# THE GAP BETWEEN VOCABULARY KNOWLEDGE AND READING COMPREHENSION IN A FOREIGN LANGUAGE 

Benedito José Calixto ${ }^{1}$


#### Abstract

Assuming that children present a vocabulary knowledge about 5000 to 7000 words of their mother tongue before they have instructions at school, leads us to suppose what would be the circumstances in relation to the acquisition of a foreign language. Learner can face as major complexity as lesser be his/her vocabulary knowledge in the target language. The majority of the students took English classes in the elementary schools, as a result it can be suppose that the amount of vocabulary knowledge may not be enough to reach a satisfactory reading comprehension of most of the texts in a higher education level. It is taking into account all of a background and the proposed programs as well. Reading can be considered the most used and necessary skill in Brazil, consequently it is assumed that there is a major gap to be achieved on foreign language reading researches in view of the amount of researches done on the native language.


KEY-WORDS: Language; Acquisition; Skill.

## O ESPAÇO ENTRE O CONHECIMENTO DE VOCABULÁRIO E A COMPREENSÃO DE LEITURA NUMA LÍNGUA ESTRANGEIRA

RESUMO: O pressuposto de que a criança antes de ingressar na escola possui um conhecimento de vocabulário de 5000 a 7000 palavras de sua língua materna leva-nos a supor quais seriam os fatores determinantes com relação à aquisição de uma língua estrangeira. O aprendiz de uma língua estrangeira enfrentará um nível maior de dificuldades quanto menor for o seu conhecimento de vocabulário na língua alvo. A maioria dos alunos teve aulas de inglês no

[^0]
#### Abstract

Ensino Fundamental, o conhecimento de vocabulário da língua estrangeira estudada desse aluno pode ainda não ser suficiente para atingir uma compreensão satisfatória da maioria dos textos principalmente em um nível superior de ensino. Logicamente levando-se em conta todo um contexto além dos programas trabalhados. A habilidade lingüística mais utilizada no Brasil é a da leitura, entendemos de que existe um espaço maior a ser preenchido nas pesquisas na área de leitura de línguas estrangeiras com relação às quantidades de pesquisas feitas no ensino da língua materna.


PALAVRAS-CHAVES: Línguas, Aquisição e Habilidade.

## INTRODUCTION

The aim of this article is to present and discuss current developments and debates on researches in the field of reading comprehension, vocabulary knowledge and general or background knowledge.

Reading in English as a foreign language can be considered the most necessary skill in Brazil. It is used in many ways for both general and specific purposes. Brazilian National curriculum emphasises reading as the main skill to be developed by our students from year 5 to year 8 and in the secondary schools.

One of the most significant problems educators face today is reading deficiency. A great number of students could well be accounted for as disabled judging by their reading difficulties, a problem which may reflect in poor performance in other educational activities. Reading can be considered one of the basic ways of acquiring information in our society and in academic settings in particular. It may be assumed that the person who is not able to read well will face serious trouble, especially in what regards to educational and, subsequently, job opportunities, not to mention their own rights as citizens.

Since the approval of the LDB (Directions and Basis Law) for the Brazilian government in 1999, it is established by the PCN (National Curriculum Parameters) that the teaching of English as a foreign language in primary and secondary schools must be provided basically all the way through the ability of reading. It is presumed
that at the beginning, when students start having English lessons, in year 5 students love English classes but from year 7 on most of the students are supposed to dislike them. One of the reasons for this can be because many English teachers even having under graduation course they have low proficiency level in English and in teaching English as foreign language as well.

English is the most used foreign language in the world. It is the language in which more and more people read and write nowadays. Reading in English is a very useful tool to have access in a very wide range of literature. Through reading in English everyone would be able to understand the world better.

## VOCABULARY KNOWLEDGE AND READING COMPREHENSION IN ENGLISH AS A FOREIGN LANGUAGE

Due to the social and economic opportunities it offers reading is one of the most important skills to be developed among all learners. However reading in a foreign language can be influenced by many factors that are usually not considered in first language reading (Grabe 1991, p. 386). It is assumed that while the first language learners have some grammar knowledge and vocabulary of around 5,000 to 7,000 words before they have instruction in schools, the foreign or second language learners have very different language knowledge. They can face difficulties in vocabulary and grammar knowledge as well as difficulties in pronunciation.

Because foreign language learners sometimes are older than the first language (L1) learners the former already has a background or general knowledge which assist them better than the latter in some aspects of making inferences and being more objective in the target language, making them more efficient learners.

