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**AN INVESTIGATION OF THE  
RELATIONSHIP BETWEEN  
VOCABULARY KNOWLEDGE AND  
READING COMPREHENSION: FOCUS  
ON GRADE 11 STUDENTS AT  
DURBETE GENERAL SECONDARY SCHOOL:**

**MESTAWOT MISGANAW**

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**BAHIR DAR UNIVERSITY**

**FACULTY OF HUMANITIES**

**DEPARTMENT OF ENGLISH LANGUAGE AND**

**LITERATURE**

**POST GRADUATE PROGRAM (TEFL)**

**AN INVESTIGATION OF THE RELATIONSHIP BETWEEN**

**VOCABULARY KNOWLEDGE AND READING COMPREHENSION:**

**FOCUS ON GRADE 11 STUDENTS AT DURBETE GENERAL**

**SECONDARY SCHOOL:**

**ETHIOPIA.**

**By:**

**MESTAWOT MISGANAW**

**January, 2021**  
**Bahir Dar, Ethiopia**

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**SECONDARY SCHOOL:**  
**ETHIOPIA.**

BY:

**MESTAWOT MISGANAW**

**A Thesis Submitted to the Department of English Language and Literature**  
**in partial fulfillment of the requirements for the Degree of Master of Arts**  
**in Teaching English as a Foreign Language (TEFL)**

**January, 2021**  
**Bahir Dar, Ethiopia**

**APPROVAL SHEET**

This is to certify that the thesis prepared by Mestawot Misganaw entitled: An Investigation of the relationship between Vocabulary Knowledge and Reading Comprehension of EFL with reference to Grade eleven Students at Durbete General Secondary School and submitted in partial fulfillment of the requirements for the Degree of Master of Arts in TEFL (English as a Foreign Language) complies with the regulation of the university and meets the accepted standards with respect to originality and quality.

**APPROVED BY EXAMINATION BOARD**

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## Declaration

I declare that this thesis is my original work and has not been presented for a degree in any other university and that all sources of information used for the thesis have been acknowledged.

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## **List of Abbreviations and Acronyms**

<b>ECA</b>	-United Nation Economic Commission for Africa
<b>OAU</b>	-Organization of African Unity
<b>ILCA</b>	- International Livestock Center for Africa
<b>ESLCE</b>	- Ethiopian School Leaving Certificate Examination
<b>L2</b>	- Second Language
<b>L1</b>	-First Language
<b>SLL</b>	-Second Language Learners
<b>EFL</b>	-English as a Foreign Language
<b>ESL</b>	-English as a Second Language
<b>VLT</b>	-Vocabulary Level Test
<b>WAT</b>	-Word Associated Test
<b>RC</b>	-Reading Comprehension
<b>RCT</b>	- Reading Comprehension
<b>DVK</b>	-Depth of Vocabulary Knowledge
<b>SVK</b>	-Size of Vocabulary Knowledge
<b>SPSS</b>	-Statistical Package for Social Science
<b>SD</b>	-Standard deviation
<b>Sig.</b>	-Significant
<b>TOEFL</b>	-Test of English as a foreign Language
<b>VK</b>	-Vocabulary Knowledge
<b>GSL</b>	-General Service List
<b>AWL</b>	-Academic Word List
<b>EAP</b>	-English for Academic Purpose

## **Abstract**

*This study aims to investigate the relationship between two dimensions of vocabulary knowledge, namely size and depth with reading comprehension on EFL learners at Durbete General Secondary School. The participants of this study were 154 grade 11 students (male=72 and female=82) who enrolled in 2013 E.C.by using stratified random sampling. And to investigate the relationship between vocabulary knowledge (size and depth) with reading comprehension three tests were used. These were Vocabulary Level Test (VLT), Word Associate Test (WAT), and Reading Comprehension Test (RCT). The results were analyzed by Pearson correlation product moment and linear regression by using SPSS 21 Software. The results revealed that there was a significant and moderate positive relationship between breadth (size) and reading comprehension ( $r=0.607$ ,  $p<.01$ ).It was found that there was a weak positive relationship between vocabulary depth and reading comprehension at a significant level ( $r=0.441$ ,  $p<.01$ ). The result indicates that the vocabulary size was more correlated with reading comprehension than vocabulary depth in this study.*

# **CHAPTER ONE: INTRODUCTION**

## **1.1 Background of the Study**

In Ethiopia English as an international language, is used as a tool for communication at secondary school, senior secondary school, preparatory and university level in the academic field as a medium of instruction for all subjects except our mother tongue. So, learning /teaching English is necessary for Ethiopian people.

Ethiopians read different written texts in English language, such as fiction, magazines and newspapers with current economic, political and social issues, different brochures, and classroom subjects like: Geography, History, Biology, Chemistry, Physics and others. Therefore, students should have enough vocabulary knowledge and good reading ability to comprehend these types of reading texts. Different scholars define reading comprehension and vocabulary knowledge as follows. Reading is one of the language skills that second language learners (SLL) process if they are to become well rounded users of the target language.

English has become the dominant language in many countries including Ethiopia, because it is an international language and many referenced materials are written in it, so for effective communication using the target language the four language skills: (speaking, writing, listening and reading) including the sub-skills like grammar, vocabulary and translation need to be well practiced. Among these skills reading comprehension is one of the most important skills to be acquired during a language course.

Vocabulary knowledge and its role in reading comprehension has been one of the main areas of focus in second language research for the last twenty years. Both vocabulary knowledge and reading comprehension are closely related and this relationship is not one directional since vocabulary knowledge can help the learner to comprehend written text and reading can contribute to vocabulary growth (Salah, 2008; Nation, 2001; Stahl, 1990).

Among the major components of language, namely sounds, grammar and vocabulary knowledge of the words, as the building blocks of language has a very crucial role. In fact,

without recognition of the meaning of words it would be impossible to either produce or perceive the language. Second language (L2) research has highlighted the importance of vocabulary knowledge, Carlise, Beeman, Davis and Sephardim (1999) recommended that L2 vocabulary knowledge made a unique contribution to second language reading comprehension for readers.

A lot of researches emphasize on the crucial effect of vocabulary knowledge on reading comprehension. Over the last ten to fifteen years, vocabulary has been considered as a component of language proficiency, both in L<sub>1</sub> and L<sub>2</sub> language acquisition. Knowledge of words is now considered the most important factor in language proficiency and school success, partly because of its close relation with text comprehension (Bernhardt, 2005; Wang, 2009).

Some researchers advocate that vocabulary is the most crucial factor in reading comprehension .Cooper (1994) described vocabulary as being the key ingredient to successful reading while other researchers argued that "no text comprehension is possible ,either in one's native language or in foreign language ,without understanding the texts vocabulary " (Laufer,1997, cited in Salah 2008).They maintain that when the percentage of unknown vocabulary in a given text increases the possibility of comprehending the text decrease (Laufer ,1989, Maher Salah 2008; Nation 2001). Laufer (1989) claimed that a reader whose vocabulary is insufficient to cover at least 95% of the words in a passage will not be guaranteed comprehension.

Readers themselves consider vocabulary knowledge to be the main obstacle to second language reading comprehension .Yairo (1971) surveyed second language students, who stated vocabulary was their most important problem in reading comprehension. Knowledge of words is now considered the most important factor in language fluency and school success, partly because of its close relation with text comprehension (Bernhardt, 2005: Wang, 2009) without knowledge of words, understanding sentence or text is not plausible. There is agreement between second language researchers that vocabulary knowledge is important component in reading comprehension .As noted many studies of English as foreign language have suggested that L2 learners need 98% the word coverage to read texts (Salah, 2008).

So, this study attempts to investigate the relationship between vocabulary knowledge and reading comprehension of Grade 11 students at Durbete General Secondary School: Ethiopia.

## **1.2 Statement of the Problem**

English plays an important role in our lives. There are four skills which are needed to be mastered in order to be able to acquire it. Among those four skills reading may be considered as the most difficult one by the students to be mastered because many of today's students are poor readers (Been, 1996). In order to comprehend English test students must have sufficient vocabulary size as it is stated by Nation (2001) vocabulary knowledge is one of the best predictors of learners' ability in reading comprehension.

There are two elements that make up the process of reading comprehension: vocabulary knowledge and text comprehension. In order to understand a text, the reader should be able to comprehend the vocabulary used in the piece of writing. If the individual words doesn't make the sense then the overall written text not either. Students can draw on their prior knowledge of vocabulary, but they also need to continually be taught new words. In addition to being able to understand each distinct word in a text, the reader also has to be able to put them together to develop an overall conception of what it is trying to say. This is text comprehension.

Vocabulary knowledge plays an important role in reading comprehension. Reading a language and comprehending it require that one possess sufficient vocabulary. Researchers tend to agree that vocabulary knowledge is a major prerequisite and causal factor in comprehension and that there is a relationship between vocabulary knowledge and reading comprehension. Some studies have investigated this relationship and used vocabulary knowledge as a predictor variable for reading comprehension (Hu and Nation, 2000; Laufer, 1989; Maher Salah, 2008).

In his study, Snow (2002) recognized the strength of the relationship between a vocabulary knowledge and reading comprehension increased substantially as the children advanced in grade level. Also, Gelderen et al. (2004) examined the relationship between vocabulary knowledge and reading comprehension among 397 Dutch students from Grade 8 to Grade 10 in secondary education. The results found a significant relationship between vocabulary knowledge and reading comprehension with the correlation of 0 .63.

Guo (2008) investigated the relationship between vocabulary knowledge, syntactic awareness and reading comprehension of 155 English speaking undergraduate and graduate students. The result showed a strong positive correlation between vocabulary knowledge and reading comprehension. He emphasized that vocabulary knowledge directly affects reading comprehension.

Tannenbaum, Torgesen, and Wagner (2006) who examined the relationship between vocabulary knowledge and reading comprehension, found that there was a relationship between these two variables. Two hundred 3rd-grade students took part in a study that examined the relationships between 3 dimensions of word knowledge and reading comprehension. Confirmatory factor analyses, structural equation modeling, and hierarchical regression analyses showed that a 2-factor model of breadth and depth fluency provides the best fit to the data. Breadth has a stronger relationship to reading comprehension; however, the two dimensions of vocabulary knowledge have significant overlapping variance that contributes to the prediction of reading comprehension.

Another study was done by Shiotsu and Weir (2007), who examined the relationship between vocabulary knowledge and reading comprehension on L2 learners in Japan. The result revealed that, there was a strong relationship between these two variables and vocabulary knowledge and reading comprehension.

In addition, Golkar and Yamini's study (2007) studied the relationships between vocabulary knowledge and reading comprehension ability among 76 Iranian undergraduate students. Three tests of the Vocabulary Levels Test, the Productive Version of the Vocabulary Levels Test, and a TOEFL test were administered to students to find out the relationship between the two vocabulary tests and their relationship to reading comprehension. The result showed there was a high correlation between the learners' vocabulary knowledge and reading comprehension ability.

Maher (2008) investigated the relationship between vocabulary knowledge and reading comprehension of authentic Arabic texts. Data was collected from twenty-three learners at



Brigham Young University, who ranged from Intermediate Low to Intermediate Mid in both productive and receptive skills. Two reading comprehension tests, circling the unknown words in texts and a lexical coverage test for each passage text was given to the subjects. A linear regression analysis of the data shows that there is a correlation coefficient of 0.7 and 0.6 between the percentage of known words and students' comprehension of the two reading texts. The results indicate that the subjects needed to know approximately 90% of running words to adequately comprehend the first passage and around 86% to comprehend the second passage.

Kaivanpanah and Zandi (2009) investigated the role of depth of vocabulary knowledge in reading comprehension. A TOEFL test and a measure of depth of vocabulary knowledge were administered to 57 EFL learners (17 males and 40 females). The analysis of the results showed that vocabulary knowledge is significantly related to reading comprehension.

Furthermore, Mehrpour et al, (2011) examined the relationship between vocabulary knowledge and reading comprehension on EFL learner from among five language teaching institutes in Shiraz. The participants of the study were sixty (30 male and 30 female). The results obtained from the analysis of the data indicated that while both depth and breadth of vocabulary knowledge play an important role in EFL learners' reading comprehension performance, depth of vocabulary knowledge makes a more important contribution. The results further discovered that depth and breadth of vocabulary knowledge are positively correlated, that is, those learners who had large vocabulary size had a deeper knowledge of the words, too.

