that you like, and tell us why you like it.

4. What do you think the word *invention* means?

Say whether the following statements are true or false.

1. Mount Everest was invented by a man. _____
2. A person is part of the invention. _____
3. Invention can also be said to be man-made. _____
4. Someone very far away can hear us when we talk over the phone. _____
5. The word *invention* means to create. _____

Choose the correct answer

1. What is the other word for invention?
 - v. Equipment
 - vi. Baby
 - vii. Creation
 - viii. Play
2. What is the other word for invention?
 - v. Equipment
 - vi. Baby
 - vii. Man-made
 - viii. Natural.
3. Which one of these is not part of an invention?
 - v. Mount Everest
 - vi. Telephone
 - vii. Car
 - viii. Television
4. Who invented a three-wheeled vehicle?
 - v. Mr. Benz

- vi. Alexander Graham Bell
- vii. The Telegraph Company
- viii. Thomas Watson
- ix. Mr Senwa

5. Which one of these is part of an invention?

- v. Victoria Falls
- vi. Africa
- vii. Telephone
- viii. Mount Everest

Sort out the items below according to the category that they fall under:

Invention	Natural
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1. Car
2. Telephone
3. A waterfall
4. Mountains
5. Soil
6. Cat
7. Satellite
8. Television
9. Computer
10. A person
11. Trees
12. Rivers
13. Make-up
14. Pen
15. Internet
16. Sea
17. Caves
18. Bicycle

19. Sky

20. Sewing machine