Linguistic differences at syntactic and discourse levels are also more likely to influence reading comprehension. There are also the differences between easier and harder syntactic order for different languages. English readers normally pay more attention to content words while reading than to the syntactic information encoded into functional words (GRABE, 1991 p.388).

Hsueh-Chao and Nation (2000), carried out a study to see what percentage coverage of text was needed for unassisted reading for pleasure. First language
learners were asked to read without looking up words. A multiple-choice test and a cued written recall test were used in this experimental research. The researchers found three levels of unknown vocabulary and reading comprehension. Readers who knew $80 \%$ of the words did not have a satisfactory comprehension on both of these tests. However the readers who got $90 \%$ and $95 \%$ of the running words most of them had not adequate comprehension but just some readers did. It was assumed that there are an expected relationship between the level of unknown words and degree of comprehension. It was also stated that around $98 \%$ of the vocabulary is central to get unassisted comprehension of a fiction text.
> "The relationship between vocabulary knowledge and reading comprehension is complex and dynamic. One way of looking at it is to divide it up into two major directions of effect the effect of vocabulary knowledge on reading comprehension and the effect of reading comprehension on vocabulary knowledge or growth" (HU HSUEH-CHAO \& NATION 2000 p. 403).

These effects show us two different sides. First is when the first language learners, young native speakers, at the very start of reading, where reading comprehension is supported by their vocabulary. Second at the time the native speaker start going to school when s/he already has the domain of about 5.000 word families, which allow him/her to put the words together. After some years of reading lessons and getting control of reading skills the environments change to acquire more and more vocabulary.

There are several theoretical models to illustrate the relationship between vocabulary knowledge and reading comprehension. And vocabulary knowledge is always there lying beneath language knowledge. Background knowledge or general knowledge and reading comprehension is also connected to the competence in language use.

One of the best predictors of reading comprehension is good vocabulary knowledge, which assist reading comprehension (HSUED-CHAO AND NATION, 2000 p.404). However, this point of view presents the process of reading in suggesting solely if you have a good knowledge of vocabulary it is about all you need to be able to read.

As reading comprehension also has to do with background knowledge good vocabulary knowledge can also represent good general knowledge and experience.

> "This world knowledge support reading comprehension because the reader must bring as much information to the text as the reader expects to get from it. It is difficult to read about astrophysics if you know nothing about it" (HSUED-CHAO AND NATION 2000 p.404).

Hsued-chao and Nation (2000) represent this relationship as:


Considering that the process of reading is not so simple and that there are many links involved influencing reading comprehension. It is not possible to exclude any others and different relationships at different stages of vocabulary development and reading comprehension.

Some discussions on the relationships between vocabulary knowledge and language use suggests that providing vocabulary easily, based on an instrumental view, emerge a fundamental association with reading comprehension. This easy access can be improved through practice consisting of word contact, speed of dealing with forms, decoding skills and speed of word recognition. Being that as they may, there are some controversies on them.

On the one hand there are complications that arise between the native speakers and their complex process in reading in their first language and the reading in a different writing system in a foreign language (Chinese language for example) where the vocabulary knowledge is very scarce. On the other hand for the non-native speakers this relationships can be even more complicated.

Thus determining the amount of unknown vocabulary is crucial in order to know if it enables the foreign language learner to read with reasonable comprehension. Since the readers possess a reasonable range of vocabulary knowledge reading comprehension can come out in a practical way. One approach to know this view of this issue has been to recognise how the range of unknown vocabulary and vocabulary extent contribute for reading texts. For example the percentage of text coverage; the amount of unfamiliar and familiar indication of vocabulary knowledge and the number of text lines per 01 unfamiliar word. These presumptions are about good and poor vocabulary measurement and management.

## VOCABULARY AND LANGUAGE ACQUISITION

Vocabulary coverage features have been considered for some researchers that the reader really needs to have a level where vocabulary knowledge offers a sufficient amount of vocabulary coverage for satisfactory reading comprehension. There are different levels of vocabulary knowledge and some readers can demonstrate to have good vocabulary knowledge. Some learners cannot have reached a reasonable level because they do not know enough vocabulary for reading text satisfactorily. Furthermore, the relationship between text coverage and vocabulary size also can be affected by the kind of text.