As Nation (2005) stated reading is the active and complex process of understanding written materials. It is a channel of learning language, science and social subjects. And also it contributes a lot for communication and perceiving theories and ideas. In addition, it is a complex interaction between the text and the reader who has his/her own background, experience, educational status and social hierarchy but, according to the researcher teaching experience at Durbete General Secondary School there is a difficulty in the ability to comprehend texts. This problem might arise from the learners' poor vocabulary knowledge even if there might be other related problems to comprehend the reading text like, their reading style, and teachers teaching methodology etc. Most of the above researches were

conducted on L2 and L1 learners and the context is different So, to fill this gap know this problem the researcher wanted to conduct this research to investigate the relationship between EFL learners“ vocabulary knowledge and their reading comprehension at Durbete General Secondary School on Grade 11 students

Therefore, this study aims to investigate a) The relationship between size of vocabulary knowledge and reading comprehension b) The relationship between depth of vocabulary knowledge with reading comprehension and C) The relationship between vocabulary size and vocabulary depth with reading comprehension among Durbete General secondary School Grade 11 students.

### **1.3 Research Questions**

The following questions guide this research:

1. To what extent does vocabulary size correlate with reading comprehension?
2. To what extent does vocabulary depth correlate with reading comprehension?
3. To what extent do vocabulary size and vocabulary depth correlate with reading Comprehension?

### **1.4 Objectives of the study**

#### **1.4.1 General Objective**

The main objective of this study was to investigate the relationship between vocabulary knowledge and reading comprehension texts among Durbete General Secondary School focus on Grade 11 students.

#### **1.4.2 Specific Objectives**

The specific objectives of this study were:

- ✓ To investigate the extent to which vocabulary size correlate with reading comprehension.
- ✓ To determine the extent to which vocabulary depth correlate with reading comprehension.
- ✓ To check the extent to which Vocabulary size and Vocabulary depth correlate with reading comprehension.

## **1.5 Significance of the Study**

It is hoped that this study may have a number of values for students, teachers and for other researchers. These are: It may create awareness for teacher and students about vocabulary knowledge and reading comprehension in teaching learning It may help teachers to facilitate the teaching learning process easily. It may be a source of information for other researchers in the same problem. The study can give a boarder point of view for EFL teachers and students in the classroom. Generally the Study may demonstrate teachers and students in teaching-learning vocabulary and reading.

## **1.6 The Scope of the Study**

The study was limited by the number of participants who participated and its area of study. The participants of the study were grade 11 students at Durbete General Secondary School in West Gojjam Zone, Amhara Region, South Achefer Woreda, and Ethiopia. The focus of the study was to investigate the relationship between EFL vocabulary knowledge and reading comprehension. The researcher chose this school since she has been working, experienced ,believed and she got essential information about the relationship between vocabulary knowledge and reading ability, so the research was done only at Durbete General Secondary School on Grade 11 students.

## **1.7 Limitation of the Study**

1. This research was not conducted based on the time schedule because of the Corona virus.
2. This study did not account for differences that subjects might have regarding the familiarity of the topic that might affect their test scores and their vocabulary knowledge. And also the validation of the comprehension tests was one of the limitations of this study. The (three passage) tests were administrated at the same time in one sheet, so some subjects were stressed and might not have performed as well on the test as they could have.

## **1.8 Operational Definition of Terms**

**Vocabulary Size:** refers to the number of words that FL learners know at a particular level of language proficiency.

**Vocabulary Depth:** refers to how well a learner knows a word.

**Comprehension:** refers to student's ability to understand what they have read.

## **CHAPTER TWO: REVIEW OF RELATED LITERATURE**

### **2.1 Introduction**

In this section the following issues were discussed. These are definition of vocabulary knowledge, framework of vocabulary knowledge, productive and receptive vocabulary knowledge, depth and size of vocabulary knowledge and their definition, definition of reading comprehension, components of reading comprehension, the relationship between vocabulary knowledge and reading comprehension, the role of vocabulary size and depth of vocabulary knowledge and types of vocabulary related to their frequency.

### **2.2 Definition Vocabulary Knowledge**

Over the years, in the field of L<sub>1</sub> and L<sub>2</sub> research, attempts have been made to explain what it means to know a word, yielding a variety of proposals to define vocabulary knowledge (e.g., Cronbach 1942, Kieffer & Lesaux 2012, Nation 1990, 2001, Qian 1998, 1999, and Richards 1976). An early definition of vocabulary knowledge (Cronbach 1942) classified it into two categories: one is knowledge of word meaning (generalization, breadth of meaning, and precision of meaning) and the other is levels of accessibility to this knowledge (availability and application).

Focusing mainly on the meaning aspect of a word, this pioneering explanation neglected to include other aspects of word knowledge, such as spelling, pronunciation, morpho-syntactic properties, and collocation (Qian 2002). Subsequently, a more inclusive definition of word knowledge was offered by Richards (1976). According to his series of assumptions about what is meant by knowing a lexical item, the following aspects constitute lexical competence: frequency, register, syntax, derivation, association, semantic values, and polysemy (Richards 1976). Although his set of assumptions was neither intended as such nor as comprehensive (Meara 1996), it has been considered as a general framework for defining vocabulary knowledge since it spotlighted the multifaceted nature of word knowledge.

By integrating Richards' framework and a number of other constituents, Nation (1990, 2001) proposed that vocabulary knowledge can be divided into three categories and that each category involves both receptive and productive aspects:

- a) Form – spoken and written forms and word parts;
- b) Meaning – form and meaning, concept and reference, and associations; and
- c) Use – grammatical functions, collocations, and constraints on use. The learners were assumed to have reached native-like competency and fluency if they have full ownership of these aspects of word knowledge (Schmitt & Meara 1997).

Similarly, categorizing word knowledge into several aspects, Vermeer (2001) suggested that words are composed of a network of interrelated nodes: thematically, phonological, morphological, conceptual, or sociolinguistic. According to Vermeer (2001), the deeper the network surrounding a word becomes, the greater the knowledge of the given word. There clearly seems to be a tendency to regard vocabulary knowledge as a multidimensional construct rather than a single construct. This acknowledgement of the complex nature of vocabulary knowledge is also well reflected in other various but complementary frameworks, which posit that at least two primary dimensions constitute vocabulary knowledge: breadth and depth (Qian 1998, 1999, Read 1988, 1989, Wesche & Paribakht 1996).

Because of this the researcher focus to investigate the two primary dimensions, which are breadth or size of vocabulary knowledge and depth of vocabulary knowledge in what extent they relate with reading comprehension in written texts.

### **2. 3. Vocabulary Knowledge Framework**

It is commonly accepted that the vocabulary knowledge plays a great role in the language learning, either for the first language learners or the second language learners. In the researches on the vocabulary knowledge and its related study, the basic question is the definition and connotation of vocabulary knowledge. The connotation of vocabulary knowledge can be defined in a number of ways. Some researchers (Richards, 1976; Nation, 1990, 2001) claim that knowing a word involves a range of inter-related sub-knowledge such as morphological and grammatical knowledge and knowledge of word meanings. In order to explain the components and aspects of the vocabulary knowledge, many researchers apply "dimension" to describe the structure and connotation of the vocabulary knowledge by providing their frameworks.

The early definition offered by Cronbach (1942) divided the vocabulary knowledge into two main aspects: knowledge of word meaning (generalization, breadth of meaning, and precision of meaning) and levels of accessibility to the knowledge (availability and application). This definition shows the basic idea of the vocabulary knowledge. However, the obvious weakness in this definition is the lack of other aspects of lexical knowledge, such as spelling, pronunciation, syntactic properties, and collocation (Qian, 2002). Richards (1976) added these factors to his framework to offer more aspects to indicate what is involved in knowing a word, including: frequency, register, syntax, derivation, association, semantic features, and polysemy. He presents more characteristics of a word than the ever before. He also mentions that knowing a word well should mean more than knowing its individual meanings. Various kinds of knowledge are associated with a word that a learner must know, ranging from knowledge related to its pronunciation, spelling, register, stylistic, and morphological features.

Knowing a word means mastering all these knowledge (Nation, 1990). Basing on this thinking, Nation (1990) improved the framework to further classify these relative knowledge into four categories: (a) form, including spoken form and written form; (b) position, including the collocations and grammatical patterns; (c) function, including frequency and appropriateness; (d) meaning, including concept and association, each of these four consists of two aspects; the receptive and productive ones. Nation not only makes a progress in the development of the previous framework, but also provides the receptive and productive ability to the understanding of the vocabulary knowledge.

This framework is considered particularly useful for classroom teachers (Qian, 2002). Qian's (2002) recent framework, developed on the collective strength of earlier models of vocabulary knowledge (Chapelle, 1998; Qian, 1998; 1999; Henriksen, 1999; Nation, 2001), proposed that vocabulary knowledge comprised four intrinsically connected dimensions: (a) vocabulary size; (b) depth of vocabulary knowledge, which includes all lexical characteristics, such as phonemic, graphemic, morphemic, syntactic, semantic, collocation, and phrase logical properties, as well as frequency and register; (c) lexical organization, which refers to the storage, connection, and representation of words in the mental lexicon of a learner; and (d) automaticity of receptive-productive knowledge, which refers to all the

fundamental processes through which access to word knowledge is achieved for both receptive and productive purposes, including phonological and orthographic encoding and decoding, access to structural and semantic features from the mental lexicon, lexical semantic integration and representation, and morphological parsing and composing.

This framework shows a broad concept of the understanding of vocabulary knowledge and contains more aspects. In the framework, “These dimensions are not only intrinsically connected but also interact closely with one another in fundamental processes of vocabulary use and growth. The importance of various factors in these dimensions will vary according to the special purpose of language use” (Laufer& Elder, 2004).

In the researches on vocabulary learning, two primary dimensions of vocabulary knowledge have often been considered: depth of vocabulary knowledge and breadth of vocabulary knowledge. Breadth of vocabulary or vocabulary size refers to the number of words known, whereas depth of vocabulary is defined as how well the learner knows a word. While breadth of vocabulary knowledge is considered as the number of vocabulary items for which a learner possesses at least minimum knowledge of their meanings, depth of vocabulary knowledge ranges from partial understanding of a word to full mastery of multiple aspects of a given word including its various related meanings and its appropriate use in varying contexts (Kieffer & Lesaux 2012, Qian 1999).

Although some conflicting argument arose in the literature as to whether this dichotomous distinction between the breadth and depth is valid (Kieffer & Lesaux 2012), a majority of lexical researchers appear to accept that those two areas tap different dimensions of vocabulary knowledge (Read 2000, Tannenbaum, Torgesen, & Wagner 2006). When discussing the two dimensions, however, caution is required so as not to interpret them as independent or separate constructs. Rather, they are closely interconnected (Schmitt & Meara 1997).

### **2.3.1. Breadth of Vocabulary Knowledge**

It has long been acknowledged that breadth of vocabulary, or vocabulary size, is a fundamental dimension of lexical ability of a language learner. The crucial role of the number of words known has been emphasized by a number of studies including Meara (1996), who

argued that learners equipped with a large vocabulary possess more expertise in using the language than ones with a smaller vocabulary.

A good deal of research on vocabulary size has been undertaken in both L1 and L2 environments, entailing useful insights for various contexts. For example, researchers interested in the impact of vocabulary knowledge on reading comprehension of native speakers of English have examined their size of vocabulary through childhood, adolescence, and adulthood. The findings from this kind of studies, according to Anderson and Freebody (1981), provided well-grounded suggestions on how many new lexical items should be presented in reading classes to learners at different ages.

More recently, ESL students studying in English speaking countries have also become the focus for vocabulary researchers in estimating the threshold number of words learners should know to handle academic work. For instance, Sutarsyah, Nation, and Kenny (1994) reported that, in order for learners to comprehend undergraduate economics textbooks written in English, 4000 to 5000 words were required. In line with the strong interest in the size of vocabulary, the development of vocabulary size tests have also received considerable attention.

One of the widely used vocabulary size test is the Vocabulary Levels Test, which was developed by Paul Nation to provide an adequate vocabulary teaching and learning programs and proved to effectively serve as diagnostic testing for learners from non-English backgrounds. It is composed of five parts, each measuring words at four frequency levels (2000, 3000, 5000, and 10,000 word levels) and the University word level.

The 2000- and 3000-word levels contain high- frequency words, which are deemed prerequisite for the effective use of the English language (Nation 1990); 5000-word level creates the boundary limit of general high-frequency words; 10,000- word level includes the lower-frequency words; and finally, the University word level consists of academic words which frequently appear in university textbooks. The test requires test-takers to match the words to the meanings. What is noteworthy of this test is that the items tested are the meanings rather than the words themselves. At each word-level, 6 questions made up of six words and three definitions are presented, as illustrated in Figure 1. It was intended by the



developer that this format prevents the chances of guessing by de-contextualizing the words from text.

