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## FACULTAD DE FILOSOFÍA Y HUMANIDADES <br> DEPARTAMENTO DE LINGÜÍSTICA

# "The Role of Vocabulary Knowledge in Reading Comprehension, Inferencing Skills, and Metacognitive Awareness in Second Language Acquisition: An Analysis of the English Teaching Program in Two Schools at Universidad de Chile" <br> Informe Final de Seminario de Grado para Optar al Grado de Licenciado en Lengua y Literatura Inglesas 

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#### Abstract

As a part of Second Language Acquisition, vocabulary knowledge plays a fundamental role in the development of skills such as reading comprehension and inferencing skills (Nassaji, 2006; Schmitt, 2010a). Likewise, metacognitive awareness ensures learners to compensate for the lack of knowledge in a given subject, including vocabulary knowledge (Read, 2000). Thus, the present study observes the influence of metacognitive awareness, reading comprehension abilities, inferencing skills and vocabulary knowledge in a second language in the program imparted by 'Plataforma Uchile'. Factors such as the score obtained on Math and Language Standardized tests (PSU) and average grades from high school (NEM) have also been considered. Possible correlations among the aforementioned factors were taken into account. A mixed, non-experimental and cross-sectional study was carried out using descriptive and correlational analysis of data. Further, in order to analyse the perception of the students towards learning a English as a second language qualitative data obtained by a questionnaire was analyzed. 108 students from "Plataforma Uchile" English program were observed. These students belonged to Facultad de Ciencias Sociales (FACSO) and Instituto de Comunicación e Imagen (ICEI). Major findings indicate the existence of significant correlations among certain factors, namely inferencing skills, reading comprehension, metacognitive awareness, vocabulary knowledge and PSU in this particular sample. Nonetheless, no correlations were found regarding the students' average grades from high school. Considering the qualitative analysis, many students expressed a positive preference towards learning English, although they regarded this activity mainly as a necessary or useful tool for occupational and academic purposes only.

Keywords: Vocabulary Knowledge, Reading Skills, Inferencing Skills, Metacognitive Awareness, Second Language Acquisition, English as a Second Language, Plataforma Uchile.


## Resumen

El conocimiento de vocabulario, como parte de las áreas de la adquisición de una segunda lengua, juega un rol fundamental en el desarrollo de habilidades tales como la comprensión lectora y las de inferencia (Nassaji 2006; Schmitt, 2010a). Así mismo, la consciencia metacognitiva asegura que los estudiantes compensen la falta de conocimiento en cualquier materia, incluso en el conocimiento de vocabulario (Read, 2000). El propósito del presente estudio es observar la influencia de la consciencia metacognitiva, las habilidades de comprensión lectora y de inferencia y el conocimiento de vocabulario en la enseñanza de una segunda lengua en el programa 'Plataforma Uchile'. Se consideraron como factores los puntajes obtenidos en las Pruebas de Selección Universitaria (PSU) de Matemática y Lenguaje y la concentración de notas de la Enseñanza Media (NEM). Posibles correlaciones entre los factores previamente mencionados también fueron consideradas. Un estudio mixto, correlacional y transversal fue llevado a cabo a través del uso de análisis descriptivo y correlacional. Adicionalmente, para analizar la percepción de los estudiantes sobre el aprender inglés como segunda lengua, datos cualitativos obtenidos mediante un cuestionario fueron analizados. 108 estudiantes del programa de inglés 'Plataforma Uchile' pertenecientes a la Facultad de Ciencias Sociales (FACSO) and Instituto de Comunicación e Imagen (ICEI) fueron observados. Los resultados más importantes indican la existencia de correlaciones significativas entre factores como habilidades de inferencia, comprensión lectora, consciencia metacognitiva, conocimiento de vocabulario y PSU en la presente muestra. Sin embargo, no se encontraron correlaciones entre los factores ya mencionados y las notas de enseñanza media de los estudiantes. Con respecto el análisis cualitativo, varios estudiantes expresaron una inclinación positiva hacia el aprendizaje del idioma inglés, aunque consideraron esta actividad principalmente necesaria solo para fines laborales y académicos.

Palabras Clave: Conocimiento de Vocabulario, Comprensión Lectora, Conciencia Metacognitiva, Adquisición de Segundas Lenguas, Inglés como Segunda Lengua, Plataforma Uchile.

The Role of Vocabulary Knowledge in Reading Comprehension, Inferencing Skills, and Metacognitive Awareness in Second Language Acquisition: An Analysis of the English Teaching Program in Two Schools at Universidad de Chile

## Introduction

Only in the last decades has the study of vocabulary as a component of Second Language Acquisition been given serious attention (Huckin \& Coady, 1999; Schmitt 2010a). As a matter of fact, learning vocabulary is pivotal for the development and mastering of many components of SLA and, in order to function and communicate, learners must acquire a significant number of words (Schmitt, 2010a). In this sense, when enhancing their vocabulary knowledge, learners will be gradually increasing abilities such as reading comprehension (Nation \& Warring, 1997; Hu \& Nation, 2000) or their success in inferencing tasks (Nassaji, 2006). Furthermore, this knowledge can be developed in two different aspects: their depth and breadth of vocabulary knowledge (Nassaji, 2006; Milton, 2009; Schmitt, 2014), as well as the receptive and productive knowledge of vocabulary (Nation, 2001).

In addition to this, metacognition plays a crucial role in any kind of learning process, including SLA. Moreover, the understanding and control that learners have over their learning processes is crucial/pivotal to ensure success overriding the impact of intellectual capacity (Schraw \&Dennison, 1994). This ability to plan, monitor and evaluate learning can compensate for the lack of knowledge (i.e. vocabulary knowledge) (Read, 2000), and its explicit instruction ought to be part of a language teaching class (Schraw, 1998).

According to this, English teaching programs' curricula ought to have a strong approach to vocabulary and metacognitive instruction (Baker \& Brown, 1984; Garner 1990; Read, 2000; Cobukcu, 2008). Furthermore, an effective instruction on vocabulary acquisition (with its implications in reading comprehension (Hu \& Nation, 2000) and inferencing abilities (Nassaji,
2006)), along with an effective instruction on metacognitive abilities, are essential in the development of the different needs a university student learning a second language has. Regardless their area of study or the discipline in which they are forming as professionals, learners must successfully develop receptive and productive abilities to successfully comprehend and communicate in their second language (Nation, 2001). Along with this, it is necessary to understand as well, that different disciplines such as social sciences or journalism might require to give additional attention to different specific abilities regarding second language learning.. Social science students might need a wider knowledge in inferencing skills to comprehend academic texts written in their L2 while journalism students might need to enhance their ability to communicate through written or oral language in their L2.

The present study will attempt to investigate the possible lack of awareness of the aforementioned issues about SLA in the main English program at Universidad de Chile. It is of utmost importance for teachers and authorities of different kinds of academic institutions to observe the effectiveness of their curricula in these key areas. In this sense, the present study was carried out with the aim of observing the presence or absence of metacognitive skills, reading comprehension ability, inferencing skills and vocabulary knowledge in second language teaching in 'Plataforma Uchile', program that, to our knowledge, has not been observed in these matters ever before. For this purpose, a mixed methods study with a high quantitative component of a non-experimental nature was carried out using a cross-sectional, descriptive and correlational analysis of its results. The data used was collected throughout a semester from 108 students from the English program who belonged to Facultad de Ciencias Sociales (FACSO) and Instituto de Comunicación e Imagen (ICEI).

On the quantitative side, after applying several tests to the participants, their results are not in line with the knowledge that they are expected to have acquired according to the program's objectives. However, significant and substantial correlations were found through the quantitative analysis. These correlations are in line with the reviewed literature, nonetheless, several odd correlations were also found between the analyzed variables. On the qualitative side, a characterization of the perspective the participants had on the English language was made, showing that the language was regarded and perceived mostly as a necessary and useful tool for academic, professional and general purposes. In addition, English was perceived by the participants as a means of communication in terms of the globalized world we live in, regarding English as a lingua franca needed to communicate throughout the world.

This study presents the following structure: Firstly, the review of previous literature on every relevant subject matter for this study is presented. Furthermore, the methodology section is presented to give a thorough overview of the process of data collection and analysis. In addition, the quantitative and qualitative results will be addressed followed by their respective analysis, and lastly, the conclusions of this study and its limitations, along with several suggestions for future research will be presented.

## Literature Review

## Vocabulary

Vocabulary in Second Language Learning. Vocabulary as a focus for research in second language teaching was only considered as of the final decade of the twentieth century (Huckin \& Coady, 1999; Schmitt, 2010a). To learn vocabulary is one of the most important tasks in the process of language acquisition, since an important number of words must be learned in order to communicate and function in an L2 (Adolphs \& Schmitt 2003; Schmitt, 2010b; Schmitt, Cobb, Horst \& Schmitt, 2015). However, Schmitt (2010a) clarifies that the target vocabulary size to be acquired should not be compared to the one of a native speaker, since a much smaller number of word families are necessary for a learner to perform different activities in their L2. In other words, the vocabulary goal should be coherent to the communicative purpose of the learner.

Following this idea, according to Schmitt (2010a), different kinds of activities require different vocabulary sizes. For daily conversation, Adolphs and Schmitt (2003) found that though 5,000 word families are the target size to cover $96 \%$ of oral communication, hence to successfully communicate in an L2 at a basic level. For the purpose of reading authentic texts, 95\% of text coverage is necessary (Laufer, 1989, 1992; Hu \& Nation, 2000; Laufer \& Ravenhorst-Kalovski, 2010; Schmitt, Cobb, Horst \& Schmitt, 2015), which means that 5,000 word families are needed in order to understand these texts.

To make sense of what the previous numbers represent, one must be familiar with the definition of word. In his work about vocabulary assessment, Read (2000), states that words are "the basic building blocks of language, the units of meaning from which larger structures such as sentences, paragraphs, and whole texts are formed" (p.1). Nevertheless, the concept of word
might go further than the definition presented, due to the many constituents that are related to it. In this sense, it is important to take into account the way these basic units, namely words, are distinct from each other and how they can be defined.

Consequently, not all lexical units are constituted by just one word (Read, 2000). In this sense, the definition of word can be broadened if the concepts of homographs and larger lexical items are brought into the discussion. On this subject, Read (2000) explains that homographs refer to a single unit or word which holds at least two meanings. Basically, saying that a learner knows a word such as bat would not necessarily imply that he or she knows both meanings, in this case, the piece of sports equipment or the animal. A learner's understanding of multiplemeaning words is connected with how deep their knowledge of a word is (Milton, 2009). This matter will be further discussed in the following section. The same situation can be noticed if larger lexical units such as compound words or phrasal verbs are taken into account. A learner might know the independent words that form a larger lexical unit, such as sold out, but if they are not aware of the meaning which this entire unit holds, then one cannot say that they have appropriately acquired the meaning of it.