Vocabulary learning also can be strongly affected by word frequency. It means that words, which appear frequently in a text tends to be acquired by the students before the words that happen less repeatedly. This way it is possible to understand how text coverage and vocabulary size are related to each other. Moreover, second language learners' scores on the various levels of a Vocabulary Levels Test (NATION 1983 and 1990), decreased from the high frequency levels to the lower frequency levels. It is supposed that readers who have vocabulary coverage of $80 \%$ of the running words in a text can find an unknown word in a row of five. If a line with an average of ten words, there will be two unknown words per line. "A density of two unknown words per line, particularly two unknown content words, would make reading very difficult and would probably result in low levels of comprehension" (HU HSUEH-CHAO \& NATION 2000 p.405).

It is also stated that because fiction texts and non-simplified texts are the majority of graded reading texts, they are also more appropriate for second language learners in terms of vocabulary load. It is also assumed that fiction texts are probable to provide good conditions to reading for the reason that these kinds of reading texts do not involve as much background knowledge as academic texts or newspapers typically do. Hu Hsueh-chao \& Nation (2000), assert accordingly to Hirsh and Nation (1992) readers need to have at least a vocabulary size of around 5.000 families to cover $95 \%$ to $98 \%$ of the running words in a novel.

High coverage level of the vocabulary in a text to have good reading comprehension can be regarded as commonsense evidence. However, it is important to know whether crossing a language knowledge threshold would be crucial or not for successful language use and reading comprehension.

Laufer and Sim (1985), state that the reader needs to cross a borderline for comprehension takes place satisfactorily. Otherwise reading comprehension could be not adequate. They used comprehension questions and interviews with learners in order to have a minimum score where readers would have the enough language knowledge to read Academic Purposes text in the First Certificate in English Exam. They concluded that the minimum necessary score would be $65 \%-70 \%$. By using interviews it was seen how learners dealt with text and which would be the needed items to be supplied to see how comprehension would be affected. It was assumed that vocabulary is the most required item followed by the theme knowledge and syntactic structure.

Laufer (1989), asked second language learners to underline the unknown words in a text setting now that $55 \%$ or more would be a reasonable score for reading comprehension of a text. Despite being one of the lowest accepted grades in some Universities, which is not justified by Laufer (1989), this vocabulary measurement found that most of the learners were successful readers. It also revealed that there was a considerable difference in comprehension scores.

Laufer (1989), trying to establish a vocabulary size that could provide 95\% coverage of academic text also assumes that a vocabulary size with about 5,000 words would be adequate to supply $95 \%-98 \%$ coverage of academic text. However, this study made in Dutch schools, with newspapers cuttings, was applied to the English language and the threshold was not well defined as words types, lemmas or families.

Besides the differences in being applied to English this study used just a small corpus of newspapers clippings and not academic text. It is assumed that the vocabulary size of $95 \%$ for understanding a text depends also on the kind of text and whether it is a novel, a newspaper or academic text, its length and the topic as well as its coherence.

Laufer (1992), in a study based on the relationship between reading comprehension score measured by English reading of non-simplified text and vocabulary tests, in different countries, found that the students who could be considered as readers had shown a vocabulary level of 3,000 word families. This author was studying the importance of a vocabulary threshold and its relationships by investigating the contributions of vocabulary, grammar and general knowledge to reading comprehension. These relationships setting the minimal proficiency level would be central to the development of reading comprehension.

This research has shown that the level of unknown words has a strong effect on text comprehension. It was used a fiction text with a strong chronological story line. This text could not be considered a difficult text. On the other hand other text types as newspapers and academic texts would require more language competence from the reader.

Hu Hsueh-chao \& Nation (2000), state that a vocabulary size around $98 \%$ of a text coverage would be necessary to achieve a very good comprehension of it. And also that English, as foreign language learners must have around 98\% coverage of the words in the text to be able to read. It was found that there was an expected relationship between level of unknown words and comprehension. As the number of unknown words increases, comprehension falls. However, very few readers could overcome this and be able to have a good reading comprehension with around 90\% $95 \%$ of vocabulary knowledge. They also declare that:

[^1]However, the context of teaching English as a foreign language, is different of first language learners as different are L1 and L2. Moreover, the existing proficiency tests (for example) show us actually another reality where foreign language learners can be considered proficient in reading, language use, speaking and writing with around $70-80 \%$ of language competence score. Not only considering vocabulary knowledge but also all the general knowledge of structure and coherence. Decoding skills and other abilities such as reading strategies, linguistic knowledge, pronunciation, vocabulary, and grammar (language usage) are also necessary to have satisfactory reading comprehension and these factors and skills are not discussed here in a wide range but general knowledge that is just named without much deep explanation.