Breadth of vocabulary knowledge is referred to the quantity or number of words learners know at a certain level of language competence. The major issue for L<sub>2</sub> vocabulary acquisition is "How many words does a L<sub>2</sub> learner need?" There is no doubt that the response will be less than for "How many words does a native speaker know?"

As Nation states the number of words that educated native speakers of English know is around 20,000 word families and for each year of their early life they add on average 1,000 word families. Studies of native speakers "vocabulary seem to suggest that second language learners need to have a vocabulary size of 2,000 most high frequency words to understand about 80% of the running texts. These data are not regular and a large variation would be between individuals. These data do not include proper names, abbreviations, compound words, and foreign words. A word family incorporates a root word, its inflected forms, and a small number of logically repeated derived forms. According to Nation and Waring (2001), learners need to know a minimum of 3000 or so high frequency words because it gives coverage of at least 95% of a running text.

Moreover, most research indicates that knowledge of the most frequent 5000 words should provide sufficient vocabulary to facilitate reading authentic texts. As a matter of fact, there still remain some unknown words, but this level of knowledge should permit learners to comprehend most of the communicative content of the text and deduce the meaning of many of the unfamiliar words from context.

The good news for second language teachers and second language learners is that a small quantity of words happens frequently and this small proportion allows learner to understand a large amount of the running words in a written or spoken context which leads to a good degree of comprehension of a text. Goals and construct the Vocabulary Size Test is designed to measure both first language and second language learners' written receptive vocabulary size in English. The test measures knowledge of written word form, the form-meaning connection, and to a smaller degree concept knowledge. The test measures largely decontextualized knowledge of the word although the tested word appears in a single

nondefining context in the test. Users of the test need to be clear what the test is measuring and not measuring. It is measuring written receptive vocabulary knowledge that is the vocabulary knowledge required for reading. It is not measuring listening vocabulary size, or the vocabulary knowledge needed for speaking and writing. It is also not a measure of reading skill, because although vocabulary size is a critical factor in reading, it is only a part of the reading skill. Because the test is a measure of receptive vocabulary size, a test-takers score provides little indication of how well these words could be used in speaking and writing.

### **2.3.2. Depth of Vocabulary Knowledge**

Over the past few years, acknowledgement of depth of vocabulary or vocabulary quality as a construct of lexical knowledge has been growing. Mezynski (1983) pointed out: Word meanings can be “known” to varying degrees. Depending on the task, a person could perform adequately with relatively imprecise knowledge. In other situations, a much finer notion of the word’s meaning might be required.

In Similar view may be found in several proposals which incorporated vocabulary depth into a definition of lexical competence. For instance, Chapelle (1998) claimed that a definition of vocabulary should include four dimensions:

- (a) Vocabulary size,
- (b) Knowledge of word characteristics,
- (c) Lexicon organization, and
- (d) Processes of lexical access.

The depth dimension is also included in Henriksen (1999), which proposed that lexical competence comprises three distinct dimensions:

- (a) partial-to-precise knowledge,
- (b) Depth of knowledge, and
- (c) Receptive and productive knowledge. With various aspects constituting the depth dimension, Henriksen considered this as a process, rather than a single continuum, of constructing a network which connects one word with other words.

In a more recent study, Qian (2002) developed a framework of vocabulary knowledge 1) on the basis of other earlier definitions (e.g., Chapelle 1998, Henriksen 1999, Nation 2001), as described in Qian's Model of Vocabulary Knowledge (Qian 2004)

(a) Vocabulary size

(b) Depth of vocabulary knowledge

(c) Lexical organization

(d) automaticity of receptive-productive knowledge the number of words of which a learner has at least some superficial knowledge of meaning all lexical characteristics, such as phonemic, graphemic, morphemic, syntactic, semantic, collocation, and phraseological properties, as well as frequency and register the storage, connection, and representation of words in the mental lexicon of a learner all the fundamental processes through which access to word knowledge is achieved for both receptive and productive purposes, including phonological and orthographic encoding and decoding, access to structural and semantic features for the mental lexicon, lexical-semantic integration and representation, and morphological parsing and composing. Designed on a basis of the merits of previous definitions, this model was selected as the conceptual framework of vocabulary knowledge for the present study. Among the four dimensions, the scope of current research is limited to two dimensions: (a) Vocabulary size, and

(b) Vocabulary depth

Vocabulary knowledge plays an important role in reading comprehension. Reading a language and comprehending it require that one possess sufficient vocabulary. Researchers tend to agree that vocabulary knowledge is a major prerequisite and causal factor in comprehension and that there is a relationship between vocabulary knowledge and reading comprehension. Some studies have investigated this relationship and used vocabulary knowledge as a predictor variable for reading comprehension (Hu and Nation, 2000; Laufer, 1989; Maher Salah, 2008).

In another study, Snow (2002) recognized the strength of the relationship between a vocabulary knowledge and reading comprehension increased substantially as the children advanced in grade level. Also, Gelderen et al. (2004) examined the relationship between vocabulary knowledge and reading comprehension among 397 Dutch students from Grade 8

to Grade 10th in secondary education. As results, found a significant relationship between vocabulary knowledge and reading comprehension with the correlation of .63.

Guo (2008) investigated the relationship between vocabulary knowledge, syntactic awareness and reading comprehension of 155 English speaking undergraduate and graduate students. As results, he showed a strong positive correlation between vocabulary knowledge and reading comprehension. He emphasized that vocabulary knowledge directly affects reading comprehension.

According to Tannenbaum, Torgesen, and Wagner (2006) who examined the relationship between vocabulary knowledge and reading comprehension, found that there is relationship between these two variables. Two hundred and three 3rd-grade students took part in a study that examined the relationships between 3 dimensions of word knowledge and reading comprehension. Confirmatory factor analyses, structural equation modeling, and hierarchical regression analyses show that a 2-factor model of breadth and depth fluency provides the best fit to the data. Breadth has a stronger relationship to reading comprehension; however, the two dimensions of vocabulary knowledge have significant overlapping variance that contributes to the prediction of reading comprehension.

In another study was done by Shiotsu and Weir (2007), examined the relationship between vocabulary knowledge and reading comprehension on L2 learners in Japan. Based on the results, there was a strong relationship between these two variables and vocabulary knowledge in predicting performance on a reading comprehension test.

In addition, Golkar and Yamini's study (2007) studied the relationships between vocabulary knowledge and reading comprehension ability among 76 Iranian undergraduate students. Three tests of the Vocabulary Levels Test, the Productive Version of the Vocabulary Levels Test, and a TOEFL test were administered to students to find out the relationship between the two vocabulary tests and their relationship to reading comprehension. As results, there was a high correlation between the learners' vocabulary knowledge and reading comprehension ability.

Maher (2008) investigated the relationship between vocabulary knowledge and reading comprehension of authentic Arabic texts. Data was collected from twenty-three learners at Brigham Young University, who ranged from Intermediate Low to Intermediate Mid in both productive and receptive skills. Two reading comprehension tests, circling the unknown words in texts and a lexical coverage test for each passage texts were given to the subjects. A linear regression analysis of the data shows that there is a correlation coefficient of 0.7 and 0.6 between the percentage of known words and students' comprehension of the two reading texts. The results indicate that the subjects needed to know approximately 90% of running words to adequately comprehend the first passage and around 86% to comprehend the second passage.

Kaivanpanah and Zandi (2009) investigated the role of depth of vocabulary knowledge in reading comprehension. A TOEFL test and a measure of depth of vocabulary knowledge were administered to 57 EFL learners (17 males and 40 females). The analysis of the results showed that vocabulary knowledge is significantly related to reading comprehension.

Furthermore, Mehrpour et al, (2011) examined the relationship between vocabulary knowledge and reading comprehension on EFL learner from among five language teaching institutes in Shiraz. The participants of the study were sixty (30 male and 30 female). The results obtained from the analysis of the data indicated that while both depth and breadth of vocabulary knowledge play an important role in EFL learners' reading comprehension performance, depth of vocabulary knowledge makes a more important contribution. The results further discovered that depth and breadth of vocabulary knowledge are positively correlated, that is, those learners who had large vocabulary size had a deeper knowledge of the words, too.

In conclusion, the literature reviews indicate that there is a relationship between vocabulary knowledge and reading comprehension. Vocabulary knowledge has a great impact on reading comprehension. No text comprehension is possible, either in one's native language or in a foreign language, without understanding the text's vocabulary. When the percentage of unknown vocabulary increases, the possibility of comprehending the text decreases.

The previous studies indicate that there is a need for further research to look closely at the relationship between vocabulary knowledge and reading comprehension. Also, few studies have been conducted on vocabulary knowledge and their relationship with reading comprehension among different country students. Therefore, according to the researcher there is a need for further research in Ethiopian schools.

Read (1988) explains the intricate and dynamic nature the notion of depth of word knowledge which is more absorbing from an L<sub>2</sub> vocabulary acquisition research belief than just quantitative angles of lexical knowledge as "as the quality of the learners vocabulary knowledge." Many researchers have emphasized of this knowledge. It is really obvious that knowing a word means knowing more than its single meaning in a specific text. Learners also need to know the pronunciation, spelling, syntactic and semantic relationship with other words such as collocation, synonym, antonym and hyponym. So, vocabulary should not be considered a single dimension, instead it is better to be viewed as a multidimensional structure.

Depth of knowledge is a network of links between words. It is about how they associate and interact with each other, and may be restricted in use according to register and context. This would include, for example, how words collocate, form idioms and can have multiple possible meanings. Depth is generally used to refer to a wide variety of word characteristics, including the shades of meaning a word may carry, its connotations and collocations, the phrases and patterns of use it is likely to be found in, and the associations the word creates in the mind of the user. All of these imply that a word will be linked to other words and ideas in the lexicon and, provided these links are correct and appropriate, to enable learners to use their chosen words appropriately and well.

The multi-dimensional framework of word knowledge (Nation, 1990) has provided a new way for the researchers to explore the depth of vocabulary study and the interrelationship of the components of the depth of vocabulary knowledge in second language learning. Based on this theory, Schmitt and Meara (1997) examined the development and changes of vocabulary knowledge of second language learners in the affix and associations aspects after a certain time of learning. From the comparison of different English learners, the researchers found there was a limitation in the growth of affix and associations knowledge, and the affix and

associations had a positive correlation. Schmitt (1998) added two more aspects including the spelling and meaning of a word into another research on the depth of vocabulary knowledge. He used the longitudinal approach to test the learners' acquisition of the target words in order to find the possible developmental hierarchies of vocabulary acquisition and their internal relationship. He discovered that the learners had difficulties in getting different meanings of the words and the affix aspect knowledge.

Recent years, national researchers started the research on this area. Liu (2000) conducted a research on the depth of vocabulary of Chinese students. In this research, the researcher used the grammatical patterns, collocations and concept, these three aspects of the words to test Chinese students in order to find the changing model during the words learning. In this research, it is found that the receptive vocabulary size is much bigger than the productive size.

In English abilities for the EFL Learners Despite the researches on the internal relation of vocabulary knowledge, researchers begin to investigate its relationship with the English ability. As mentioned in the background of this paper, many researches focus on the role of the breadth or the size of vocabulary in the English abilities. It may be because that the depth of vocabulary knowledge contains many aspects and is difficult to measure for the researches. The attention paid to the role of depth of vocabulary knowledge in assessing the English abilities began to be drawn in the relationship between depth of vocabulary and comprehensive reading. Qian (2002) believed both vocabulary size and depth dimensions played positive roles in reading comprehension. Vocabulary is acquired in an incremental fashion, so words acquired at the beginning of the learning process are likely to have much more depth than words more recently learned. The more a learner knows, the more likely it is that he or she will have a greater depth of knowledge for these words. Equally, although having a large vocabulary size will give the learner a larger database from which to guess the meaning of unknown words or behavior of newly learned words, having deeper vocabulary knowledge will very likely improve the results of the guessing work...

In exploring the role of vocabulary knowledge in reading comprehension, both dimensions deserve equal attention. Attempting to discover the role of ESL learners' depth of vocabulary knowledge in reading ability, Qian (2002) conducted a series of studies and found

that there was a high correlations between vocabulary size, depth of vocabulary knowledge, and reading comprehension, and the depth of vocabulary knowledge, conceptualized as receptive knowledge of word meanings and collocations, was not only a better predictor of second language learners' reading comprehension but also made a great contribution to reading comprehension, over the contribution made by size of vocabulary knowledge.