To expand, the distinction between type and token can be useful to continue with the characterization of the concept of vocabulary. These concepts have to do with the way words are counted in a text (Read, 2000). On the one hand, tokens refer to the actual number of words of a text regardless if they are found more than once. Whereas on the other hand, types refer to the total number of word forms, counting each word, regardless the number of repetitions, as a separate type. Moreover, different kinds of words also play different parts in a text regarding their word class, namely function words and content (or lexical) words.

On this matter, Read (2000) points out that content words are those that hold meaning on their own, such as full verbs, adverbs, nouns and adjectives, whilst function words do not provide meaning when they are not immersed within a context. Such is the case of articles, pronouns, prepositions, auxiliaries, conjunctions, etc. The author also claims that the knowledge of content words is the one that vocabulary testing should focus on.

Words can also be counted into lemmas or word families. The former consists of a headword and some of its inflected and reduced forms (Nation, 2001). Moreover, the lemmatization of tokens is used to count different inflected forms of the same token, so they can be counted as one lemma. It is important to take into account that lemmas should belong to the same word class (Read, 2000), hence, the verbs harden, hardened, do not belong to the same lemma as the adverbs hardly or harder, even though they share the same headword (while they do belong to the same word family).

Additionally, lemmatization is deeply connected to the learning burden of vocabulary (Read, 2000): once a learner can use the inflectional system, learning one token of a lemma will make the task of learning the other tokens inside the lemma less overwhelming. The latter occurs because learners will already know what the stem of the word means and would be able to use their morphological knowledge in order to infer the meaning of the variation of the word, which might be a facilitator.

On the other hand, word families consist of a headword, its inflected forms and its closely derived forms (Nation, 2001), regardless the word class to which they belong. However, the decision of which closely derived forms are going to belong to a single word family might not be the same for different teachers or linguists (Nation, 2001). This difference is strictly connected to the learner's proficiency and their knowledge of suffixes and prefixes, because a less proficient
learner might not identify a specific headword and therefore not find obvious that a word is connected to another by its headword, inflection or derivation (Nation, 2001).

Vocabulary Knowledge. Even though a word can be accurately used by a learner with only the knowledge of its spelling and pronunciation, the real knowledge of a word goes beyond these two aspects (Schmitt, 2007). Nation (2001) provides some insight on the information that is needed to master the knowledge of a word at all levels. This information is divided into three categories: form, meaning and use. Each category contains three different aspects to know about a word, which he further divides into two different types of word knowledge: receptive and productive word knowledge. This distinction is made to differentiate our abilities to receive language input through listening or reading and understand it, and our ability to produce words orally or in writing, within the right context, using the right pronunciation or spelling, etc.

Regarding form, three important aspects are taken into account when a student is learning a word: the spoken and written knowledge of a word as well as the different parts of it. When it comes to meaning, the aspects to master are form and meaning as well as concept and referents and finally, the associations of words. Finally, regarding use, it is the grammatical functions of a word, its collocations and its constraints on use (for example in register) the relevant aspects to learn. For a more illustrative way to approach this idea, the following table summarizes the information provided. Nation (2001) called this the Process Model. It will also be explained below.

Table 1
What is involved in knowing a word (Nation, 2001, p.27)

| Form | Spoken | R | Can the learner recognize the spoken form of the word? |
| :---: | :---: | :---: | :---: |
|  |  | P | Can the learner pronounce the word correctly? |
|  | Written | R | Can the learner recognize the written form of the word? |
|  |  | P | Can the learner spell and write the word? |
|  | Word Parts | R | Can the learner recognize known parts in the word? |
|  |  | P | Can the learner produce appropriate inflected and derived forms of the word? |
| Meaning | Form and Meaning | R | Can the learner recall the appropriate meaning for this word form? |
|  |  | P | Can the learner produce the appropriate word form to express this meaning? |
|  | Concept and References | R | Can the learner understand a range of uses of the word and its central concept? |
|  |  | P | Can the learner use the word to refer to a range of items? |
|  | Associations | R | Can the learner produce common associations for this word? |
|  |  | P | Can the learner recall this word when presented with related ideas? |
| Use | Grammatical Functions | R | Can the learner recognize correct uses of the word in context? |
|  |  | P | Can the learner use this word in the correct grammatical patterns? |
|  | Collocations | R | Can the learner recognize appropriate collocations? |
|  |  | P | Can the learner produce the word with appropriate collocations? |
|  | Constraints on Use (Register, frequency...) | R | Can the learner tell if the word is common, formal, infrequent, etc.? |
|  |  | P | Can the learner use the word at appropriate times? |

Note. $\mathrm{R}=$ receptive knowledge; $\mathrm{P}=$ productive knowledge
To exemplify his Process Model, Nation (2001) explains what involves knowing the word underdeveloped. Referring to receptive knowledge and use in the first stages, a person would need to be able to recognize the word when heard and be familiarized with its written form, as well as realizing it is formed by three parts (under-, develop and -ed) and would need to relate the parts of the word with its meaning. Then, Nation (2001) continues stating that a person should be able to know that the word signals a specific meaning. They should also know what it means in the particular context it occurs. Additionally, they would know the concept that allows understanding the word in different contexts; therefore, they would know as well that there are other words, in an specific context, like overdeveloped (which is its antonym), backward and
challenged (which are synonyms) that relate to it. Plus, they would eventually learn that this word frequently occurs next to words such as territories and areas (typical collocations) in this context. After that, the student would be able to recognize if the word has been used correctly in the context it occurs. Additionally, learners would know that the word in question is neither uncommon nor pejorative.

Plus, regarding productive knowledge and use, a person should be able to: pronounce and stress the word correctly, be able to write it with the correct spelling and be able to use the right word parts in their appropriate forms. They should also be able to produce it in a context in which it means "not fully developed", and be able to use it in different contexts expressing the range of meanings of the word. They should also be able to produce synonyms and antonyms for the word. Along with that, they should be able to use it in an original sentence, produce words that occur together with this particular word and to be able to decide if it should be used to suit the degree of formality of the situation. All these distinctions refer to how deep the knowledge of a word is.

Furthermore, two dimensions have been distinguished regarding vocabulary knowledge: breadth (also referred as size) and depth of vocabulary knowledge (Nassaji, 2006; Milton, 2009; Schmitt, 2014). The former refers to the amount of word families that learners know, and the latter refers to the quality of knowledge of those words. Nation (2001) states that depth of vocabulary knowledge is measured through the knowledge of the aspects he described and that were presented in Table 1, which have to do with form, meaning and use. Nassaji (2006) explains that the knowledge of these aspects of words is one of the factors that enables students to enhance reading comprehension with a stronger contribution than the size of vocabulary knowledge. Alongside, Nassaji (2006) explains that this does not mean that one is more
important than the other, but that both are necessary and important in the process of language learning.

Vocabulary learning is incremental, which means that it is a process in which the amount of words and the knowledge of them is constantly added to a pool of already acquired knowledge; thus, probabilities to learn all aspects of a word from a single encounter are extremely low (Schmitt, 2007; 2010a). In terms of how many encounters are needed to acquire a word, Nation (1990) carried out research that showed that the range of exposures needed varies from 5 to 16 . In addition, Webb, Newton and Chang (2012), found that 15 is the sufficient number of encounters needed for a learner to successfully to recognize the forms of a word's collocation and Laufer (2016) stated that it is nowadays agreed among researchers that 10 to 12 encounters with a word while reading lead to a degree of meaning recognition. Furthermore, the number of exposures to acquire a word depends on the type of exposure, the level of engagement to the learning process and the level of congruity between L1 and L2 (Schmitt, 2010a). In other words, the manner in which a learner approaches a new lexical item, how often they do it, along with the motivation to learn it are important aspects in the process of learning a new word. Moreover, how the teacher or programme of study guides the student in the learning process and the way they decide to present the lexical items is utterly important.

Additionally, the process of learning a new word has stages and requires time (Schmitt, 2010a). In this sense, Schmitt (2010a) explains that when a learner faces a new word a number of times, its form and meaning will be acquired first, as well as some grammatical knowledge. He strongly believes that the rest of the aspects as well as the degree of knowledge of each of them are acquired within time and through exposure and use. This is why the recycling of words plays a crucial part in vocabulary teaching.

Milton (2009) explains that vocabulary recycling improves vocabulary learning, since new material must be recycled and repeated in order to be satisfactorily learned. He adds that, at the same time, a teacher should expand upon new vocabulary to provide a rich lexical environment to the learners.

Intentional and Incidental Vocabulary Knowledge. Vocabulary learning can be characterized as intentional or incidental. Intentional techniques aim to teach vocabulary explicitly, hence, the attention of the learner is focused strictly on learning specifically the new words that the teacher is aiming to teach (Schmitt, 2010a). Read (2000) calls these systematic vocabulary learning methods, he adds that the main activities are word lists in their varied spectrum. These methods are usually used to achieve learning and they seem to be quite useful, according to studies carried out by linguists. Additionally, Nation (2001) states that programs to learn a second language that are good do not involve more than a $25 \%$ in this type of activities but do complement both styles of learning.

On the other hand, incidental vocabulary learning refers to all the ways of learning vocabulary as a by-product of language by reading (Huckin \& Coady, 1999). This is not an unconscious process, as the main focus on the activity is not vocabulary learning (Schmitt, 2010b); thus, learning occurs when the L2 learner is gradually exposed to extensive input (Pellicer-Sánchez \& Schmitt, 2010). Although explicit exposure in vocabulary teaching is more effective, teachers and materials have limitations regarding the number of times they can focus on that task (Schmitt, 2008). Hence, incidental learning is an important part of the vocabulary learning process, however it is better not to rely on incidental learning alone for learning new words (Schmitt, 2008; 2010a), but to understand it as a good knowledge enhancer of the
vocabulary that is already known (Schmitt, 2010a). Moreover, Sonbul and Schmitt (2010) found that the mix of incidental learning plus explicit instruction afterwards might enhance lexical gain.