Hu Hsueh-chao \& Nation (2000), had presented a severe position in not allowing the readers to have access to dictionaries or glossary. Yet it can lead not only first language teachers, but also foreign language teachers to choose adequate reading materials when looking for meaning and reading comprehension activities in class.

They also declared that for English teachers or foreign language teachers it is possible to suggest some features and kinds of reading. This assisted reading can improve students reading comprehension by supporting them through guidance and clarification of unknown words allowing the use of dictionaries or glossaries elaborated in the text for intensive reading. However, for extensive reading for language growth it is suggested to read the unfamiliar expressions and words dealing with that with less interruption aiming to understand the message of the text. Developing fluency in reading skills it is also important to read texts without unfamiliar words.

## BACKGROUND AND GENERAL KNOWLEDGE


#### Abstract

The relationship between background knowledge and reading comprehension has been explored extensively. These investigations have demonstrated that reading comprehension has been facilitated through the background knowledge of the topic of a text. It is assumed that reading abilities and


general knowledge contribute to reading comprehension and reading speed. At the same time, as skilled readers, but with little sphere of knowledge, can balance their lack of knowledge by being dependent on their general reading skill, poor readers with poor reading skill can compensate this and have some stability in reading comprehension by means of their high general knowledge.

Domain knowledge or general knowledge and vocabulary knowledge are supposed to have independent effects on reading comprehension. These effects can show different aspects on what was comprehended and how much was comprehended. Little vocabulary knowledge can affect the understanding of the microstructure of the text whereas general knowledge can facilitate the inference tracking and assist to understand the macrostructure of a text. It is taken for granted that the familiarity with the topic helps the second language reader to construct meaning.

Droop and Verhoeven (1998), concluded that background knowledge improves reading comprehension efficiency of children acquiring literacy in a first and second language. On the other hand it became clear the differences between first and second language learners. First language learners are more assisted with general and background knowledge than second language learners that appeared to be influenced by the vocabulary knowledge and general and cultural knowledge level of the target language. Thus it is important to consider the children's language proficiency and their background knowledge to provide adequate reading materials.

There are two factors involved in obstructing comprehension. The first of these is the kind of reading material presented to students. Attention is required because an appropriate choice of material will determine whether or not processing and comprehension will be satisfactory. Reading material needs to be chosen with careful consideration as it is intended to support comprehension according to the knowledge and interest of the students. Adams (1980), asserts "the second factor lies on what will be demanded from the students, with attention not to go beyond their ability".

L1 reading is viewed as a process where word decoding and recognition have to do with prior knowledge supporting reading. Whereas L2 reading comprehension is more supported by L2 language competence than to factors within L1 reading ability. In this case it is important to consider the alphabetical differences between English and Korean language. While the relationship and the contributions
from L1 to L2 in relation to the language factors as decoding and recognition skills will have a closer relation with languages, which have the same alphabet. "When first learning to read in an L2, readers cannot as easily use knowledge or intuitions from L1 reading experiences as they can when they become more proficient in L2" (LEE AND SCHALLERT 1999 p.714).

## FINAL CONSIDERATIONS

There are some challenging questions about a threshold level of proficiency and the relationship between language proficiency and reading comprehension in L2. This is also called of linguistic ceiling. Threshold meaning has to do with an entrance or doorway and in a more abstract meaning as a level or point, where a borderline is marked about something that can change afterwards. In second language reading, a threshold level is tied with language competence. This can be understood as a limit, which is necessary to be developed to acquire an essential ability to read in a L2. Readers cannot read effectively until they improve some proficiency in a second or foreign language. An entrance level can show the correlation between L1 and L2 reading before or after a certain proficiency level. This can be evident for the success or not in reading comprehension.

A number of researchers claims that the latent needs for reading comprehension improvement in a second or foreign language are very large. Much has been explored about the first language reading than the foreign language and successful attempts on researches that L1 have had need to be also repeated to foreign or second language. Thus there is a wide range of research to be done in this field.

## REFERENCES

Adams M.J. (1980). Failures to Comprehend and Levels of Processing in Reading. In: Spiro, R. Bruce, B. \& Brewer, W. (1980).(eds.) Theoretical Issues in Reading Comprehension. Hillsdale, New Jersey: L. Erlbaum Associate Publishers.