Nowadays, it is believed that the depth of vocabulary knowledge has some influence in the performance of the whole English ability. The researchers have found that the depth of vocabulary knowledge has a positive correlation with comprehensive reading (Qian, 2002). However, except for the reading comprehension, few researches directly explore the role of depth of vocabulary knowledge in other English abilities or the whole comprehensive ability of the second language learners.

Huang (2003) tested the English major students from the collocation angle and found the collocations of the words had a positive correlation with the comprehensive ability (listening, reading and writing). Lu (2004) who investigated the relationship of the size and depth of vocabulary knowledge with the comprehensive ability found that the depth of vocabulary knowledge showed an imbalanced performance among different level learners. Huang (2004) made a test of the depth of vocabulary knowledge and pointed out the correlation of the scores of the English test performance and the depth of the vocabulary knowledge.

However, the researchers have limitation in the tools for measuring the depth of vocabulary knowledge (Li, 2007). Recently, Li (2007) did a study on the relationship of the size, depth of vocabulary knowledge with the comprehensive ability and suggested the depth of vocabulary knowledge make a greater contribution to the English ability compared with the size of the vocabulary. Based on the previous researches, the researcher understood that the depth of vocabulary could be an indicator of the reading ability and also may show a correlation with other aspects of the comprehensive abilities.



## 2. 4. Vocabulary Size and Reading Comprehension

The role of vocabulary in reading comprehension is a complex one. To understand text meaning, one must be able to decode the printed message (Adams 2004, Alderson 2000, Day and Bamford 1998). The presence of high density of unknown words in a text may seriously hinder comprehension (Curtis 1987, Nation, 2001). Fast and efficient word recognition, word encoding and lexical access are necessary for a higher level of meaning construction (Adams 2004, Just and Carpenter 1987, Lesgold and Perfetti, 1978).

The main difference between skilled and less skilled readers lies in slower and inefficient lexical access and semantic processing (Bernhardt 2005, Grabe and Stoller 2002, Nassaji 2003, Segalowitz et al. 1991). A number of studies have revealed consistent correlations between vocabulary and comprehension (Laufer 1992a, 1992b, Qian 1999, 2002, Nation 2001). Stahl (2003: 246) contends that studies from readability formulae have „found that the most important factor in determining the difficulty of a text is the difficulty of the words.“ Vocabulary size is thus a strong predictor of reading comprehension.

Within the context of L<sub>2</sub> research in reading, findings on the reading processes and vocabulary threshold have consistently indicated the importance of vocabulary knowledge in reading comprehension (Fukink et al. 2005, Garcia 1991, Koda 1994, Laufer, 1997, Zhang 2000, 2002a, 2002b; see Alderson 2000, Bernhardt 2005, Koda 2005 and Nation 2001, for reviews).

Vocabulary size is used as predictor of reading success. A number of studies (e.g., Koda 1989, Laufer 1992a, 1996, Qian 1999) have used scores on vocabulary size to predict levels of academic reading comprehension. Laufer (1996) found significant correlations between different types of vocabulary size tests and reading comprehension tests in her studies. In one study with 92 first-year university students whose native language was either Hebrew or Arabic (Laufer 1992), the correlation between the scores on the Vocabulary Levels Test (Nation 1983) and scores on reading comprehension was .50, and that between the scores on Eurocentres Vocabulary Test (Meara and Jones 1989) and scores on reading comprehension was 0.75.

In another study involving 80 first-year university students of similar L<sub>1</sub> backgrounds (Laufer, 1996), a correlation of .71 was reported between students' scores on reading comprehension and those on the Vocabulary Levels Test. Koda's (1989) study of 24 college students who were learning Japanese as a foreign language found equally strong correlations between a self-made vocabulary test and two reading tests, one being a cloze test and the other paragraph comprehension. Koda (1989) reported a correlation of .69 between the learners' scores on the vocabulary test and the cloze test and a correlation of .74 between their scores on the vocabulary test and the paragraph comprehension test.

Research by Coady et al. (1993) with 79 students studying English in a university academic preparation program found that two experimental groups, which had received special training in high frequency vocabulary, achieved better ESL reading comprehension at the end of the experiments than did a control group which had not received such a treatment. The study was carried out to verify the proposition that „there is a positive and significant relationship between knowledge of high-frequency words and reading proficiency. Based on the results of their study, Coady et al. (1993) argued that special training in the 2000 most frequent English vocabulary items could improve learners' reading proficiency. Besides, investigating the impact of vocabulary on ESL reading, Qian (1999) found a high correlation ( $r = .82$ ) between the scores on the Vocabulary Levels Test and scores on the reading subset of the TOEFL.

According to what was presented above and what great many of researchers including (Laufer 1996, Meara 1997, Nation 2001, Read 2000) and many more at test to, the significance of the role of vocabulary in reading comprehension is clearly acknowledged. What is missing is a blithe disregard for vocabulary in approaching reading comprehension, particularly in the EFL setting of Iran. This fact simply goes unnoticed by a host of Iranian teachers. Hence, working within this context, the present researcher deemed it indispensable to launch a study where vocabulary is paid little heed to in most reading comprehension courses. To this end, the study aims to answer the following research question: Does vocabulary size have any effect on reading comprehension of Iranian EFL learners?

## **2.5. Productive Vocabulary and Receptive Vocabulary**

All productive or active vocabulary involves words that we apply when we speak or write. According to Nation productive use of vocabulary is defined as wanting to express a meaning through speaking or writing. And retrieving and producing the appropriate spoken or written form. On the other hand, receptive or passive vocabulary is composed of words that we recognize when we hear or see. It is normally bigger than productive vocabulary, and may comprise numerous words to which we allocate some definitions, even if we do not understand their full meanings and implications or use them as we speak and write. Nation gives a detailed definition of receptive vocabulary.

He defines receptive vocabulary use as that of perceiving the form of a word while listening or reading and retrieving its meaning. In other words, receptive knowledge is the language input that learners receive from others through listening or reading and try to understand it. Productive knowledge, on the other hand, is the language output that learners convey messages to others through speaking or writing. But in this study the researcher only used receptive vocabulary because it investigates the relationship between vocabulary knowledge and reading comprehension. Vocabulary can be defined as all the words known and used by a particular person. Nevertheless, a person knowing a word does not mean that he or she will be able to comprehend or utilize the word in a proper manner, the reason being, there are several characteristics of word knowledge - which are in turn utilized to assess word knowledge.

Word knowledge could be of two types: productive or achieve and receptive or receive. But very often it has been observed that there is no flawless divisions made between productive knowledge also known as achieve and receptive knowledge also known as receives. It has been observed that a person's receptive vocabulary is larger than productive vocabulary. For Example: a child who cannot speak, write or sign can follow quite a number of instructions given in language which he or she is used to. But when the Child learns to speak, sign, write then his or her vocabulary becomes active. Therefore, it can be said that productive vocabulary are those words that are produced in reference to any suitable perspective and those words or those vocabulary should match the envisioned connotation of the speaker .

Receptive vocabulary is those words or that vocabulary which we get to hear or which we receive from somebody else in the language we are exposed to. Between the productive and receptive division lies a variety of abilities which are frequently referred to as degree of knowledge. This shows that as our word knowledge increases more and more words enter our vocabulary. Approximately the stages of word knowledge could be described as: Word which has never been heard of Heard of the word but could not describe it .The word could be acknowledged because of the perspective or through voice Capable of using and comprehending the meaning of the word in general, but cannot actually describe it Confident with the meaning and usage of the word. There are four types of vocabulary: Listening and speaking vocabulary represent spoken vocabulary and reading and writing represent written vocabulary. Children begin to learn spoken vocabulary years before they learn written vocabulary. Written language is formed on the basis of spoken language. Each type of vocabulary has a different purpose and fortunately the growth in one type of vocabulary supports the growth in another type.

Reading Vocabulary: This vocabulary refers to the words we recognize when we read any text. We read and understand many words, but we do not use them in speaking vocabulary. If a person is a reader then this type of vocabulary happens to be the second largest vocabulary. Needless to say, vocabulary grows with reading. The range of vocabulary is directly interconnected to reading ability. Linguistic vocabulary is identical to thinking vocabulary. A person is assessed by others on the basis of his or her vocabulary.

## **2.6. Definition of Reading Comprehension**

Reading can be defined as, “a complex system of deriving meaning from print” (Adams, 1990; Kame'enui et al., 2002). Within this system are a series of identified skills associated with the process of reading and comprehension. The plethora of reading-related skills makes it difficult to discuss reading comprehension without defining reading as a construct. The New York City Board of Education identified thirty-six reading-related skills (Lunzer& Gardner, 1979). Subsequent researchers (Adams, 1990; Alderson, 2000; Anderson & Freebody, 1982; Munby, 1978; Staskowski& Creaghead, 2001; Taylor et al., 2000) narrowed the list to a more manageable set of 10 skills prevalent in good readers, including: recalling word meanings, drawing inferences, and following the structure of a passage. Alderson

(2000) says that reading ability is an “abstract notion” and that reading constructs come from a theory of reading.

This paper will tries to further explore the relationship between the depth of the vocabulary knowledge, size of vocabulary knowledge and the ability to comprehend written text in order to answer the question that how much the depth of vocabulary could predict the comprehensive ability and to what extent vocabulary size, vocabulary depth has a relationship with reading comprehension .

## **2.7 The Component of Reading Comprehension**

Reading comprehension is a multi-component, complex process that involves many interactions between the reader and what s/he brings to the text (previous knowledge, strategy use), as well as variables related to the text itself (interest in the text, understanding of the types of texts). While many middle school, high school, college students and even adults have learned to read, some will struggle with reading for meaning; and, as with learning to read, these students need explicit strategies to use during the process of reading in order to support them with gaining, using and remembering information from their texts.

Strong readers use strategies that work for them and can identify which strategy to use for different types of texts .Those struggling with reading can improve their reading comprehension skills by being taught strategies, as well as when and how to use them with different types of texts. Below is a sampling of the many comprehension strategies that can be directly taught to help students improve their range of comprehension skills: discovering main idea , identifying detail , sequencing events, using context, getting facts, drawing conclusions/predicting outcomes, distinguishing between fact and opinion , understanding cause and effect, identifying figurative language, identifying bias and Prejudice, using prior knowledge, comparing and contrasting ideas, ,generating and answering questions, identifying inferences , summarizing concepts , understanding Vocabulary, visualizing ideas, determining author’s purpose , understanding point of view It is never too late to address reading problems. When a student’s reading issue(s) can be identified down to these specific details, an effective program can be designed to improve these skills.

## **2.8 Types of Vocabulary**

In his review article from (2008), Schmitt concludes that “learners need large vocabularies to successfully use a second language, and so high vocabulary targets need to be set and pursued.” When working with frequency based vocabulary, it is assumed that both native and non-native language learners acquire vocabulary in the order of its range and frequency (Nation 2006). Based on this assumption, and in order to know what vocabulary targets to set and pursue, vocabulary has traditionally been divided into four categories: high-frequency words, academic words, technical words and low-frequency words. These types of vocabulary is explained and evaluated in the following way.

### **2.8.1. High- and Low-Frequency Vocabularies**

As evident in the names, high- and low-frequency vocabularies are frequency based. The standard of high-frequency vocabulary has been set at the 2,000 most frequent word families, starting with West’s General Service List (GSL) from 1953 and is still strongly supported by Nation (Nation, 2011). The reason for the focus on high-frequency vocabulary is because it covers around 80% of any given English text (Nation 2001). The learners thus gain a lot of understanding with a relatively small vocabulary, which is desirable for any language learner.

Low-frequency vocabulary has been identified in many ways, “ranging from anything beyond 2,000 word families all the way up to all of the word families beyond the 10,000 frequency level” (Schmitt 2008). Basically, they are all the words that are not deemed to be highfrequency words (Nation 2001). Nation has suggested that learners and teachers deal very differently with high- and low-frequency words in the learning process. He endorses explicit teaching for the high frequency vocabulary and that learners be taught vocabulary learning strategies in order to learn the low-frequency vocabulary in a more implicit manner. The idea is that learners start by learning the high-frequency words and then move on to learning the low-frequency words “preferably in a rough order of importance for them” (Nation 2011). And Schmitt (2012) point out that the recent research on comprehension and lexical coverage has made this four part categorization obsolete, since a much higher lexical

coverage is needed than previously thought, mainly based on Nations study from 2006 related previously in this paper.

Based on the estimation that at least 3,000 word families are needed to adequately participate in a conversation held in English (Adolphs & Schmitt 2003; Nation 2006), as well as the fact that the third 1,000 frequency band also provides substantial lexical coverage (Laufer & Ravenhorst-Kalovski 2010) and Schmitt argue that high frequency vocabulary should contain the 3,000 most frequent words of English, instead of the traditional 2,000 word families.