Huckin and Coady (1999) concluded that for incidental vocabulary knowledge to occur successfully it is necessary for learners to first have a well-developed core vocabulary knowledge. Laufer (2016), explains Coady's (1997) "beginner's paradox" idea stating that the 3,000 most common words families should be taught before engaging in extensive reading tasks for the purpose of incidental vocabulary learning, otherwise they will not have enough vocabulary to understand long, enjoyable texts. This combined with good reading strategies and some prior knowledge of the subject of the texts, allow learners to successfully overcome the problems that appear when learning incidentally, which might include, according to Huckin and Coady (1999), imprecision, misrecognition, and interference.

Word Frequency. Word frequency refers to how likely and how often words are encountered by learners, hence, how likely it is that learners will eventually learn them (Milton 2009). N. Schmitt and D. Schmitt (2012), divide word frequency into three bands: lowfrequency, mid-frequency and high-frequency words. In this sense, the selection of the vocabulary to teach is also important for the learning process. That is why effective vocabulary teaching is connected to teaching the most frequently used words of the English language (Schmitt, 2007; N. Schmitt \& D. Schmitt, 2012). Nation and Waring (1997) support this idea based on a study carried out by Hirsh and Nation (1992) in which they analyzed novels with simple vocabulary aimed for young readers of English. They found that with a vocabulary size of 2,000 word families, learners should have a $90 \%$ coverage facing one unknown word every ten words. Plus, with a vocabulary size of 2,600 words text coverage goes up to $96 \%$, finding one unknown word every sixteen, and with a vocabulary size of 5,000 word families, the
percentage rises to $98,5 \%$, finding just one unknown word every sixty-seven words. Hence, teaching high frequency words first, will make up for the lack of knowledge of a beginner learner facing texts with simple vocabulary.

To understand and apply what has been discussed above is essential in vocabulary teaching. The learner will be faced with implicit and explicit learning throughout their second language learning process, and in order to maximize its quality, the teacher must be determined to not overlook this. Moreover, different characteristics of words such as their frequency, are also important to take into account for an effective vocabulary teaching.

## Reading Skills

Reading is a complex, highly demanding process that has been approached in several ways. Koda (2013) says that reading is " . . . a complex construct, involving multiple operations and a unique set of skills each of those operations entail" (p. II). On the one hand, the input driven view of learning (Ellis, 2002), considers reading learning as a process in which there is a cumulative mapping experience between correspondent elements such as symbol-to-sound or symbol-to-morpheme mappings, which gets stronger with frequent experience (Koda, 2013). On the other hand, following a developmental perspective, Perfetti and Dunlap (2008) define reading as learning how "the writing system encodes the reader's language" (p. 34), where the basic principles of the writing system as well as the orthography are challenges to overcome when acquiring literacy. Perfetti (2003 as cited in Koda, 2013) views reading as two interrelated systems: a language and its writing system. Learning to read entails that making links between the two systems is necessary. Therefore, in order to learn how to write, one first needs to acquire substantial knowledge about the linguistic aspects of a language in an L1, thus, this process is as relevant when learning an L2.

Koda (2013) explains Carr and Levy's (1990) component skills approach, where reading "is seen as the product of a complex information-processing system, involving a constellation of closely related mental operations" (p.304) which consist of a set of processing skills highly related to one another that will interact and affect reading comprehension (Koda 2013).

A distinction has also been made between lower and higher order reading skills (Perfetti, Landi \& Oakhill, 2005). Steensel et al. (2016) explain this distinction defining lower order reading skills as the ability of decoding words from print, a process which starts consciously but then gradually becomes automatic; and higher order reading skills as the ability that readers develop to attach meaning to text. The use of these skills varies according to the reader's developmental stage (Steensel et al., 2016), and while automaticity increases, reading comprehension depends more on higher order skills than lower order skills (Perfetti et al., 2005).

Cross-linguistics Perspective of Reading Skills. Koda (2005 as cited in Koda, 2013) states that when learning to read in a second language, the degree of difficulty increases exponentially, due to the fact that every operation involves both the L1 and the L2. She also explains that L2 learning is affected by the competencies that the learners previously acquire. Therefore, reading is cross-linguistic, since it is possible to transfer the skills one has in the L1 to the L2.

Yet, at a second glance, this transfer of skills is not as simple as it could have seemed before. There are two theories that try to explain these transfers: a) the central processing theory and b) the script-dependent one. The central processing theory (Da Fontoura \& Siegel, 1995 as cited in Koda, 2013) states that learners who are good readers in the L1 are more likely to achieve higher reading proficiency in their L2. Along the same lines, they say that if learners have poor reading skills in their L1 they will probably have poor reading skills in their L2.

The script-dependent theory (Gholamain \& Geva, 1999 as cited in Koda, 2013), in contrast, affirms that the development of decoding is facilitated by phonological transparency of the written system. For example, Spanish is highly graphemic (each sound corresponds to a letter in the written system) but English is not. Therefore, the phonological transparency of Spanish is higher than in English. According to this theory, learning to read in Spanish should be easier than in English.

Far from being opposite, these two theories seem to complement each other, since they both explain different dimensions of transferring skills from L1 to L2. Still, non-languagespecific skills should be available to use in learning to read in a second language when it has been properly developed in the L1. Yet, this does not happen with language-specific skills, since they depend on the L1 properties which, of course, vary immensely from language to language. That is why L1 skills must be adjusted to L2. Additionally, this adjustment should vary in different languages (Koda, 2013).

Furthermore, L1 reading skills must be assimilated after being transferred to L2 reading (Koda, 2013). This is related to how closely languages are related to one another. According to Koda (2013), the amount of modification that the transferred skills must go through depends on the similarities that the L1 and the additional languages share. She points out similarities such as structural properties in terms of language processing and also, similarities in the language written system, which could be highly similar such as Roman scripted languages (English or Spanish) or Cyrillic scripted languages (Russian).

There are some factors that explain the variation of this adjustment. First, the linguistic distance between two languages (how different they are) is responsible for individual differences in the rate (speed) in which L2 reading skills develop. Therefore, between alphabetic languages,
mappings from L1 to L2 should be decoded with little or no modification. Yet, what determines the rate of the development of skills in the L2 is not how similar both L1 and L2 are but the quality and quantity of print input the learner receives (Hamada \& Koda, 2008 as in Koda, 2013).

Consequently, Koda (2013) says that L2 reading is defined by a dual-language involvement. Two assumptions are basic to this idea. First, continual cross-linguistic interactions between L1 skills transferred to L2 shape the L2 reading skills. Second, these interactions "induce sustained assimilation of print processing experiences in two languages". Therefore, when using their reading skills, L2 learners are permanently using both languages.

As one can conclude, the understanding of these processes is crucial for the rise of better ways to teach literacy in an L2. Koda (2013), states that the quality and quantity of the input that learners are exposed to plays a key role in the forming and leveling of L2 reading skills. Also, the teaching of vocabulary is important for the development of the automatization of word access skills in L2 reading, thus enhancing reading comprehension (Fukkink, Hulstijn \& Simis, 2005). These are examples of the many sub-processes that operate in the complex reading process of L2 learners, in which different types of knowledge (world knowledge, linguistic knowledge or strategic knowledge), and the enhancing and use of low and high order skills (Fukkink et al., 2005) lead to a success in the acquisition of literacy in an L2.

Vocabulary Knowledge and Reading Comprehension. In order to achieve a successful level of reading comprehension, vocabulary knowledge plays a salient role. Hu and Nation (2000), explain the distinction between four different views regarding the relation between vocabulary knowledge and reading comprehension: the instrumentalist view, the aptitude view, the knowledge view and the access view. The first one, perceives good vocabulary knowledge as
a predictor of successful reading comprehension. The aptitude view understands vocabulary knowledge and reading comprehension as outcomes of a good mental aptitude. The knowledge view understands vocabulary knowledge as a product of world knowledge, which derives in good reading comprehension;nd, finally, the access view supports the idea that reading comprehension is better if there is an easier access to word meaning. However, the presence of one of these views does not mean that the any other one is invalid; to understand that this relationship between vocabulary knowledge and reading comprehension varies at different stages of the vocabulary growth process is essential (Anderson \& Freebody, 1981). However, these views describe this relation on the basis of L1 literacy. The relation between L2 reading comprehension and L2 vocabulary knowledge is much more complex because readers already have literacy in their L1 and the writing systems might be different from each other. Another reason is because vocabulary size of new L2 learners is virtually inexistent (Hu \& Nation, 2000).

Moreover, for the purpose of understanding an L2 text, the number of words needed to succeed has been a major concern for linguists. Pulido (2007), revising previous research, states that for lower-proficiency learners, it is harder to integrate contextual and non-contextual cues into their reading than for readers that knew more words in the context, affecting their comprehension.

Research shows that vocabulary knowledge leads to greater comprehension. Schmitt, Jiang and Grabe (2011) argue that the relationship between reading comprehension and vocabulary knowledge exists in "a sort of curve" (p.28), because although greater vocabulary knowledge determines greater reading comprehension, the percentage of vocabulary coverage that is needed depends on how much comprehension of the text is required. Learners who are not highly proficient still can gather some information from texts, even though their vocabulary
coverage is small. Additionally, Laufer (1989) was the first to attempt to set a percentage of words needed in order to understand a text. Her conclusion was that a learner of a second language needs $95 \%$ of coverage in order to fairly understand a text; this means that the reader understood $95 \%$ of the running tokens. Hu and Nation (2000), however, determined that $98 \%$ coverage is needed, it is at this point that Laufer and Ravenhorst- Kalovski (2010) introduce the concept of "adequate comprehension".

They claim that at a $95 \%$ threshold it is possible to understand a text, yet to have an adequate comprehension (this means to be able to understand a text in order to pass a test successfully) and be able to infer the words not known, a $98 \%$ threshold is necessary. Nonetheless, the concept of adequate comprehension depends of the context of learning the second language and the purposes of the process.

In the end, Laufer and Ravenhorst-Kalovski (2010) claim that 98\% coverage is possible knowing the first 5,000 most frequent word families and 95\% coverage can be achieved with 3,000 words families known. They concluded that the $95 \%$ coverage that Laufer (1989) came up with suffices only for minimal comprehension; yet the problem is that it is not universally adequate. This is how the results showed by Hu and Nation (2000) are relevant. They say that around 8,000 to 9,000 most frequent word families are to be known in order to adequately understand a text, this means that people who are in the 8,000-9,000 threshold are highly likely to have $98 \%$ coverage. Therefore, they are able to understand a text by passing a multiple choice test about it having a score of $87 \%$ of correct answers. Laufer and Ravenhorst-Kalovski (2010) conclude that, even though in informal contexts $95 \%$ coverage might be sufficient (which is equivalent to knowing enough word families at the 3th frequency band). In university contexts, and especially in courses that focus on reading, students need $98 \%$ text coverage in order to
perform successfully in tests, that is what is usually adequate for this kind of ESL learners (higher education learners).Thus, the lexical threshold for adequate comprehension at university level is of $98 \%$ text coverage or knowing the word families from the 8 and 9 frequency band.