Auerbach, E.R. \& Paxton, D. (1997). "It's Not the English Thing": Bringing Reading Research into the ESL Classroom. Tesol Quartely, Vol.31, No.2, pp237-261.

Brown, A. (1980). Metacognitive development and reading. In: Spiro, R, Bruce, B, Brewer, W, (1980) (eds.) Theoretical Issues in Reading Comprehension: Hillsdale, New Jersey: L. Erlbaum Associate Publishers.

Carrel, P. (1989). Metacognitive Awareness and Second Language Reading. The Modern Language Journal 73, 122-133.

Carrel, P. (1988b). SLA and classroom instruction: Reading. Annual Review of Applied Linguistics, 9, 223-242.

Carrel, P. (1991). Second Language reading: Reading ability or language proficiency? Applied Linguistics, 12, 159-179.

Carver, R.P. (1994). Percentage of unknown vocabulary words in text as a function of difficulty of the text: implications for instruction. Journal of Reading Behaviour, 26(4), 413-437.

Droop and Verhoeven (1998). Background Knowledge, Linguistic Complexity, and Second-Language Reading Comprehension. Journal of literacy Research, 30 (2) 253-271.

Dunmore, D. (1989). Using Contextual Clues to Infer Word Meaning: an Evaluation of Current Exercise Types. Reading Research Quarterly 24, 162-173.

Goldman, S. \& Rakestraw, Jr. J.(2000) Structural Aspects of constructing Meaning From Text. Handbook of Reading research Vol.III, Kamil, M.L; Mosenthal, P.B; Pearson, P.D; Barr, R; Mahwah, New Jersey: Lawrence Erlbaum Association.

Grabe, W. (1991). Current developments in second language reading research. Tesol Quartely, 25 (3) 375-405.

Hu Hsueh-chao, M. \& Nation, I.S.P. (2000). Unknown Vocabulary Density and Reading Comprehension. Reading in a foreign language, vol. 13 (1)

Laufer B. and Sim, D.D. (1985). Measuring and explaining the reading threshold needed for English for academic purposes texts. Foreign Annals, 18(5), 405-411.

Laufer B. (1989). What percentage of text-lexis is essential for comprehension? In C. Lauren and M. Nordman (eds) Special Language: From Humans Thinking to Thinking Machines. Clevedon: Multilingual Matters.

Laufer B. (1992). How much lexis is necessary for reading comprehension? In Arnaud and Bejoint ( 1992): 126-132.

Lee, J.W. and Schallert, D.L. (1999). The relative contribution of L2 Language Proficiency and L1 Reading Ability to L2 Reading Performance: A Test of the Threshold Hypothesis in an EFL Context. Tesol Quartely, 711-739.

Nation, I.S.P. (1983). Testing and teaching vocabulary. Guidelines, 5(1), 12-25.

Nation, I.S.P. (1990). Teaching and learning vocabulary. Rowley, Mass: Newbury House.

Nation, I.S.P. (1993). Vocabulary size, growth and use. In R. Schreyder and B. Waltens (eds) The Bilingual Lexicon. Amsterdam/Philadelphia: John Benjamins. 115-134.

Oakhill, Cain \& Bryant, (1997). Factors that contribute to individual differences in children's comprehension skill. Integrating Research and Practice Seminar.

Peregoy S. F. \& Boyle, O. F. (2000). English Learners Reading English: What we know, what we need to know. Theory Into Practice Vol.39, N.4, autumn 2000. pp 238-247.

Spiro, R. Bruce, B. \& Brewer, W. (eds.)(1980). Theoretical Issues in Reading Comprehension. Hillsdale, New Jersey: L. Erlbaum Associate Publishers.


[^0]:    ${ }^{1}$ Graduado em Letras. Pós-graduado pela Unicamp. Mestre em Lingüística pela Unesp. Créditos de doutorado pela University of London. Professor de língua inglesa do curso de Secretariado Executivo Bilíngüe, Unioeste, campus de Toledo. Membro do Grupo de Pesquisa em Secretariado Executivo Bilíngüe. Membro do Conselho Universitário. bencalixto@uol.com.br.

[^1]:    "If the vocabulary load is greater than one unknown word in fifty running words, then extensive reading has become intensive reading. These two types of reading practise some similar skills and some different skills. Teachers need to ensure that extensive reading truly is extensive reading, so that the unique skills that it develops have a chance to be practised" (p.423)