Also, due to Nation's calculation that 8,000-9,000 word families are needed in order to do mundane things such as reading a book and watching the news, they suggest that this range of vocabulary cannot reasonably be deemed to be infrequent. They suggest instead that words beyond the ninth 1,000 frequency band be labeled low-frequency vocabulary.

If this is implemented, the academic and technical vocabulary will not fill the gap between high- and low-frequency vocabulary bands, so Schmitt suggest that the vocabulary ranging from the third to the ninth frequency band be called mid frequency vocabulary, illustrated below: High frequency vocabulary Mid-frequency vocabulary Low-frequency vocabulary  
1,000-3,000 3,000-9,000 9,000- To my knowledge, Nation has not responded to this critique by Schmitt, but he uses the division of high- mid- and low-frequency vocabulary in his 2012 version of the Vocabulary Size Test.

Although, Nation keeps the high-frequency vocabulary limit at 2,000 word families, and puts the starting point for the low-frequency vocabulary at 10,000 word families. Whether or not the third 1,000 level bands should be counted as high frequency or not can be discussed. However, the research related here clearly suggests a need to pedagogically address the vocabulary that follows the high-frequency bands. By naming this vocabulary range midfrequency, teachers and linguists are given a meta-language to address the vocabulary, which will facilitate a pedagogical development of the mid-frequency vocabulary span (Schmitt and Schmitt 2012). This is clearly illustrated by the development of the Academic Word List, which has become a very popular teaching tool for teaching academic vocabulary.

Low frequency words are part of the largest and most diverse group of words. The list consists mostly of words that aren't frequent or wide range enough to fit in the group of high frequency words and of words that rarely appear. There are thought to be over 100,000 word

families in this group, which is quite extraordinary considering that most native speakers are likely to have a vocabulary of only 20,000 word families. Low frequency words are more common than the name of the group indicates, whereas around 10% of the words in both academic texts and newspapers are from this group. However, the percentage of low frequency words in friendly conversation is a bit lower, or about 5% (Nation, 2008). The following table from Nation (2008) shows the frequency of the different word groups in an academic text. The description underneath the table describes from which category the words come.

### **2.8.2. Academic and Technical Vocabulary**

The academic vocabulary is mostly represented by Coxhead's Academic Word List (AWL) from 2000. Xue and Nation made a predecessor in 1984 called the University Word List, but Coxhead's version has taken precedence since it is more condensed. The AWL is also frequency based, however, the corpus of reference contains only academic text and the coverage of the corpora is estimated using the AWL and the GSL. The academic corpora contained "representative texts from the academic domain" whereof the majority was written for "an international audience" (Coxhead 2000). The texts were then divided into four main categories: Arts, Commerce, Law and Science. These, in turn, consisted of 28 more defined subject areas. The AWL comprises 570 word families which cover roughly 10% of the academic corpus that Coxhead used, compared to a fiction corpus where the AWL only covered 1.4% of the text. The coverage was, however, not the same for all four categories in the academic corpus.

Especially the hard science texts did not benefit as much by the AWL as the other categories. In spite of this, the relatively high coverage for a specific register has made the AWL a popular teaching tool, particularly for those studying English for Academic Purposes (EAP). Technical vocabulary is that which is too specialized to be covered by the general academic vocabulary. It is found in the low-frequency ranges and needs to be learned in each specific field (Nation 2001). This vocabulary is usually taught explicitly, since the words are so rare and so vital to the understanding of genre texts that learners are not expected to know them beforehand (Schmitt & Schmitt 2012). Schmitt (2008) points out that academic and technical vocabulary "cut across these 1,000 word-bands, and Nations division into four categories does not take this into account. This puts the necessity of teaching academic and technical



vocabulary in question, especially considering that they are meant to be taught as a complement to the high-frequency vocabulary, which would most likely not result in sufficient text coverage due to the cross over.

In addition, the 64.3% of the AWL is covered by high-frequency vocabulary, if the level is set at 3,000 word families. This suggests that the AWL is too general to be truly useful. Hyland and Tse (2007) point out that even though the AWL covers around 10% of the academic vocabulary, the 570 word families “often occur and behave in different ways across disciplines in terms of range, frequency, collocation and meaning”. The different discourse registers found in the academic world vary a great deal which leads Hyland and Tse to suggest treating them as “subject-specific literacy” instead of generalizing about uniform academic discourse (2007). Because of this they do not support the division between academic and technical vocabulary and suggest that for EAP courses, students be taught discourse specific vocabulary that will enable them to succeed in their chosen field rather than general academic „register“. Also, the notion of an academic vocabulary “gives a misleading impression of uniform practices and offers an inadequate foundation for understanding disciplinary conventions or developing academic writing skills”.

Nation (2011) recognizes the critique of Hyland and Tse as justified, even though the basis of their critique lies in trying to make the AWL into something it was not meant to be, namely a list that would cover all of the academic discourse. Well prepared for studying at academic level as they might think. Therefore, students that aim to learn English for academic purposes should focus on the AWL. It is the most useful vocabulary to learn after the first 2000 word families on the high frequency word list. These two lists combined cover roughly 90% of all words in academic texts.

There is little research available on technical words. The group is formed by words that have a special purpose and are typical in a specialized field such as physics. A student studying anatomy might find that roughly 30% of the words in the text are technical words (Chung and Nation, 2003). Therefore it is important for anyone who is specializing in a particular area to learn the necessary technical words. According to Nation (2008) technical words are thought to range in size from approximately 1000 to 5000 words based on the subject area. Nation (2008) also claims that it is imperative that technical words are learned as part of the subject matter.

## **CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY**

This section presents the research design, information about the participants, the sampling techniques, the instruments used to collect data and the analysis techniques.

### **3.1. Research Design**

The aim of this study was to investigate the relationship between vocabulary knowledge and reading comprehension, so to conduct the research quantitative approach was used.

Quantitative research is generally associated with the positivist/post positivism paradigm. It usually involves collecting and converting data into numerical form so that statistical calculations can be made and conclusions drawn.

Research design is a logical sequence that connects empirical data to the studies initial research question and ultimately to its sound conclusion according to Nigatu (2013), cited in Mertiler (2005). The main objective of this study is to investigate the relationship between vocabulary knowledge and reading comprehension among Durbete General Secondary school on Grade 11 students. The independent variable of the study was vocabulary knowledge (vocabulary size and vocabulary depth) whereas the dependent variable was reading comprehension. The design was correlation in nature with quantitative approach, since the aim is to investigate the relationships among the variables involved.

### **3.2. Research Site**

The research was conducted at Durbete General Secondary School on Grade 11 students". The school is found at Durbete town, south Achefer woreda ,West Gojjam. It is 62 km far from the regional city/Bahir-Dar./The researcher selected this site because of familiarity with the environment, teachers and students, and she has been working in this school and also she has taught in this grade level since 2007 E.C.

### **3.3. Participants of the Study**

This study was conducted at Durbete General Secondary School on an investigation of the relationship between Grade 11 students" vocabulary knowledge and reading comprehension. The school was selected purposefully because the researcher is familiar to this school and has

taught since 2005 .Due to this, the researcher believed that she would get cooperation which is very basic to get real, rich and deep information for the study from the target population. Grade 11 students were selected for this study as they were believed to reveal their experiences as far as the topic of the study was concerned. Also, they could give more real, rich and deep information about the relationship between vocabulary knowledge and reading comprehension. Another important reason is that the researcher has taught grade 11 students for several years. Therefore, the participants of the study would be grade 11 EFL students of the school in 2013E.C

In the selection of the EFL students who were included in the this study, the researcher used stratified sampling, since all grade 11 EFL students at Durbete General Secondary School were large in number. There were 16 sections and 1317 students in total (700 Female and 617 Male). Among these; 15% (105 Female and 92 Male) were selected from this total population. The main intention of employing this sampling technique was to incorporate students who had equal chance or proportion for both female and male students.

### **3.4. Data Gathering Instruments**

To collect the relevant data from the samples of the target population, the researcher used three tests for the selected participants /students to investigate the relationship between the student's vocabulary knowledge and reading comprehension. These data gathering tools were separately described as follows;

#### **3.4.1. Vocabulary Levels Test**

In this study, vocabulary size is conceptualized as the receptive meaning recognition of the words and operationalized by Participants (see receptive vocabulary chapter two).

The Receptive Vocabulary Levels Test (VLT) was used in this study to measure the participants' vocabulary size or breadth of vocabulary knowledge. It consists of two levels of word frequency: the 2,000 Word Level, the 3,000 Word Level in this study even if the receptive vocabulary level test consists five word level ,2000,3000, the 5,000 Word Level, the University Word List Level, and 10,000 Word Level.

Furthermore, prior to the formal conducting of the current study, a pilot study was done. A few students whose educational backgrounds were similar to the participants of the current study were invited to take only 2,000 and 3,000, Word Levels Test. Their performance on the 2000 and 3000 Word Level Test was good. Therefore; the present study adopted only the receptive 2,000 and 3,000 Word Levels Test. However, instead of the original VLT (20 items in clusters, each cluster contains three definitions) constructed by Nation (2001) an equivalent version developed by Schmitt et al (2001) was employed in the present study. It was in a matching format, including 20 blocks. Each block contained six words and three definitions. The test takers were required to select the original word in the left column to go with each definition in the right column. With three definitions for each of the 20 blocks, the test included 60 items for test takers to answer. Each item of the test was scored one point. Thus, the maximum possible total scores for the receptive vocabulary 2,000 and 3,000 Word Level Test was 60. The split-half reliability estimate for scores on the whole test was .76.

The first vocabulary test is a validated version of the Vocabulary Levels Test (VLT, Schmitt et al., 2001), which is used to measure breadth of vocabulary knowledge. This vocabulary test is Versions 2. This version is of the same level of difficulty (Schmitt, et. al, 2001). In this study, Version 2 was adopted because it was based on the new Academic Word List. This test has been utilized in many previous studies (Qian, 2002; Teng, 2014b; Xiang & Fulcher, 2007). The test format consisted of matching words and word meanings. For example:

- |           |                                    |        |
|-----------|------------------------------------|--------|
| 1. copy   | _____end or highest point          |        |
| 2. event  |                                    |        |
| 3. motor  | _____this moves a car              |        |
| 4. pity   |                                    |        |
| 5. profit | _____thing made to be like another | 6. tip |

Participants were required to match the three short definitions with three of the six words and they received one point for each correct answer; the maximum possible score was 60 points

### **3.4.2 .Word Associates Test (WAT)**

The second vocabulary test was the Word Associates Test (WAT) developed by Read (1993; 2004). As a multiple-choice test format, this test measured depth of vocabulary knowledge. This test format is based on two relationships: paradigmatic (meaning), syntagmatic (collocation), and lexical progression (a process of building words). This test has been

utilized in a number of previous studies on exploring the depth of vocabulary knowledge (Nassaji, 2004; Qian, 2002; Teng, 2014). The test consisted of 25 items that test whether the learners could identify the collocation, synonymous, part-whole, or whole-part relationship between a stimulus word (adjective) and eight options. The eight options were put into two groups, with four being distracters, separated either in the left or right box.

Depth cannot be measured in one test or even a bundle of tests. Rather, it should be cut into manageable sections to be related to language skills and to focus on more specific issues for research progress. Accordingly, three dimensions are measured in WAT; synonymy, polysemy and collocation. It was intended to gauge the test takers depth of receptive English vocabulary knowledge. Most word association tasks are productive in nature, requiring test takers to produce a number of related words that come into their heads when the test takers are presented with a set of stimulus words. However, considering that the present study attempted to investigate the relationship of word association knowledge to reading comprehension, which pertains to a receptive skill, it seemed reasonable to adopt such a receptive test of word association as DVK. A modified version of the DVK measure by Qian (2001) was used in the present study to assess the participants' word association knowledge and collocation knowledge.

According to Qian (2001) the key answers to eight items in Read's (1998) WAT were considered ambiguous and were thus replaced. Each DVK item was composed of one stimulus word and two boxes. The stimulus word was an adjective, and each of the two boxes contained four words. The words in the left box were used to investigate the participants' receptive aspect of word association knowledge, while the words in the right box were utilized to measure the participants' receptive aspect of collocation knowledge. Among the four words in the left box, the test takers were required to choose two words that is/are synonymous with one aspect of or the whole meaning of the stimulus word, whereas in the bottom box, they were asked to select among the four words, two words that collocate(s) with the stimulus word. The instruction sheet for the test taker specified that there were four correct answers in each item.