Furthermore, Nation and Waring (1997) organized the percentage of text coverage in lemmas, stating that with a vocabulary size of 1,000 lemmas $72.0 \%$ of text coverage is achieved, and from there text coverage increased with the rise of vocabulary knowledge. Moreover, Hu and Nation (2000) claim that $98 \%$ of text coverage is needed for thorough and adequate comprehension of a text without assistance. Schmitt et al. (2011) more recently supported this last figure regarding the comprehension of academic texts, but making emphasis that although vocabulary knowledge is a key factor for text comprehension, it does not lead to complete comprehension of a text, due to the fact that other reading skills are involved and are also important to the process.

Another relation between vocabulary knowledge and reading comprehension is that reading can be seen as an instance of incidental vocabulary knowledge. Nagy (1997) claims that the chances of learning a word from a single exposure ranges from $5 \%$ to $14 \%$, and although rather small, learners (specially L1 learners) are exposed to a great number of text, hence the amount of learning can be substantial (Schmitt, 2010a). Such situation is not usually shared by L2 learners whose incidental learning from reading is not that vigorous.

Hence, to ensure incidental learning from L2 reading a specialized program trying to maximize reading should be used (Schmitt, 2010a), these can be, for instance, the use of extensive reading tasks. Therefore, reading can be taken as a crucial aid in learning a second language, but in order to learn, a sufficient vocabulary is needed to learn at its full potential.

## Inferencing Skills, Reading Comprehension and Their Relationship to Vocabulary

## Knowledge

Learners might find several unknown words when first facing a text. The meaning of those words can be retrieved by the use of inferencing skills. In Nassaji's words, inference can be defined as "the connections that people establish when they try to interpret texts" (2006, p. 388). These connections are made within the different levels of reading comprehension process, such as, background knowledge, other parts of the same text, or the link between previously known information with new information. These levels are involved in the prediction and interpretation process to find meaning within the text (Nassaji, 2006). In this sense, lexical inferencing searches for the meaning of words based on linguistic and non-linguistic information within the text such as context, and it is heavily connected with incidental vocabulary learning (Nassaji, 2006).

The success of the lexical inferencing process depends on many factors. Nagy (1997), claims that three different kinds of knowledge play their part in a learner's inferencing success: linguistic knowledge, world knowledge and strategic knowledge. Linguistic knowledge consists on the information that the learner can gather from the linguistic context in which the new word has occurred, world knowledge is the "learner's understanding and use of the relevant domains of knowledge" (Nassaji, 2006, p. 388). In turn, strategic knowledge has to do with the knowledge about the strategies a learner can use to achieve success in word meaning inferencing. Moreover, eight other factors that influence lexical inferencing have been mentioned by the same author. The factors that Nassaji (2006) mentions are 1) the nature of the word 2) the text itself, 3 ) the degree of textual information in the surrounding text, 4 ) the learner's ability to use extra-textual cues, 5) the importance of the word to understand the text, 6)
the degree of cognitive and mental effort involved in the process, 7) the learner's attention to details in the text, and 8 ) preconceptions about the meaning of the words.

In terms of L2 lexical inferencing, it has been said that two components play an important role on its success. Nassaji (2006) explains Huckin and Bloch's (1993) lexical inferencing model which contains a knowledge module component and a metalinguistic strategic component. On the one hand, the knowledge module refers to the knowledge that learners have regarding linguistic information such as vocabulary knowledge, morphologic and syntactic knowledge as well as knowledge about text, which are all involved in the process of inferring from context. On the other hand, the metalinguistic strategic component refers to the strategic decision-making that a learner uses to infer the meaning of an unknown word. This strategic knowledge results in the use of a variety of inferencing strategies.

Different elements can be taken into account, regarding the background knowledge that readers can access to infer word meaning. According to Pulido (2007), readers consult their previously acquired morphological knowledge to gather information about the new word's word class, its word meaning component, its grammatical function and the semantic roles that the word can play. Also, syntactic information, such as word order, can be used to identify semantic information and to decide which semantic role the word plays within the sentence and context in which it is occurring. Moreover, Pulido also specifies that L2 learners can access any previous information that the extent of their L2 proficiency allows them to in order to infer the meaning of new words. All this should be considered as the initial form-meaning connection process for new words encountered, which is just the beginning of the incremental process of vocabulary acquisition.

Nassaji (2006) identified a number of inferencing strategies from participants trying to infer unknown words from a text. Lexical inferencing is understood as any cognitive or metacognitive activity that learners use to gather meaning of a word from context. Nassaji (2006) characterized these strategies as identifying, evaluating and monitoring strategies. In his research, participants in a think-aloud data collection process, tended to repeat words or entire sections to find meaning. They also verified their inferencing processes by asking themselves if they were doing a good job, and then finally revise how the process went and evaluate the outcome. Eventually, they found that depth of vocabulary knowledge played an important part on the use of strategies as well as the rate of success of the process.

Finally, it is important to mention that explicit and successful vocabulary training plays an important role on the inferencing skills of a language learner. Even though strategies can be explicitly trained, Nassaji's (2006) study found that in order to assure successful learning and use of inferencing strategies to gather meaning from context in an L2, depth of vocabulary is the principal tool that must be explicitly trained. This is because native speakers of a language have a stronger and heavier lexical representation of lexical items that surround contextually the unknown word, than L2 learners (Jiang, 2000).

## Metacognition

Metacognition is understood as "the knowledge of cognitive processes involved in comprehension and the ability to control the direction, intensity and persistence of these cognitive processes" (Maier \& Richer, 2014, p.4). Basically, it means that people are able to understand and control their process of learning (Schraw \& Dennison, 1994). Metacognition is a higher order skill and it is usually developed through the years (van Steensel, Oostdam, van Gelderen \& van Schoonen, 2016). Schraw and Dennison (1994) explain that metacognitive
aware students perform better than their unaware peers, emphasizing that the performance difference was not due to a higher intellectual capacity. Additionally, they explain that metacognitive awareness is somewhat unpredictable and independent of aptitude and previous knowledge.

This awareness facilitates the use of metacognitive strategies, thus, playing an important part in achieving the full potential of every learning instance. Moreover, the explicit instruction of regulatory skills can derive in significant improvement of learning (Schraw, 1998). Hence, its existence within classroom instruction is indispensable. Schraw (1998), explains that researchers usually divide distinctively between two components of metacognition: knowledge of cognition and regulation of cognition.

On the one hand, knowledge of cognition refers to the explicit knowledge that learners have about their own cognition. This awareness is divided into three different kinds: declarative, procedural and conditional. Declarative knowledge has to do with knowing about our own learning processes and learning strategies, procedural knowledge refers to how to use these strategies and conditional knowledge consists of knowing when to use these strategies (Garner, 1990).

On the other hand, regulation of cognition refers to "a set of activities that help students control their learning" (Schraw, 1998 p.114), these activities occur during a learning instance in which the learner is using three different essential skills to ascertain the maximum productivity of it. These three essential skills are: planning, monitoring and evaluating (Schraw, 1998; De Backer, Van Keer \& Valcke, 2014). Planning refers to the preparation and selection of specific learning strategies that will be used, monitoring refers to the learner's ongoing and operative awareness of the process at hand and evaluating consists of a final appraisal and assessment of
the learning process product and efficiency. Moreover, it is important to take into account that both components are strictly connected, and the development of one will enhance the other (Swanson, 1990; Schraw, 1994).

Despite cognitive skills seem to be domain-specific, metacognitive abilities are domaingeneral (Schraw, 1998). Metacognitive strategies will compensate for the lack of knowledge in all academic domains as metacognitive knowledge is enhanced and trained (Schraw, 1998), and with the improvement of one metacognitive strategy in a specific domain, this strategy will become more general and will be available for the learner to use in academic tasks that could be very different from one another.

Additionally, Nassaji (2006) referring specifically to lexical inferencing says that these strategies are activities learners use when identifying and constructing word meaning from context. These strategies in second language acquisition are as important as in any other kind of learning process. Since these strategies enhance the process of learning, they allow learners to take advantage of the extant relationship between vocabulary knowledge and reading comprehension.

Cubukcu (2008) used a selection of metacognitive strategies for reading in order to explicitly teach them to students and see how they performed in a post-test. He describes ten different strategies; all of them hold a relation with the aspects presented by Pintrich, Wolters and Baxter (2000). Next, these ten strategies will be shortly described as presented by Cubukcu (2008, p. 5):

- Using Strengths: The students exploit their personal strengths in order to better understand. They focus in the kind of information displayed that they understand better in the text.
- Inferring Meaning: Learners try to determine (through word analysis or other strategies) the meaning of the words present in the text that they do not know and that seem critical to understand the text.
- Using Background Information: Learners reconsider and revise their background knowledge about the topic according to the content of the text.
- Evaluating: Students evaluate the text in order to determine if it contributes to their knowledge and understanding of the subject.
- Searching According to the goals: Learner search for the information that is relevant to their goals when reading.
- Reading Goals: Students evaluate whether what they are reading is relevant to their goals.
- Distinguishing: Learners realize what information is new and what they already know.
- Deciding on the difficulty: The person determines how easy or hard to read is the text.
- Revising: While reading, the student reconsiders and revises the initial questions about the topic based on the content of the text.
- Guessing the later topics: The learner anticipates what information will be presented on the text as it advances.

Cubukcu (2008) determined that there is a tendency to perform better when metacognitively aware and especially when students are explicitly taught metacognitive strategies. Additionally, the study reveals that "training in metacognitive language learning strategies help learners develop their reading skills and raise their language proficiency levels" (p. 4). Thus, it is essential for learners to train themselves in these strategies, also, because it might have an influence on vocabulary acquisition and reading comprehension.

In terms of metacognition and its influence on vocabulary knowledge and reading comprehension, much can be said. Schoonen, Hulstijn and Bossers (1998) found that metacognitive knowledge can explain, to a large extent, the variances of native and foreign language reading comprehension of students of eighth and tenth grade. They also found that metacognition played a more important role on the students of the higher grade. They also stated that regarding reading, metacognition should be assumed as their own assessment as readers, their knowledge and control of strategies which help process and learn from text, while relating this assessment to the awareness of the complexity of the task and their goals. Furthermore, metacognition instruction in reading is encouraged by scholars such as Baker and Brown (1984), who claim it does result in worthwhile and reliable improvements for the reader.