According to Read (1998) this arrangement was made with an attempt to reduce possible guessing effects. For the DVK measure, each word correctly chosen was awarded one point.

Thus the maximum possible total score was 100 for the 25 items. The split-half reliability estimates for scores on the WAT was .62. The following is an example of the items in the test

Sudden

--- beautiful	----quick	---change	----school
--- thirsty	---surprising	---doctor	----noise

### 3.4.3. Reading Comprehension Test (RCT)

Participants took a reading comprehension test from grade 11 teachers guide (page142) which was prepared by different scholars to test their reading comprehension at the end of the year. It consists 10 multiple choice questions and two other reading comprehensions adopted from Published on line article (2014) school of foreign language, Dalian university of Technology, and china. All the three passages consist 4 multiple questions about information stated or implied in the texts. The reason why these tests used is because of: the text appropriateness to participants’ level, with little challenging questions here is whether depth and size of vocabulary knowledge correlated with reading comprehension.

In this study, the test takers were asked to choose the most appropriate answer from four written options, a published Grade 11 reading comprehension test on teacher's guide to test students at the end of the year and two tests which are adopted the above mentioned. For the scoring of the three Reading Comprehension Tests, each item was worth one point. Thus, the maximum possible total score was 20 for the 20 test items. The split-half reliability estimate for scores on the Reading Comprehension Test was .43.

### 3.5. Validity of the Instruments

A number of measures were taken to ensure instruments validity which is defined as, ‘‘the degree to which a study accurately reflects or asses the specific concept that the researcher is attempting to measure’’ (Sudman and Bradburn, 1982, p. 109) The idea of validity to tests design refers to the steps taken by the researcher to ensure clarity, wording and ordering of the questions. One measure of validity as described by Smith and Glass (1987 is that of face validity). In describing face validity, the researcher attempted to support the interpretation of the measurements and its connection to the construct by seeking professional judgment. To

ensure face validity, the researcher gave the tests to colleagues, English teachers and her advisor.

### **3.6. Reliability of the Instruments**

Reliability refers to the degree to which the instrument measures phenomena in a consistent manner. According to Oppenheim (1966, p. 10), reliability refers to ‘‘consistency; obtaining the same result again.’’ This consistency can itself be measured in the form of statistical coefficient of reproducibility, often Cronbach alpha, which is similar to a correlation coefficient. Cronbach alpha test was run to measure the internal consistency and the reliability of the tests.

### **3.7. Procedures of Data Collection and Analysis**

As it was attempted to explain in the previous sections, this research was quantitative. It tried to show the relationship between Vocabulary Knowledge and Reading Comprehension at Durbete General Secondary School .To this end, the following procedures were followed

Reading comprehension test was given first; Vocabulary size test and vocabulary depth test were given in another session. A vocabulary test was separated from reading test to avoid any potential influence of vocabulary test on students reading ability to comprehend. Because of the vocabulary size and vocabulary depth were standardized and directly given to the participants. However, the reliability of items developed by the researcher was checked with the help of the experts and my advisor. As a result, revision was made so as to keep some items clear. In addition, with the recommendation of the experts, some ambiguous items were revised so as to keep clarity. As soon as the researcher reached this school and grade level, she contacted the classroom teachers of the selected sections. At Durbete General Secondary School grade 11, 197 students were selected and, with the help of four other teachers, sitting arrangements were made to allow the invigilators control over any cheating. Following this, Reading Comprehension Test was distributed first. A five minutes‘‘ explanation and examples as to how students could go about each were given by the researcher. The classroom‘‘s chalkboard was used to display examples. Students‘‘ were allowed free to raise any question

or doubt while doing the questions. Students started filling the questionnaires. The teachers were all made clear to the students and the researcher motivated the participants.

In the data gathering stage, all the tests were done by the respondents and collected. After two days Vocabulary Level Test and Vocabulary Associate Test were given with no overlap. All students completed the tests within the limited time. Respondents were adequately informed about the purpose of the study and their contribution would put effect on the research to bring forth better EFL academic context. After data were gathered and coded, Statistical Package for Social Sciences (SPSS) was used for the analysis. It is very familiar among educational and applied Linguistics researchers who study the relationship between/among variables (Dornyei, 2007) cited in Dawit (2008). The values of all variables were entered into the SPSS system. Three statistical techniques were employed. Correlation was used to investigate the relationship between vocabulary knowledge and reading comprehension.

Similarly, the mean score of each test was taken for further analyses in both reading comprehension and vocabulary knowledge (vocabulary size and vocabulary depth). Then, data were computed for each phase of the study. Findings were tabulated and represented in descriptive table where felt necessary. The tables are presented inside chapter four. In the end, analysis, discussions and recommendations to the teaching of English as a foreign language were discussed.

The collected data were analyzed by using SPSS 21 software. Calculation of the descriptive statistics was yield. In addition, to determine the correlations between vocabulary knowledge and reading comprehension ability, Pearson Product Moment correlation was employed. Pearson's correlation coefficient is a statistical measure of the strength of a linear relationship between paired data. In a sample it is denoted by  $r$  between -1 and 1. so we can verbally describe the strength of the correlation using the guide that Evans (1996) suggests for the absolute value of  $r$ : .00-.19 "very weak" , .20-.39 "weak" , .40-.59 "moderate" , .60-.79 "strong" and .80-1.0 "very strong.



## CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

. The aim of the study was to investigate the relationship between EFL Vocabulary knowledge and reading comprehension at Durbete General Secondary School grade 11 students .The participants of this study were 197(105 Female and 92 Male) students even if the analysis was done by only 154 because 43 students didn't take one, two or three of the tests. (See the original participants data Appendix A).

### 4.1. Results

**Table 1. Descriptive Statistics of the variables (N=154)**

	N	Minimum	Maximum	Mean	Std. Deviation
vocabulary size	154	12	55	35.17	10.099
vocabulary depth	154	27	78	53.87	10.112
reading comprehension	154	2	18	8.06	3.483
Valid N (listwise)	154				

As shown in table 1, the minimum, the maximum, the mean and standard deviation of, the three variables for the participants were presented. The maximum score on vocabulary size test gained by participants is 55 and the minimum score is 12. The mean of the participants is 35.17(58.6166%) and Std.Deviation is 10.099. The mean percentage score (58.6166%) of the vocabulary size test was the highest among the three tests the test of depth of vocabulary knowledge obtained the second highest mean percentage score (53.87%). Comparatively, the mean percentage scores of reading comprehension is (40.3%) which is very low and below half percent. This indicates that the number of participants (N=154) reading comprehension was low and which is less than 18% by vocabulary size and 13% by vocabulary depth in this study.

**Table 2 Correlations between the variables (vocabulary size and reading comprehension)**

		vocabulary size	reading comprehension
vocabulary size	Pearson Correlation	1	.607 <sup>**</sup>
	Sig. (2-tailed)		.000
	N	154	154
reading comprehension	Pearson Correlation	.607 <sup>**</sup>	1
	Sig. (2-tailed)	.000	
	N	154	154

<sup>\*\*</sup>. Correlation is significant at the 0.01 level (2-tailed).

Table 2, showed that there was correlation between the two variables vocabulary size and reading comprehension by using Pearson correlation at the significant level of 0.01 (2 tailed) In terms of the relationship of reading comprehension and vocabulary size knowledge, Pearson correlation analysis was used and the correlation coefficient is shown in the above table 2. The participants' score on vocabulary size knowledge is correlated significantly with their reading comprehension scores ( $r=0.607$ ,  $p<0.01$ ).

**Table 3 Correlations between the variables (vocabulary depth and reading comprehension)**

		reading comprehension	vocabulary depth
reading comprehension	Pearson Correlation	1	.441 <sup>**</sup>
	Sig. (2-tailed)		.000
	N	154	154
vocabulary depth	Pearson Correlation	.441 <sup>**</sup>	1
	Sig. (2-tailed)	.000	
	N	154	154

<sup>\*\*</sup>. Correlation is significant at the 0.01 level (2-tailed).

Table 3 above, the second question of this research investigates (to what extent does score on vocabulary depth correlate with score on reading comprehension?) So, this table showed that these dependent and independent variable has positive relationship. Vocabulary depth showed moderate correlation with reading comprehension ( $r=0.441$ ,  $p<.01$ ).

This indicated that depth of vocabulary knowledge had less correlated than vocabulary size with reading comprehension (see the above table 3).

**Table 4: The Correlation between Vocabulary Size and Vocabulary Depth with reading Comprehension (N=154)**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1.624	1.214		-1.338	.183
vocabulary size	.178	.025	.515	7.060	.000
vocabulary depth	.064	.025	.185	2.533	.012

a. Dependent Variable: reading comprehension

As shown in table 4, the third question of this research (to what extent both vocabulary size and vocabulary depth do correlate with reading comprehension). So, this table showed that the relationship of these variables. The result of linear regression analysis confirmed the result of Pearson correlation by showing that vocabulary size has a mark and positive correlation to students' reading comprehension. The coefficient found was 0.515 and the result confirmed that vocabulary depth has a weak and positive correlation with reading comprehension. The coefficient found was 0.185. This indicates that vocabulary size was more significantly correlated with reading comprehension than vocabulary depth.

## 4.2. Discussion

Many researchers consider vocabulary knowledge as the most chief aspect of second language (L2) learning (Knight, 1994; Schmitt, 2008.). Vocabulary knowledge is essential for reading comprehension. As Stahl (1983) asserted, the relationship between reading comprehension and vocabulary knowledge is “one of the best documented relationships in reading research”. Thus, many researchers suppose that a reader’s vocabulary knowledge can be the best predictor of his or her understanding of text (Anderson & Freebody, 1981). There is a general agreement that vocabulary knowledge should be regarded as a multi-dimensional construct, therefore researchers no longer consider vocabulary knowledge having a single dimension.

The first question of the study investigates to what extent vocabulary size correlates with the reading comprehension. Table 2 displays the results of Pearson correlation these dependent and independent variables. As shown in the table, the correlation between these two variables was statistically significant and fairly moderate ( $r=0.607$ ,  $p<0.01$ ). This indicates that the size and reading comprehension had moderate positive relationship each other. The 2000-3000 vocabulary word level appear to be in this grade level. Interestingly it is noticed that the higher the vocabulary size levels the higher with correlation with reading comprehension.

The second question of this study was to what extent vocabulary depth score does correlate with score on reading comprehension. Table 3 display the results of Pearson correlation between these two variables was significant and very weak positive relationship ( $r=0.441$ ,  $p<.01$ ).

This indicates that the depth and reading comprehension of Durbete General Secondary School grade 11 students had very weak relationship.

The third question was vocabulary size and vocabulary depth score do correlate with score reading comprehension. As table 2 presents and based on question number 1 and number 2 vocabulary sizes and reading comprehension correlation was a significant and weak. Generally this research finding was contradict with the previous researches like, Snow (2002) recognized the strength of the relationship between vocabulary knowledge and reading comprehension increased substantially as the children advanced in grade level. Also,

Gelderen et al. (2004) examined the relationship between vocabulary knowledge and reading comprehension among 397 Dutch students from Grade 8 to Grade 10th in secondary education. As results, found a significant relationship between vocabulary knowledge and reading comprehension with the correlation of .63, other studies also (Laufer 1998, Qian ,2002, Nation,2001) finding showed the relation between the two was strong positive correlation but this study finding showed weak correlation even if it is positive.

The study not supports Vermeer's (2001) where high correlations between these two variables were found. Vermeer's findings were refuted by many studies which have found a significant difference between size and depth. In the present study, the weak correlation found between size and depth indicates that -those two vocabulary aspects are not equally correlated with reading comprehension. Nurweni and Read (1998) claim that as students reach advanced language proficiency level, their size and depth overlap; whereas in lower proficiencies, the two aspects are distinct. In connection with the relationship between vocabulary size, depth and reading comprehension, the results indicated a positive but weak relation. These results corroborate those of Ouellette, Stavonich and Laufer(1998). This study also contradicts the results obtained by Tannenbaum et al. and Qian (2001) in literature review. Generally the study concludes that these two dependent and independent variables were inseparable .when the extent of the vocabulary knowledge decreases the reading comprehension also decreases.

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION**

### **5.1 Summary**

The purpose of the present study was to investigate the relationship between vocabulary knowledge (size and depth) with reading comprehension. The results of the study indicate that there was moderate and positive correlation between vocabulary size and reading comprehension.

Additional analyses also showed vocabulary depth significantly correlates with reading comprehension even if it was weak.

Finally the linear regression result revealed that vocabulary size was highly correlated with reading comprehension than vocabulary depth.