As determined by Cobukcu (2008), learning how and when to use metacognitive strategies help students to enhance their reading comprehension. As tested by Cobukcu's study, inferring meaning of novel words in a text is an important metacognitive strategy. With sufficient exposure (5-16 times) to novel words in a text, learners are able to acquire new words (Schmitt, 2010a). As they learn to infer the meaning of novel words they also learn the new words. The latter helps understanding the text better which enables students to infer more accurately the new words in a text (Hu \& Nation, 2000).

Following the idea presented above, the way learners manage to use their vocabulary knowledge while communicating has a strong connection with their metacognition. Read (2000) states that learners have to rely on metacognitive strategies to compensate for lack of vocabulary in order to communicate a complex idea. When learners avoid the use of a particular word because they do not know how to pronounce or spell it they are using their metacognition. These communication strategies vary, and Read (2000) lists a few that researchers have found
throughout the years. These are the following: L2 to L1 switch when there is need to use an unknown L2 word, the use of general terms to compensate for the lack of knowledge of a more specific word, or also appeal to an authority and ask for the translation of a word.

For the purpose of this investigation, the relation between all the previously mentioned subject matters has been addressed. Vocabulary acquisition must not be cast away since it is of substantial importance in second language acquisition. Furthermore, the aforementioned core vocabulary plays a critical role on the development of second language learner's reading comprehension skills, and, it is also a decisive factor in the outcome of the process of vocabulary inference. Inferencing skills for vocabulary, at the same time, increase vocabulary through incidental vocabulary learning techniques, as mentioned above. However, the significance of teaching and application of metacognitive strategies in cognitive processes to compensate for the lack of knowledge, as well as the enhancement of any learning process, has been mentioned for its theoretically important relation to reading comprehension, inferencing skills and, thus, vocabulary acquisition.

## The English Program

The purpose of Table 2 is to show the several objectives regarding the competences of reading, writing and speaking in the different levels of the English Program.

Table 2
English program's objectives by level

|  | Starter | Beginner | Pre-intermediate | Intermediate |
| :--- | :--- | :--- | :--- | :--- |
| Oral Skills <br> Objectives | - To provide basic <br> information about <br> personal and social <br> context and academic <br> work. | -To participate in simple <br> and short conversations in <br> familiar environments. <br> - To make simple questions <br> about their personal, social <br> and academic tasks. | - To participate <br> comfortably in a <br> conversation <br> about personal, <br> social or <br> academic topics | - To participate <br> comfortably in a <br> conversation about <br> personal, social or <br> academic topics by <br> making questions, |



|  |  |  | descriptions of various topics of their discipline. <br> - To give a presentation about a topic of their area of study and develop the main ideas. | documentaries and answer additional questions. |
| :---: | :---: | :---: | :---: | :---: |
| Written <br> Skills <br> Objectives | - To ask and provide personal information in a written form. <br> - To describe in a written and simple form several aspects of their everyday environment. <br> - To use the information gathered from Internet and other technological sources and apply it in the creation of short, simple, original texts related to their area of study. <br> - To write technical descriptions in a clear, simple and organized manner. <br> - To create simple messages in any format: e-mails, letters, postcards, forms, etc. <br> - To use Internet and English as a medium of communication between teachers and students and among students. <br> - To take notes and write simple summaries, demonstrating competencies to synthesize specific topics. | - To describe in a written form several aspects of their everyday routine. <br> - To use the information gathered from Internet and other technological sources and apply it in the creation of short, simple, original texts related to their area of study. <br> - To make a written description about the program in a clear, simple and organized manner. - To create simple messages in any format: emails, letters, postcards, forms, etc. <br> - To use Internet and English as a medium of communication between teachers and students and among students. <br> - To take notes and write simple summaries, demonstrating competencies to synthesize specific topics. | - To write <br> messages and texts that describe experiences and events with plenty detail. <br> - To write notes, messages, forms and other texts to give relevant information to friends, students, teachers, administrative staff and others as part of the everyday life. <br> - To take notes of a simple message. <br> - To write texts of a medium length about familiar topics of the area of study, using basic paragraphs and a linear sequence. - To describe in simple words events such as past experiences, stories, trips, etc. - To give details about daily lives' environment, such as people, places, studies, work, etc. <br> - To write simple and short reports and | - To write messages and texts that describe experiences and events with plenty detail. <br> - To write notes, messages, forms and other texts to give relevant information to friends, students, teachers, administrative staff and others as part of the everyday life. - To take notes during a conference that are accurately enough that can be used later on, as long as the topic is of the student's interest and diction is clear and well-structured. <br> - To write texts of a medium length about familiar topics of the area of study, using basic paragraphs and a linear sequence. <br> - To describe in simple words events such as past experiences, stories, trips, etc. <br> - To give details about daily lives' environment, such as people, places, studies, work, etc. <br> - To write summaries about short pieces of information from several sources, doing simple paraphrase of short written texts. <br> - To write simple and short reports and essays related to the discipline |


|  |  |  | essays related to the discipline in a standardized format | in a standardized format. |
| :---: | :---: | :---: | :---: | :---: |
| Reading <br> Skills <br> Objectives | -To comprehend simple, short texts about personal contexts and important social contexts. <br> To obtain relevant information and vocabulary from texts that develops topics related to the discipline. <br> To use the internet to get access to relevant information regarding the area of study. -To use the Internet and English as a medium of communication between teachers and students and among students. - To analyze, compare and contrast various texts that are appropriate for the level, about a similar topic and context. <br> To comprehend simple technical documents related to the discipline. | - To comprehend simple texts of short or medium length about personal, social and academic contexts. <br> To use the internet to get access to relevant information <br> To obtain relevant information and vocabulary from texts that develops topics related to the discipline. - To use the Internet and English as a medium of communication between teachers and students and among students. analyze, compare and contrast various texts that are appropriate for the level about a topic and context of the discipline. <br> To comprehend simple technical documents related to the discipline. | - To read texts related to the area of study and/or interests, with a satisfactory level of <br> comprehension. <br> - To analyze, compare and select various texts about a similar themes that are relevant to the discipline. <br> - To understand thoroughly the description of events related to the academic, social and personal, in order to maintain a constant correspondence to another person by any electronic medium (e-mail, chat, blog, etc.). <br> - To look for and understand relevant information from several written material of daily use, such as letters, bulletins and official documents. <br> - To identify the main <br> conclusions within texts that has clear arguments. <br> - To recognize the relevant points in simple | - To read texts related to the area of study and/or interests, with a satisfactory level of comprehension. <br> - To analyze, compare and select various texts about a similar themes that are relevant to the discipline. <br> - To understand thoroughly the description of events related to the academic, social and personal, in order to maintain a constant correspondence to another person by any electronic medium (e-mail, chat, blog, etc.). <br> To look for and understand relevant information from several written material of daily use, such as letters, bulletins and official documents. <br> - To identify the main conclusions within texts that has clear arguments. <br> - To recognize the relevant points in simple journalistic articles about familiar contexts. <br> - To understand instructions and rules those are expressed at a pertinent linguistic level. <br> - To consult extensive texts with the purpose of finding the desired information and know how to collect information from different parts of a text or from different texts with the purpose of |


|  |  |  | journalistic <br> articles about <br> familiar <br> contexts. <br> - To understand <br> instructions and <br> rules that are <br> expressed at a <br> pertinent <br> linguistic level. | accomplishing a <br> specific <br> assignment. - To <br> recognize unknown <br> words in a text that are <br> related to disciplinary <br> topics through <br> inferencing strategies. <br> To deduce the meaning <br> from complex sentences <br> from the recognition of <br> words and context in <br> disciplinary and familiar <br> texts. |
| :--- | :--- | :--- | :--- | :--- |
| Framework | A1 |  | A2 | A2+ |

## Research questions

## Quantitative Research Questions

- Is there a relationship among inferencing skills, reading comprehension, and metacognitive awareness in L2 Vocabulary Knowledge in ESL students from ICEI and FACSO?
- Is there a relationship among reading comprehension, vocabulary knowledge, metacognitive awareness and inferencing skills in the scores obtained by ESL students of ICEI and FACSO in both the Language and Math Standardized Tests (PSU)?
- Is there a relationship among vocabulary knowledge, reading comprehension, metacognitive awareness and inferencing skills and the average grades from high school (NEM) of ESL students from ICEI and FACSO?
- Is there any salient relation among any of the aforementioned factors? If so, do these relations influence the SLA process in the students of FACSO and ICEI? How?


## Qualitative Research Questions

- Why do students like/dislike English and what are the most common emergent themes when expressing their preference towards English?
- What do students think of learning English and what are the most common emergent themes around expressing opinions about learning English?


## Methodology

The methodology applied to carry out the study will be presented in this section. First, the present research is a mixed methods study in which there is a high quantitative component. Additionally, it can be characterized as non-experimental, cross-sectional, descriptive and correlational. A mixed methodology was chosen in order to collect quantitative data through various tests and, at the same time, to characterize the perception of English of the participants through qualitative data. It is expected that these characteristics will enable the study to fulfill its objectives and to answer the research questions in a complete, thorough way. In order to obtain data that portrayed the reality of our participants, this study was carried in a non-experimental way. A progression analysis throughout the English Program Platform was carried out, hence, for a more representative sampling procedure, more than one level of the program were part of the sample of this study in order to run correlations between data from different courses.

## Participants

The participants who took part in this investigation were undergraduate students from Facultad de Ciencias Sociales (FACSO) and Instituto de Comunicación e Imagen (ICEI) from Universidad de Chile. These students belonged to the levels of Beginner, Pre-Intermediate and Intermediate of the English program. 114 participants signed the consent form (See Appendix A)
was, and 108 people completed all the instruments (considering students from both faculties). These participants can be divided according to gender into 43 males and 65 females. The majority of the participants belonged to ICEI ( $\mathrm{n}=37$ ), and they were enrolled in the English Program's Intermediate level by the time the instruments were applied. All of the students who took part in this investigation were EFL learners whose mother tongue is Spanish, and their ages fluctuate from 18 to 28 years old.

## Instruments

The instruments used in this research were the following
a. A questionnaire (See Appendix B): which was created by the team conducting this investigation. It aimed to draw information about the social and academic background of students.
b. A general Metacognitive Awareness Inventory (See Appendix C): from now on MAI, is based on Schraw and Dennison's (1994), used to measure the general metacognitive abilities of the participants.
c. A Metacognitive Awareness for Reading Strategies Inventory (See Appendix D): from now on MARSI, which deals specifically with metacognitive awareness in reading comprehension. This inventory was based on Mokhtari and Reichard (2002) and, for the purpose of this study, the adapted version of Leal and Lima was used (2015).
d. The X_Lex Test, a software that Meara (2005) created to measure the students' vocabulary breadth as well as their linguistic awareness regarding their own vocabulary size.
e. A Reading Comprehension Practice Test (See Appendix E) which consisted of a written text from the Reading and Writing section of the Cambridge Key English Test (2003).
f. An Inferencing Skills Test (See Appendix F) to measure the students' lexical inferencing skills by means of a written text used by Nassaji (2006).

Questionnaire on the Student's' Social and Academic Background. This questionnaire was created by researchers with the purpose of providing a general profile including personal, social and academic characteristics of the students. The questionnaire was divided into two sections: the first part asked about the participants' personal and academic background, such as age, gender, previous exposure to the English language, the scores they obtained on the language and math section of Prueba de Selección Universitaria (PSU), and the type of school they attended (public, partial state subsidy or private school) in order to establish a relation with the tests scores. Other questions were aimed to draw information about the participants' opinion on the English classes they had during school. Students had to mark in each 'Yes/No' box the best option that reflected their own experience.

In the section two of this questionnaire, participants were asked to provide their opinion about the English classes they have had so far at University. In this part of the questionnaire, there were two subsections: the first subsection asked participants to describe their English classes at University. They were also asked to provide an opinion about the use of audiovisual and online material, as well as the group activities which are held during the class and the reason behind the addition of an English subject in the programs' curricula. This information, however, was not used because the investigation included too much information.

Finally, in the last section of this questionnaire, participants were asked to identify their strengths and weaknesses regarding oral and written skills in the English language. The items are the following:

Speak in English

Write formal texts in English (E.g.. Essays)
Write casually in English

Read any kind of text in English
Read texts in English that are about my field of study
Understand when someone speaks to me in English
This last information, however, was not used neither in the results nor analysis of results since this investigation privileged the use of other information more relevant to the context in which the study was carried out.

Metacognitive Awareness Inventories. Two types of questionnaires were used to measure the participants' metacognitive awareness: the first type is an adaptation made by Lima and Bruni (2015) to Schraw and Dennison's (1994) Metacognitive Awareness Inventory (MAI). The MAI used in this investigation consisted of a 52-item self-report instrument, in which these items were randomly distributed in eight scales with at least four items per scale. The eight scales are as follow: (1) declarative knowledge, (2) procedural knowledge, (3) conditional knowledge, (4) planning, (5) information management strategies, (6) monitoring, (7) debugging strategies and (8) evaluation of learning. All the questionnaire items involved a five-point Likert scale ranging from 'I never or hardly ever do this, I occasionally do this, I sometimes do this, I generally do this too, I always or almost always do this'.

The second questionnaire was taken from Mokhtari and Reichard's (2002) Metacognitive Awareness in Reading Comprehension Inventory (MARSI), which consisted of a 30 -item selfreport instrument, in which these items were randomly distributed in three scales with at least eight items per scale. The three scales were the following: (1) Global Reading Strategies, (2) Problem-Solving Strategies and (3) Support Reading Strategies. It used the same five-point

Likert scale used in MAI. In both cases, students had to tick in each box the best option that reflected their own experience regarding metacognitive awareness.

X_Lex test. Lex Tutor. The Lextutor program was used to measure the vocabulary knowledge of the students. The results obtained from this activity were based on a system of hits and misses; for the student to get a hit, it was necessary to figure out that the word was a real word, or that the pseudo word did not exist in the language, on the contrary, one miss meant that the student thought that a pseudo word was a real English word, or that an actual word did not exist in the English language. At the end of this activity, two numbers and one chart were obtained. On the one hand, the numbers reflected the students' perceived vocabulary knowledge versus their actual vocabulary knowledge. On the other hand, the chart was divided into 6 different items; 5 of the items showed where the words that the students knew belonged in relation to frequency divided into 1000 intervals. Finally, the last bar showed the error rate that the students had.

Reading Comprehension Test. The Reading Comprehension Test was taken from the Reading and Writing section of the Cambridge Key English Test (2003). The original text went through the same procedure as the text used in the Inferencing Test. The first section of the test consisted of reading a short text (204 words). In the second section of the test, students were asked to answer 5 multiple-choice questions regarding the text's content. The choices were 'Right', 'Wrong' and 'It doesn't say'. Each multiple-choice question has only one correct response. The position of the correct alternative randomly varied within the three possible positions. In the last section of the test, students answered a question regarding the main ideas of the text, which had to be written in Spanish.

Inferencing Skills Test. This test focused on the students' skills to infer the meaning of a
word according to the context presented in a determined text. The test applied for this purpose was used by Nassaji (2006) in previous investigations. The original text was entered into Vocabprofiler, a computer program that belongs to the Complete Lexical Tutor website (at www.lextutor.ca), a compendium of different online tools for both language analysis and learning. In broad terms, Vocabprofiler takes any text and divides it by word frequencies from the most frequent 1000 words of English to the most frequent 25000 words of English. For the purpose of this investigation, the Vocabprofiler used was VP-Classic (https://www.lextutor.ca/vp/eng/), which took the text and classified its words into four categories by frequency: (1) the most frequent 1,000 words of English, (2) the second most frequent thousand words of English, (3) academic words of English and (4) the rest of words classified as 'off-list'; words that surpassed the 2000 most frequent words' level were replaced by synonyms or paraphrased in a sentence.

This test consisted of a short text ( 335 words), in which 8 content words were replaced by 8 pseudo words which followed patterns of English derivation and forms, and were highlighted in the text. In the last section of the test, students were asked to provide meaning for the pseudo words in the text. Students could answer with a definition of the word, the translation of the word into Spanish or a synonym. In order for the instructions to be fully understood, students were provided with an example in the test.

## Procedures

Pilot Test of the Inferencing Test. In order to carry out a data gathering process that would allow to test the students properly and to obtain the accurate results for this research, the instruments were piloted. Considering this, a pilot test for the Inferencing test was carried out. Students from Licenciatura en Historia and from Licenciatura en Lengua Inglesa of Facultad de

Filosofía y Humanidades at Universidad de Chile participated in the Pilot Test of the instruments. In this procedure, participants were tested in a classroom setting divided by programs during one 30 minute session. A total number of 36 students participated in the process in which two different forms of the inferencing skills test were considered during this Pilot Test. The two different instruments presented different texts, of similar length, one of them had 7 target words while the other had 8 target words. Students were required to read the text first; secondly, they were asked to give a definition, translation or synonym of the bolded and underlined target words; and finally, to give an opinion about the test. One of the texts was finally chosen by the research team as this text had been previously used by Nassaji (2006) in a think-aloud inferencing study, proving its validity. This pilot test allowed to select one of the options for the final test that was used in the later data collection process.

Pilot of the Data Collection Process. After carrying out the pilot test of the instruments, the data collection process itself was evaluated as well. A faculty from the university was chosen and 39 students were tested. The whole research team was present and they were divided into different areas of the data collection process, such as giving the instruments to the students, organizing the tests after they were finished and the X_LEX test. The piloting allowed the group to organize the process in a way that would be quicker and more efficient in the real data collection.

Selection of Participants. After piloting the process, two faculties of the university were asked to participate in our research, namely FACSO and ICEI. In order to gather the data, several ideas were suggested and implemented in an attempt to draw attention to the research and get participants enrolled in the investigation. A number of posters were hung around the campus with the group's contact information; however, this idea was not effective at all, since it only
attracted one student after two weeks of publicity. Therefore, the research team had the need to get in contact with some of the university's authorities to support this study and give permission to gather the data during class times. This permission was finally achieved and the data collection occurred

Data Collection Process. After receiving authorization from Subdirección Escuela de FACSO, Dirección de Pregrado de ICEI, Coordinador del Programa de Inglés, Directora de Pregrado de la Vicerrectoría Académica de la Universidad de Chile and Vicerrectora de Asuntos Académicos de la Universidad, the team was able to gather the information at ICEI and FACSO. The research team was present in the data gathering process that took place in the English classes in sessions of 60 minutes on average. The tests were given to three of the levels in session in the program: Beginner, Pre-Intermediate and Intermediate. At the beginning of each data gathering session, one of the members of the research group explained in Spanish the instructions of the tests to the participants. Then, they were asked if they agreed to participate. Then, they were given the consent form and two tests: the reading comprehension and the inferencing skills ones. After the participants signed the consent forms they were asked to proceed to work on the tests. After finishing these tests, the participants took the X_Lex vocabulary test. Afterwards, they were given the two metacognition inventories and the questionnaire which aimed to gather the background information from the participants.

## Data Processing and Evaluation

MAI/MARSI. Both MAI and MARSI were scored according to the students' answers on a Likert scale following the same revision pattern for both tests. The inventories were manually checked, assigning points to each answer according to the following criteria:

I never or hardly ever do this= 1 point I occasionally do this= 2 points

I sometimes do this $=3$ points
I generally do this= 4 points
I always or almost always do this= 5 points
For MAI, the scores obtained by each participant were divided into the eight different sets of strategies or abilities that this particular test acknowledges, namely declarative knowledge, procedural knowledge, conditional knowledge, planning, information management strategies, monitoring, debugging strategies and evaluation of learning. Each of these sets of strategies provided a sub-score. Later each sub-score was added up in order to obtain the final score for each test.

The revision of MARSI followed this same pattern of grading. Nevertheless, the mean obtained by the participants for each evaluated category, i.e. Global Reading Strategies, Problem-Solving Strategies and Support Reading Strategies, was also considered before totalling the raw numbers obtained in each one of them. Even though this last step was not mentioned in the instructions on how to score the tests in the original instrument from Mokhtari and Reichard (2002), it has been done in this way so as to provide a more holistic revision for the data, facilitating in this way the process of data and results' analysis.

Reading Comprehension. For the reading comprehension test the participants were awarded one point for each correct answer in the multiple choice questions item with a maximum of 7 points. Additionally, they were awarded 2 (Achieved), 1 (Mildly Achieved) or 0 (Not Achieved) points for their answers to the question about the main idea of the text.