### **5.2 Conclusion**

The aim of this study was to investigate the relationship between Vocabulary knowledge and reading Comprehension in EFL classroom at Durbete General Secondary School students in South Achefer Woreda: Ethiopia. Derived from the findings and data analysis it can be concluded that there was a weak correlation between the students' vocabulary size and their reading comprehension performance. And the study found a very weak correlation between vocabulary depth and reading comprehension. Moreover, from the two vocabularies knowledge size showed a significant correlation than depth with reading comprehension.

With respect to the relationship between vocabulary size and reading comprehension, there was a positive and significant correlation ( $r=0.607$ ,  $p<0.01$ ).

With regard to the relationship between vocabulary depth and reading comprehension, there was a very weak positive and significant correlation ( $r=0.441$ ,  $p<.01$ ).

Based on the finding found from vocabulary size and vocabulary depth, vocabulary size score was more correlated with reading comprehension than vocabulary depth.

Generally, as the result of this study, there was a significant moderate positive relationship between vocabulary knowledge and reading comprehension. This study recognizes that vocabulary knowledge as predicting factor to reading comprehension in students' studying English.

### **5.3 Recommendations**

On the basis of the findings of this study, the following recommendations may be forwarded:

1. Since the study indicated significant relations among EFL learners' vocabulary knowledge with reading comprehension, teachers should consider the contribution of their students' vocabulary knowledge awareness to be successful in reading comprehension performance and this helps them to develop more appropriate classroom English tests that can actually assess students' reading comprehension.
2. As vocabulary knowledge (size) was found to be more significant, predictor of reading comprehension teachers and parents should give priority to students' vocabulary knowledge development (e.g. provide supplementary materials and fostering extensive reading programme). Thus, EFL teachers should educate their students' about the role of extensive reading and assign large and balanced amount of reading materials.
3. As the study indicated students' vocabulary size was found more significant than students' vocabulary depth with their reading comprehension, vocabulary size received more emphasis in EFL classrooms. So, teachers should use materials including word lists, vocabulary cards, definitions and all pedagogically sound vocabulary activities to expand vocabulary knowledge (size).

Finally, further research is needed to be investigated by other researchers. In the light of this study, it would be interesting to add other factors that may possibly contribute to reading comprehension. Further research should add more independent variables, beside vocabulary knowledge, such as background information and reading strategies to investigate their effect on reading comprehension. This study investigated only the correlation between Vocabulary knowledge (size and depth) and the reading comprehension of grade 11 EFL learners, so further studies should be conducted with EFL learners at different levels of proficiency, using

different type of skills(speaking, listening and writing ) with vocabulary knowledge. And finally the researcher recommends use different grade level, different background, number of participants and use additional dimensions of vocabulary knowledge like morphological, lexical, pronunciation and registration should be investigated.



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## APPENDIX A: original data of the obtained score

The original data of the obtained score from the tests and basic information of the participants

Respondents Code	Sex	Variables		
		Vocabulary size (VLT)	vocabulary depth (WAT)	reading comprehension (RCT)
1	M	42	53	6
2	M	37	59	7
3	F	39	61	6
4	M	17	48	5
5	F	25	54	6
6	F	33	44	8
7	F	40	48	7
8	F	13	48	7
9	M	26	63	5
10	M	36	48	2
11	F	28	52	5
12	F	23	56	5
13	F	31	51	--
14	M	29	54	9
15	M	18	48	7
16	F	31	50	10
17	M	29	50	10
18	M	34	70	8
19	M	16	57	6
20	F	39	61	6
21	F	16	64	7
22	M	43	65	13
23	M	31	64	7
24	M	19	46	--

25	F	30	47	5
26	F	44	54	--

27	F	36	51	5
28	F	48	60	12
29	M	22	56	5
30	M	52	73	9
31	F	35	27	10
32	M	34	54	4
33	F	44	53	4
34	M	21	50	7
35	M	12	50	8
36	F	43	63	6
37	M	32	56	6
38	M	23	52	7
39	F	20	53	2
40	F	27	50	6
41	M	24	51	4
42	M	26	52	8
43	F	--	55	4
44	F	24	46	2
45	M	12	58	4
46	F	37	65	4
47	F	35	64	3
48	M	37	67	7
49	M	24	47	6
50	F	23	54	8
51	F	--	50	11
52	M	35	55	9
53	M	38	63	10
54	F	18	45	--
55	M	29	59	4

56	M	17	57	6
57	M	29	50	10
58	F	31	49	5
59	M	46	53	8

60	F	30	39	7
61	M	28	43	3
62	F	18	55	6
63	M	19	56	5
64	F	24	38	9
65	F	19	45	4
66	F	32	56	6
67	F	37	49	--
68	M	--	--	--
69	M	50	68	14
70	F	44	48	11
71	F	--	--	--
72	M	22	38	--
73	M	48	70	16
74	F	--	--	12
75	M	--	--	7
76	M	--	--	8
77	F	39	48	6
78	F	43	49	15
79	M	--	--	10
80	F	29	38	5
81	F	28	42	3
82	F	45	47	--
83	M	26	32	5
84	F	50	69	17
85	M	39	46	11
86	F	--	--	6

87	M	22	34	2
88	F	44	44	9
89	F	24	39	7
90	M	--	--	--
91	M	38	42	--
92	M	42	49	12

93	F	37	45	7
94	M	39	65	5
95	F	44	46	12
96	F	--	--	11
97	F	43	56	8
98	M	46	57	10
99	M	44	51	--
100	F	32	41	8
101	M	22	49	4
102	F	33	38	6
103	F	29	49	13
104	M	--	--	9
105	F	49	69	14
106	F	--	--	16
107	M	25	31	5
108	F	24	48	10
109	M	--	--	10
110	M	48	67	13
111	F	28	63	--
112	F	37	61	6
113	M	--	--	7
114	F	--	--	7
115	M	51	64	--
116	F	29	41	8
117	M	39	61	8

118	M	43	62	12
119	F	45	58	6
120	M	54	66	13
121	F	47	61	13
122	M	52	69	17
123	F	32	37	2
124	F	28	43	3
125	F	47	61	7

126	M	--	--	7
127	F	29	50	9
128	F	49	51	12
129	M	---	--	--
130	M	48	65	14
131	F	42	63	14
132	M	28	57	5
133	F	34	51	9
134	F	---	--	--
135	F	29	38	7
136	M	41	43	10
137	F	40	53	11
138	F	33	41	8
139	M	42	54	8
140	M	--	--	6
141	F	27	46	5
142	F	27	41	5
143	M	48	48	8
144	F	34	42	12
145	M	24	30	10
146	F	--	--	--
147	M	49	62	13
148	M	38	38	--



149	F	41	48	10
150	F	40	39	4
151	F	28	52	4
152	M	49	64	8
153	M	48	68	--
154	F	24	53	6
155	M	36	53	6
156	F	--	--	--
157	F	36	61	7
158	F	51	69	15

159	M	55	78	18
160	F	28	48	10
161	M	27	46	3
162	M	36	50	--
163	M	36	42	6
164	F	39	54	7
165	M	47	66	8
166	F	42	71	10
167	M	48	75	14
168	F	26	61	8
169	F	40	53	7
170	M	34	56	9
171	M	--	--	--
172	F	32	49	--
173	M	42	54	--
174	M	49	68	13
175	F	42	49	13
176	F	34	49	5
177	M	39	57	9
178	M	46	57	10
179	F	38	52	7

180	F	43	62	8
181	F	43	46	--
182	M	46	42	4
183	M	28	54	5
184	F	34	54	7
185	F	49	66	11
186	M	50	71	9
187	M	48	75	13
188	F	28	61	7
189	F	---	--	6
190	M	43	64	8
191	F	44	57	--
192	F	37	47	9
193	M	48	68	15
194	F	50	70	17
195	F	28	42	--
196	M	45	61	8
197	F	42	64	8



(2)

1 accident

2 debt \_\_\_\_\_ loud deep sound

3 fortune \_\_\_\_\_ something you must pay

4 pride \_\_\_\_\_ having a high opinion of your self

5 roar

6 thread

(3)

1 coffee

2 disease \_\_\_\_\_ money for work

3 justice \_\_\_\_\_ a piece of clothing

4 skirt \_\_\_\_\_ using the law in the right way

5 stage

6 wage

(4)

1 clerk

2 frame \_\_\_\_\_ a drink

3 noise \_\_\_\_\_ office worker

4 respect \_\_\_\_\_ unwanted sound

5 theater

6 wine

(5)

1 dozen

2 empire \_\_\_\_\_ chance

3 gift \_\_\_\_\_ twelve

4 opportunity \_\_\_\_\_ money paid to the government

5 relief

6 tax

(6)

1 admire

2 complain \_\_\_\_\_ make wider or longer

3 fix \_\_\_\_\_ bring in for the first time

4 hire \_\_\_\_\_ have a high opinion of someone

5 introduce

6 stretch

(7)

1 arrange

2 develop \_\_\_\_\_ grow

3 lean \_\_\_\_\_ put in order

4 owe \_\_\_\_\_ like more than something else

5 prefer

6 seize

(8)

1 blame

2 elect \_\_\_\_\_ make

3 jump \_\_\_\_\_ choose by voting

4 manufacture \_\_\_\_\_ become like water

5 melt

6 threaten

(9)

1 ancient

2 curious \_\_\_\_\_ not easy 3 difficult

\_\_\_\_\_ very old

4 entire \_\_\_\_\_ related to God

5 holy

6 social

(10)

1 bitter

2 independent \_\_\_\_\_ beautiful

3 lovely \_\_\_\_\_ small

4 merry \_\_\_\_\_ liked by many people

5 popular

6 slight

(11)

1 bull

2 champion \_\_\_\_\_ formal and serious manner

3 dignity \_\_\_\_\_ winner of a sporting event

4 hell \_\_\_\_\_ building where valuable objects are shown 5  
museum

6 solution

(12)

1 blanket

2 contest \_\_\_\_\_ holiday

3 generation \_\_\_\_\_ good quality

4 merit \_\_\_\_\_ wool covering used on beds

5 plot

6 vacation

(13)

1 comment

2 gown \_\_\_\_\_ long formal dress

3 import \_\_\_\_\_ goods from a foreign country

4 nerve

5 pasture \_\_\_\_\_ part of the body which

6 tradition carries feeling

(14)

1 administration

2 angel \_\_\_\_\_ group of animals

3 frost \_\_\_\_\_ spirit who serves God

4 herd \_\_\_\_\_ managing business and affairs

5 fort

6 pond

(15)

1 atmosphere

2 counsel \_\_\_\_\_ advice

3 factor \_\_\_\_\_ a place covered with grass

4 hen \_\_\_\_\_ female chicken

5 lawn

6 muscle

(16)

1 abandon

2 dwell \_\_\_\_\_ live in a place

3 oblige \_\_\_\_\_ follow in order to catch

4 pursue \_\_\_\_\_ leave something permanently

5 quote

6 resolve

(17)

1 assemble

2 attach \_\_\_\_\_ look closely

3 peer \_\_\_\_\_ stop doing something

4 quit \_\_\_\_\_ cry out loudly in fear

5 scream

6 toss

(18)

1 drift

2 endure \_\_\_\_\_ suffer patiently

3 grasp \_\_\_\_\_ join wool threads together

4 knit \_\_\_\_\_ hold firmly with your hands

5 register

6 tumble

(19)

1 brilliant

2 distinct \_\_\_\_\_ thin

3 magic \_\_\_\_\_ steady

4 naked \_\_\_\_\_ without clothes

5 slender

6 stable

(20)

1 aware

2 blank \_\_\_\_\_ usual

3 desperate \_\_\_\_\_ best or most important

4 normal \_\_\_\_\_ knowing what is happening

5 striking

6 suprem

## APPENDIX C: Word Associate Test (WAT)

**BAHIR DAR UNIVERSITY**

**FACULTY OF HUMANITIES**

**Department of English Language and Literature**

**Word Associate Test (WAT)**

**Dear students:** The following test is for the level of English adjectives, to measure your vocabulary depth. For the following test there is one stem word that is an adjective and eight words in the right and left column. Two of the words in the left column can help you to explain the meaning (synonym) of the given adjective from number 1-25 and two of them among four in the right column, words are nouns which can follow (collocate) with it in a sentence or phrase. So, please choose four words only from both columns (two adjective in the left and two nouns in the right column) by putting  mark. You should answer that every question as the sample below. Thank you for your cooperation!

Example: **Sudden**

---beautiful	---quick	---change	---school
---surprising	---thirsty	---doctor	---noise

**Write your personal information below:**

Code----      Sex-----      Name of school -----      Grade-----

**1. beautiful**

---enjoyable	---free	---education	---face
---expensive	---	---music	--
Loud		weather	

**2. bright**

---clever	--famous	---colour	---hand
---happy	--shining	---poem	---taste

**3. calm**



---open	---quiet	---Cloth	---day
--smooth	--- tired	---light	---person

#### 4. natural

---expected	--	---foods	---neighbors
helpful		---parents	---Songs
---real	--short		

#### 5. fresh

---another	--cool	--cotton	---heat
---easy	---	---language	--water
raw			

#### 6. general

---Closed	--	---country	---idea
different		---reader	---street
---usual	---whole		

#### 7. bare

--empty	---heavy	---cupboard	-- feet
---uncovered	--- useful	---school	--tool

#### 8. common

---complete	---	---boundary	--circle
light		---name	--- part
---ordinary	--		
shared			

**9. complex**

---angry    --difficult	---arguments    ---
---necessary    ---sudden	passengers
	---patterns    ---
	problem

**10. broad**

---full    ---moving	---night    --- river ---
---quiet    ---wide	shoulders    ---smile

**11. dense**

---crowded    ---hot	---forest    ---handle
---noisy    ---thick	---smoke    ---weather

**12. direct**

---honest    ---main	---fence    ---flight
---straight    ---wide	---heat    ---river

**13. compact**

---effective    ---all	---group    ---kitchen
--solid    ---useful	---medicine    ---string

**14. crude**

---clever    ---	---behavior    ---drawing
fair    ---rough    --	---oil    --- trade
valuable	

**15. domestic**

---home	--	---animal	---movement
national		---policy	---speed
---regular	--		
smooth			

**16. profound**

---bright	---deep	---effect	---machine
---exact	---great	---taste	---thought

**17. fertile**

---dark	--	---business	---egg	---
growing		mind	---soil	
---private	--special			

**18. formal**

---fast	---loud	---bomb	---education
---organized	--serious	---growth	---statement

**19. independent**

---changed	---equal	--	---child	---country
-important	--separate		---ideas	---prices

**20. original**

---careful	---closed	---condition	---mind	---
---first	---proud	plan	---sister	

**21. sensitive**

--feeling--	---clothes ---instrument
interesting	---skin ---topic
---sharp --	
thick	

## 22. professional

---paid ---	---advice ---
public ---regular	manner ---musician
--religious	--transport

## 23. liberal

---free ---moderate	---crops --
---plenty ---valuable	furniture
	---parents --
	transport

## 24. dramatic

--exciting ---official	---adventure --change
---surprising ---worried	---patient ---salary

## 25. conservative

---cautious --hopeful	---clothes --estimate
---traditional ---warm	---meeting ---signal

## **APPENDIX D: Reading comprehension Test (RCT)**

**BAHIR DAR UNIVERSIY**

**FACULTY OF HUMANITIES**

**Department of English Language and Literature**

**Reading comprehension Test (RCT)**

**Dear students;** I am conducting a research to investigate the relationship between Vocabulary Knowledge and Reading comprehension on grade 11 students at Durbete General Secondary School. Your sincere response to the questions below is a great help for my success of study. In addition the study helps you to know in which extent the relationship between your vocabulary knowledge and reading comprehension. Therefore, I ask you politely to read the following three passages and choose A, B, C or D choices BEST answer for you.

Write your personal information below

Code----- Sex----- Name of school----- Grade-----

**Passage One: Questions 1 to 10 are based on the following passage.**

My grandfather, Agbefia, was a wealthy fisherman .He owned four large drag-nets and three fishing boats. He did not employ people but he was the head of a fishing company. a group of men in the village where he helped him to cast his nets and to draw them in ,and in return they received a population of the catch ,which their wives sold in the market. But they had no shares in the nets or boats and were free to leave my grandmother whenever they liked.

Every morning, the old man would leave his house before dawn and walk on the sea-shore. He watched the changing colours of the sea and studied moments of the clouds in the sky. From this the foretold what the weather would be like, and decide where and when to cast his nets that day. Many of his company slept on beach, and when he had made his

decision he would wake them, and give them their instructions before the returned to his house. He was also the chief's linguist. He had to attend the chief on all important occasions and to speak for him. My grandfather was a magnificent and awe-inspiring figure as his golden linguist's staff in his hand, he conveyed to the people the wishes of their chief.

My grandmother, on the other hand, was not awe-inspiring at all. She laughed easily, and she did her best to shield me, and all the children of the house, from the troubles that came our way.

We called her Mamadze which means „Red grandmother“ because of the colouring.

During child hood ,my grandfather had four wives ,and between them they had twenty-five children .He had had ,in all ,eight wives, but the other four had proved unfaithful ,or in some other way un satisfactory ,and he had sent them away.

My own grandmother, Yakuvi, was his favourites and the one who stayed with him to the end of his life. In middle age, my grandfather built a small, but strong and beautiful house, a few hundred yards away from the great family house and compound, which was by then teeming with his children and grandchildren .And he took only my grandmother Yakuvi with him, and together they spent the years of their old age in peace there. And during their last days, he married her for a second time in Christian ceremony.

1. Which is the BEST title for this passage?  
A. My beginnings.
- B. The family business
- C. Life in my grandfather's time
- D. My grandparents

2. Why was the writer's grandfather wealthy?
- A. He owned a fishing business
  - B. He employed a group of men.
  - C. He was a fisherman
  - D. He was a part of a group of fishermen.
3. What did his grandfather do in the mornings?     A. He had to walk up the men.
- B. He chose the best place to Fish.
  - C. He went for a walk.
  - D. He enjoyed the view from the beach.
4. What was the chief linguist's role?
- A. He had to carry a special staff.
  - B. He had to speak for the chief.
  - C. He had to attend the on important occasions.
  - D. He had to convey the wishes of the people to the chief.
5. What was the writer's grandmother like?     A. She had an impressive appearance.
- B. She only looked after her own children.
  - C. She protected the children in the house.
  - D. She was ugly.
6. How many wives did his grandfather has?
- A. Four
  - B. Twenty- five
  - C. Eight
  - D. Twelve

7. Who was Yakuvi?
- A. His grandfather's preferred wife.
  - B. His grandmother's favourite
  - C. Someone who stayed with the writer until the end of his life.
  - D. A woman the writer's grandfather married in middle age.
8. What did his grandfather build in middle age?
- A. A great family house.
  - B. A compound
  - C. A house away from the main house.
  - D. A house teeming with children.
9. What did his grandfather use his small house for?
- A. To live in when he was old.
  - B. As peaceful place to go.
  - C. To spend time with his wives.
  - D. As a house for his children and grandchildren.
10. What happened before his grandfather died?
- A. The writer became a Christian.
  - B. His grandfather became a Christian.
  - C. His grandfather married his grandmother again.
  - D. His grandfather married a second wife.

**Passage Two: Questions 11 to 15 are based on the following passage.**

- A is for always getting to work on time.
- B is for being extremely busy.
- C is for the conscientious way you do your job.



You may be all these things at the office, and more. But when it comes to getting ahead, experts say, the ABCs of business should include a P, for politics, as in office politics.

Dale Carnegie suggested as much more than 50 years ago Hard Work alone doesn't ensure career advancement. You have to be able to sell yourself and your ideas, both publicly and behind the scenes. Yet, despite the obvious rewards of engaging in office politics a better job, a raise, praise-many people are still unable or unwilling to play the game.

People assume that office politics involves some manipulative behavior, says Deborah Comer, an assistant professor of management at Hofstra University. But politics derives from the word "polite". It can mean lobbying and forming associations. It can mean being kind and helpful, or even trying to please your superior, and then expecting something in return.

In fact, today, experts define office politics as proper behavior used to pursue one's own selfinterest in the workplace. In many cases, this involves some form of socializing within the office environment is not just in large companies, but in small workplaces as well.

The first thing people are usually judged on is their ability to perform well on a consistent basis, says Neil P. Lewis, a management psychologist. But if two or three candidates are up for a promotion, each of whom has reasonably similar ability, a manager is going to promote the person he or she likes best. It's simple human nature.

Yet, psychologists say, many employees and employers have trouble with the concept of politics in the office. Some people, they say, have an idealistic vision of work and what it takes to succeed. Still others associate

politics with flattery fearful that, if they speak up for themselves, they may appear to be flattering their boss for favors. Experts suggest altering this negative picture by recognizing the need for some self-promotion. 11.

Office politics (paragraph 2, line 2 ) is used in the passage to refer to .

- A) The code of behavior for company staff
- B) The political views and beliefs of office workers
- C) The interpersonal relationships within a company
- D) The various qualities required for a successful career

12. To get promoted, one must not only be competent but.

- A) Give his boss a good impression
- B) Honest and loyal to his company
- C) Get along well with his colleagues
- D, Avoid being too outstanding

13. Why are many people unwilling to play the game (para.3 line 4 ) A) They believe that doing so is impractical.

- B) They feel that such behavior is unprincipled.
- C) They are not good at manipulating colleagues.
- D) They think the effort will get them nowhere

14. The author considers office politics to be.

- A) Unwelcome at the workplace
- B) Bad for interpersonal relationships
- C) Indispensable to the development of company culture
- D) An important factor for personal advancement

15. It is the author's view that.

- A) Speaking up for oneself is part of human nature
- B) Self-promotion does not necessarily mean flattery
- C) Hard work contributes very little to one's promotion
- D) Many employees fail to recognize the need of flattery

**Passage Three: Questions 16 to 20 are based on the following passage.**

As soon as it was revealed that a reporter for Progressive magazine had discovered how to make a hydrogen bomb, a group of firearm fans formed the National Hydrogen Bomb Association, and they are now lobbying against any legislation to stop Americans from owning one.

The Constitution, said the association's spokesman, gives everyone the right to own arms. It doesn't spell out what kind of arms. But since anyone can now make a hydrogen bomb, the public should be able to buy it to protect them.

Don't you think it's dangerous to have one in the house, particularly where there are children around? The National Hydrogen Bomb Association hopes to educate people in the safe handling of this type of weapon. We are instructing owners to keep the bomb in a locked cabinet and the fuse separately in a drawer.

Some people consider the hydrogen bomb a very fatal weapon which could kill somebody.

The spokesman said, Hydrogen bombs don't kill people-people kill people. The bomb is for selfprotection and it also has a deterrent effect. If somebody knows you have a nuclear weapon in your house, they're going to think twice about breaking in.

But those who want to ban the bomb for American citizens claim that if you have one locked in the cabinet, with the fuse in a drawer, you would never be able to assemble it in time to stop an intruder.

Another argument against allowing people to own a bomb is that at the moment it is very expensive to build one. So what your association is backing is a program which would allow the middle and upper classes to

acquire a bomb while poor people will be left defenseless with just handguns.

16. According to the passage, some people started a national association so as to.

- A) Block any legislation to ban the private possession of the bomb
- B) Coordinate the mass production of the destructive weapon
- C) Instruct people how to keep the bomb safe at home
- D) Promote the large-scale sale of this newly invented weapon

17. Some people oppose the ownership of H-bombs by individuals on the grounds that.

- A) The size of the bomb makes it difficult to keep in a drawer
- B) Most people don't know how to handle the weapon
- C) People's lives will be threatened by the weapon
- D) They may fall into the hands of criminals

18. By saying that the bomb also has a deterrent effect the spokesman means that it.

- A) Will frighten away any possible intruders
- B) Can show the special status of its owners
- C) Will threaten the safety of the owners as well
- D) Can kill those entering others' houses by force

19. According to the passage, opponents of the private ownership of H-bombs are very much worried that.

- A) The influence of the association is too powerful for the less privileged to overcome
- B) poorly-educated Americans will find it difficult to make use of the weapon
- C) The wide use of the weapon will push up living expenses tremendously
- D) The cost of the weapon will put citizens on an unequal basis

20. From the tone of the passage we know that the author is.

- A) Doubtful about the necessity of keeping H-bombs at home for safety
- B) Unhappy with those who vote; against the ownership of H-bombs
- C) Not serious about the private ownership of H-bombs
- D) Concerned about the spread of nuclear weapons

**APPENDIX E: The Reliability Statistics of vocabulary size, vocabulary depth and reading comprehension (N=154)**

	Value Part	.383
N of Items	1	2 <sup>a</sup>
Cronbach's Alpha	Value	1.000
	Part 2	
N of Items		1 <sup>b</sup>
	Total N of Items	3
Correlation Between Forms		.455
Spearman-Brown	Equal Length	.625
Coefficient	Unequal Length	.645
Split-Half Coefficient		.618

a. The items are: reading comprehension, vocabulary size.

b. The items are: vocabulary size, vocabulary depth.