Achieved means that they mentioned 3 or 4 out of the 4 main elements in the text and that were correctly interrelated. Mildly Achieved happened when they were able to mention and relate correctly only one or two out of the 4 main elements of the text. Not achieved means that they were not able to relate or mention any of the main elements in the text.

These elements were: (a) the place where the action is happening or who was carrying it out (Liverpool City Council), (b) issue 1: overpopulation of fat pigeons, (c) issue 2: people's fault on the pigeons staying in the city center and being fat and, (d) solution: the creation of robot birds that work scaring the pigeons away from the city.

Inferencing Skills Test. The inferencing skills test was evaluated according to three different measurements: "Achieved", "Mildly Achieved" and "Not Achieved". Each one of these had assigned scores: 2,1 and 0 respectively. The test had a total score of 16 and a minimum of 0 . In order to award 2 points to the participant, they needed to provide a suitable synonym, translation or definition of the target pseudo word. In order to be awarded 1 point, they had to provide a synonym, translation or definition that was close to the real meaning of the target pseudo word but was not accurate enough (for example, if the target pseudo word meant adolescence the participant would have answered with adulthood or childhood, which are semantically related but actually mean different things). In order to not be awarded any points the participant had to not respond at all or respond words that were similar to real words in English or Spanish (for example, paullance $=$ pollution $=$ contaminación, contract $=$ contrato ) .

Qualitative Data Processing. The information gathered from the questionnaires was divided into two different parts: the first one consisted on yes/no answers, that were entered into an Excel document. Every answer represented a number, for example, when they were asked their gender if the answer was "female", that answer was designated with a number 1 ; and if the answer was "male", it was assigned a number 2 . The second one was formed by the answers to open questions, which were ordered in a table per participant. Each participant had their own table with all the open answers of the questionnaire, leading to a facilitation of the tagging process.

In order to classify the answers a tagging process was made. The purpose of this process was to establish categories that unified similar concepts of the different answers so as to get different labels. This process was developed in the following way: The research group was divided into four couples; each of them was assigned with a number of questionnaires to revise. This allowed the group to share different points of view and to avoid the problem of anecdotalism. After every couple finished the first revision, the group created a table with the final tags considering all the topics that had been mentioned by the participants. Following this, another revision of the questionnaires was carried out by the rest of the couples in order to verify that the open questions were properly tagged. The strategy used in the revision of the data is known as peer checking (Dörnyei, 2007), it allows to unify the work and to upgrade the nature of the discussion. Peer checking provided the group with constant feedback from all the members, therefore, the investigation group worked towards achieving interrater reliability through agreements.

SPSS. In order to run correlations in the SPSS program, a database was designed with all the information gathered from the participants. Aiming for organization and clarity, the first step was to put all the data into excel sheets and divided by section, level and faculty. After that, a general database was generated so the program would accept the data and run it properly. Descriptive data, Pearson's and Spearman's correlations were run using this program. Nonetheless, the difference obtained in Pearson's and Spearman's correlations were minimal, thus, the Pearson's one was selected to be used in the results and the analysis. Spearman's correlations and its values can be seen in Appendix G.

## Results

In the following section, results for quantitative and qualitative data are shown, respectively. For quantitative data, statistical analysis, both descriptive and correlational, have been put into SPSS and analyzed accordingly. On the other hand, the qualitative data has been registered and displayed in charts and tables in order to facilitate their display and interpretation. For this purpose, the identification and tagging of recurrent topics that were commonly found among the students' responses was taken into account.

The analysis provided in this section has been arranged according to the aims and objectives of this investigation. In this way, a comparison between English II, English III and English IV was made, so as to study the results and progress that the students might have had. The results for this dataset are entirely descriptive, and have been displayed in tables which present the descriptive statistics for mean, mode, median, and standard deviation. In the same way, correlations among the complete set of data have been run, in order to corroborate if there are indeed significant relations between the variables of reading comprehension, inferencing skills, metacognitive awareness, and vocabulary knowledge, average grades from high school (NEM) and the Language and Math Standardized Tests (PSU)

The results were obtained from a sample of 108 participants. This sample consisted of 6 different groups, each one of them arranged as shown in Table 3.

Table 3
Number of participants for each group

| Name of the group | Number of participants |
| :---: | :---: |
| FACSO English II | 7 |
| FACSO English III | 16 |
| FACSO English IV | 25 |
| ICEI English II | 20 |
| ICEI English III | 5 |
| ICEI English IV | 35 |

For descriptive data analysis, the number of participants was totaled according to the level of English they were taking in the moment the instruments were applied. In this way, the groups obtained are organized as shown in Table 4:

Table 4
Number of participants distributed into the English

| Name of the group | Number of participants |
| :---: | :---: |
| English II | 27 |
| English III | 21 |
| English IV | 60 |

## Quantitative Results

The following tables show the results obtained for descriptive analysis, where the three studied levels are displayed. Nevertheless, and for the purposes of this investigation, only the English II and English IV levels were considered, due to the fact that it is between these two levels where more progress is expected to be observed. Descriptive statistics for the whole sample have also been taken into account, so it is possible to provide a holistic perspective from the total data set.

Table 5
Descriptive statistics for Reading Comprehension and Inferencing in English II, III and IV

|  | English II |  | English III |  | English IV |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Reading <br> Comprehension | Inferencing <br> skills | Reading <br> Comprehension | Inferencing <br> skills | Reading <br> Comprehension | Inferencing <br> skills |
| N | Valid | 27 | 27 | 21 | 21 | 60 |
| $\quad$ Missing | 0 | 0 | 0 | 0 | 0 | 60 |
| Mean | 4.44 | .78 | 5.90 | 4.19 | 6.12 | 0 |
| Median | 4.00 | .00 | 6.00 | 4.00 | 6.00 | 2.50 |
| Mode | 5.00 | .00 | 7.00 | 0.00 | 7.00 | 0.00 |
| Std. | 1.28 | 1.87 | 1.64 | 3.91 | 1.61 | 3.19 |
| Deviation | 2.00 | .00 | 3.00 | 0.00 | 0.00 | 0.00 |
| Minimum | 7.00 | 8.00 | 8.00 | 12.00 | 8.00 | 11.00 |
| Maximum |  |  |  |  |  |  |

Note. The ideal maximum scores for Reading Comprehension test and Inferencing Skills test are 8 and 16 points, respectively.

Table 5 shows the results obtained for the variables of Reading Comprehension and Inferencing Skills in each level. In this portion of the results, a slight progress from English II to English IV is observed. English II's students obtained and average of 4.44 points ( $S D=1.28$ ) in the reading comprehension tests, whilst the students in English IV exhibit a slightly higher score ( $M=6.12, S D=1.61$ ). Similar results were obtained for the Inferencing Skills tests, for which students in English II level obtained an average of 0.78 points ( $S D=1.87$ ) and those in English IV scored about two more points on average ( $M=2.5, S D=3.19$ ). The most common scores for Reading Comprehension tests were 5 points in English II $(M o=5)$ and 7 points in English IV $(M o=7)$. Nevertheless, in the Inferencing Skills test, the mode was the same for both groups ( $M o=0.00$ ).

Table 6
Descriptive statistics for MAI and MARSI in English II, III and IV

|  | English II |  | English III |  | English IV |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | MARSI | MAI | MARSI | MAI | MARSI | MAI |
| N Valid | 27 | 27 | 21 | 21 | 60 | 60 |
| Missing | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | 104.11 | 132.70 | 105.95 | 126.76 | 106.70 | 130.70 |
| Median | 100.00 | 131.00 | 103.00 | 127.00 | 109.00 | 128.50 |
| Mode | $99.00^{\circ}$ | $123.00^{\text {a }}$ | $126.00^{\text {a }}$ | $133.00^{\text {a }}$ | $100.00^{\text {a }}$ | $111.00^{\text {a }}$ |
| Std. Deviation | 11.86 | 19.37 | 16.08 | 17.37 | 12.32 | 19.10 |
| Minimum | 82.00 | 99.00 | 74.00 | 98.00 | 78.00 | 77.00 |
| Maximum | 128.00 | 185.00 | 129.00 | 163.00 | 141.00 | 175.00 |

a. Multiple modes exist. The smallest value is shown

Note. The ideal maximum scores for MARSI and MAI tests are 150 and 260 points, respectively.

Table 6 presents the descriptive statistics for MAI and MARSI (general metacognition and reading skills metacognition inventories), where very minimal differences were found among the groups. English II level displays an average score of 104.11 points ( $S D=11.86$ ) on MARSI, against English IV whose average corresponds to 106.7 points ( $S D=12.32$ ). Multiple modes were found among all the groups, and only the smallest values have been shown on the table. In the case of the scores obtained for MAI, English II shows an average score of 132.7 ( $S D=19.37$ ), whilst English IV's average presents a difference of 2 points on average ( $M=130.7$, $S D=19.10$ ) in relation to the results obtained by English II's participants. More similarities are presented in terms of standard deviation, which prove that the distribution among these tests' results is quite similar for all the tested groups.

Table 7
Descriptive statistics for Language and Math Standardized Tests (PSU) and NEM in
English II, III and IV.

|  | English II |  |  | English III |  |  | English IV |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Language PSU | Math PSU | NEM | Language PSU | Math PSU | NEM | Language PSU | Math PSU | NEM |
| Valid | 27 | 27 | 27 | 21 | 21 | 21 | 60 | 60 | 60 |
| Missing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | 654.52 | 580.11 | 6.24 | 685.76 | 650.71 | 6.18 | 696.32 | 610.85 | 6.28 |
| Median | 650 | 580 | 6.3 | 705 | 656 | 6.2 | 700 | 604.5 | 6.3 |
| Mode | 680 | 570.00 | 6.4 | 750 | 580.00 | 6.3 | $650.00^{\text {a }}$ | 590 | 6.3 |
| Std. <br> Deviation | 53.01 | 58.46 | 0.31 | 59.98 | 56.03 | 0.36 | 53.12 | 52.69 | 0.28 |
| Minimum | 510 | 458 | 5.6 | 570 | 560 | 5.4 | 586 | 490 | 5.5 |
| Maximum | 760 | 680 | 6.7 | 785 | 750 | 6.7 | 820 | 720 | 6.8 |

a. Multiple modes exist. The smallest value is shown

Note. The ideal maximum scores for Language PSU and Math PSU are 850 points, whilst the maximum possible score for NEM is 7.0.

Table 7 aims to display the participants' academic background by showing their average scores for PSU tests and their respective NEM (students' average grade from all their years in high school). From the obtained results, it is possible to see that a better performance is found in the English IV level, where the three considered variables display higher average scores for this group than the others.

Table 8
Descriptive statistics for X_Lex Test's results in English II, III and IV.

|  | English II |  | English III |  | English IV |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | X Lex SelfPerception | $\begin{aligned} & \hline \text { X_Lex Real } \\ & \text { Score } \end{aligned}$ | X_Lex SelfPerception | $\begin{gathered} \text { X_Lex } \\ \text { Real Score } \end{gathered}$ | X_Lex SelfPerception | $\begin{gathered} \hline \text { X_Lex Real } \\ \text { Score } \end{gathered}$ |
| N Valid | 27 | 27 | 21 | 21 | 60 | 60 |
| N Missing | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | 3796.3 | 2138.89 | 4314.29 | 2261.9 | 4344.17 | 2494.17 |
| Median | 3800 | 2150 | 4400 | 2350 | 4400 | 2550 |
| Mode | 3700 | 1550.00 | 4000.00 | $100.00{ }^{\text {a }}$ | $4400.0{ }^{\text {a }}$ | 2900 |
| Std. <br> Deviation | 579.94 | 813.51 | 395.65 | 1108.7 | 523.44 | 882.46 |
| Minimum | 2600 | 100 | 3250 | 100 | 2200 | 600 |
| Maximum | 4800 | 3800 | 4900 | 3900 | 5000 | 4250 |

a. Multiple modes exist. The smallest value is shown

Note. The ideal maximum scores for the X_Lex test are 5000 points for both Real and Self-perception categories.
X_Lex's Test's results for English II, III and IV are presented in Table 8. The analysis for this test shows that students from English IV obtained higher average scores in the Selfperception variable $(M=4344.17, S D=523.44)$ than the students in English II $(M=3.796, S D=$ 579.94). Nevertheless, the Real Score for both groups presents a 355.28 points difference on average, where English IV students obtained the highest average of all the groups displayed in the table ( $M=2494.17, S D=882.46$ ).

Table 9
General results obtained from data gathering

|  | Reading <br> Comprehension | Inferencing <br> skills | MARSI | MAI | X_Lex Self- <br> perception | X_Lex <br> Real Score |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{N} \quad$ Valid | 108 | 108 | 108 | 108 | 108 | 108 |
| $\quad$ Missing | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | 5.65 | 2.73 | 105.9 | 130.43 | 4201.38 | 2360.18 |
| Median | 6 | 2 | 106 | 129.5 | 4350 | 2475 |
| Mode | 7 | 0 | 109 | $123.00^{\circ}$ | 4400 | 2900 |
| Std. | 1.68 | 3.28 | 12.93 | 18.78 | 563.38 | 918.85 |
| Deviation | 0 | 0 | 74 | 77 | 2200 | 100 |
| Minimum | 8 | 12 | 141 | 185 | 5000 | 4250 |
| Maximum | 8 |  |  |  |  |  |

a. Multiple modes exist. The smallest value is shown

The results for the entire data set are shown in Table 9. For Inferencing Skills test, the most common score obtained by the participants was $0(M o=0.00)$, with an average score of $2.73(S D=3.28)$. Nevertheless, one participant obtained 12 points out of 16 , being the only one who reached that score from the whole sample. Reading comprehension average score reached $5.65(S D=1.68)$, while MARSI and MAI averages are $105,90(S D=12.93)$ and $130.43(S D=$ 18.78) respectively. X_Lex's results for the whole data set seem to be slightly lower compared to the results obtained by the English IV level alone. In this way, the Self-perception variable presents an average score of $4201.38(S D=563.38)$ while the Real Score reached $2360.18(S D=$ 918.85).

Table 10
General Academic Background

|  | Language PSU | Math PSU | NEM |
| :--- | :---: | :---: | :---: |
| $\mathrm{N} \quad$ Valid | 108 | 108 | 108 |
| $\quad$ Missing | 0 | 0 | 0 |
| Mean | 683.81 | 610.91 | 6.25 |
| Median | 685 | 600 | 6.3 |
| Mode | 650 | $580.00^{2}$ | 6.3 |
| Std. Deviation | 56.71 | 59.14 | 0.3 |
| Minimum | 510 | 458 | 5.4 |
| Maximum | 820 | 750 | 6.8 |
| a. Multiple modes exist. The smallest value is shown |  |  |  |

In Table 10, slight differences can be seen between the mean and median of each of the three variables considered. The highest average between the two standardized tests (PSU) was obtained on the Language Test $(M=683.81, S D=56.71)$, where the most common score was 650 points and the highest one reached 820 points. Math standardized test's results ( $M=610.91, S D=$ 59.14) display lower results that the Language test, the minimum score registered being 458 points. Mean for NEM reaches $6.25(S D=0.3)$ while its mode is only superior by 0.05 points ( $M o=6.3$ ).

From tables 11 to 17 , correlational statistics are provided. Only significant correlations are displayed, and those correlations which were expected but were not found in the present set of data are mentioned to bear in mind for further analysis.

Table 11
Pearson's correlation for Reading Comprehension, Inferencing Skills, and Language Standardized Test (PSU)

|  | Inferencing skills | Language PSU |  |
| :--- | :--- | :---: | :---: |
| Reading Comprehension | Pearson Correlation | $.398^{* *}$ | $.347^{* *}$ |
|  | Sig. (2-tailed) | 0 | 0 |
|  | N | 108 | 108 |

**. Correlation is significant at the 0.01 level (2-tailed).

In Table 11, correlations between the variables Reading Comprehension, Inferencing Skills and Language Standardized Test (PSU) are shown. In the case of Reading Comprehension and Inferencing Skills, a significant moderate correlation was found, $r(106)=.398, p<0.01$. Similar results were found between Reading Comprehension and Language PSU $r(106)=.347, p$ < 0.01. Correlations between Reading Comprehension and X_Lex test, Math PSU, MARSI and MAI were expected. Nevertheless, no significant correlations between these variables were found.

Table 12
Pearson's correlation for Inferencing Skills

|  |  | Math PSU | X Lex Real Score |
| :--- | :--- | :---: | :---: |
| Inferencing skills | Pearson Correlation | $.263^{*}$ | $.255^{*}$ |
|  | Sig. (2-tailed) | 0.006 | 0.008 |
|  | N | 108 | 108 |
| **. Correlation is significant at the 0.01 level (2-tailed). |  |  |  |

Table 12 shows the correlations found between the variables of Inferencing Skills with Math standardized test, and Inferencing skills with the Real Score obtained in the X_Lex test.

The first two variables present a small, significant correlation, $r(106)=.263, p<0.01$, whilst Inferencing Skills and X_Lex's test results seem to also be correlated with a small strength of association, $r(106)=.255, p<0.01$. Significant correlations were expected between the variables Inferencing Skills, Language standardized test, MARSI and MAI. Nonetheless, none of these correlations seemed to be present in the current sample.

Table 13
Pearson's correlations found for MARSI and MAI

|  |  | MARSI Global St. | MARSI Problem Solving | MARSI Support St. | MARSI <br> Total Score |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MAI | Pearson Correlation | . $541 *$ | .444** | .456** | .583** |
|  | Sig. (2-tailed) | 0 | 0 | 0 | 0 |
|  | N | 108 | 108 | 108 | 108 |

**. Correlation is significant at the 0.01 level (2-tailed).
Table 13 shows the correlations found for MAI and MARSI and each of the subcategories evaluated in MARSI. As expected, both variables MAI and MARSI seem to be strongly related in a significant level, $r(106)=.583, p<0.01$. Correlations between MAI and MARSI related to other variables were expected. Nonetheless, only these correlations were found for metacognitive awareness tests.

Table 14
Pearson's correlation for Language and Math Standardized Tests (PSU)

|  |  | Math PSU |
| :--- | :--- | :---: |
| Language PSU | Pearson Correlation | $.239^{\circ}$ |
|  | Sig. (2-tailed) | .013 |
|  | N | 108 |

*. Correlation is significant at the 0.05 level (2-tailed).

A small correlation was also found between both standardized tests, namely Language and Math PSU. This is shown in Table 14, where it is possible to observe that the correlation is significant and directly proportional, $r(106)=.239, p<0.05$.

Some odd correlations which were not supported by previous investigations mentioned in this report were found. These results are shown from tables 15 to 17 .

Table 15
Pearson's correlation for Language Standardized Test (PSU) and X_Lex's results

|  |  | X Lex Self-Perception | X Lex Real Score |
| :--- | :--- | :---: | :---: |
| Language PSU | Pearson Correlation | .198 | .167 |
|  | Sig. (2-tailed) | .040 | .083 |
|  | N | 108 | 108 |

*. Correlation is significant at the 0.05 level (2-tailed).

Table 15 shows that a correlation between the Self-perception variable for X_Lex test's results and Language PSU were encountered. This correlation is small and directly proportional, $r(106)=.198, p<0.05$. A column for the Real Score has been added to prove that, even though some sort of significant result was expected between this variable and Language PSU, the correlation which was displayed was by no means significant for the data provided by the sample.

More correlations with the Self-perception variable for X_Lex Test's results were found and are displayed in tables 16 and 17.

Table 16
Pearson's correlation for Reading Comprehension and $X_{-}$Lex's results (Self-perception variable)

|  |  | X Lex <br> Self-perception |
| :--- | :--- | :---: |
| Reading Comprehension | Pearson Correlation | $.333^{\prime \prime}$ |
|  | Sig. (2-tailed) | 0 |

**. Correlation is significant at the 0.01 level (2-tailed).
Table 16 shows the results for the correlation between Reading Comprehension and X_Lex's results in the Self-perception variable. In this case, a moderate significant correlation
was found, $r(106)=.333, p<0.01$. No significant results were found between Reading Comprehension and the Real Score on X_Lex vocabulary test.

Table 17
Pearson's correlation for Inferencing Skills and X_Lex's results (Self-perception variable)

|  | Pearson Correlation | X Lex <br> Self-perception |
| :--- | :--- | :---: |
| Inferencing skills | Sig. (2-tailed) | $.363^{* *}$ |
|  | N | .000 |
| **. Correlation is significant at the 0.01 level (2-tailed). | 108 |  |

The last unexpected correlation is presented in Table 17. Inferencing Skills and X_Lex Self-perception variables seem to be moderately correlated, $r(106)=.363, p<0.01$.

Nevertheless, a correlation between the Real Score variable and Inferencing Skill was also found, as previously displayed in Table 13.

## Qualitative Results

For the qualitative section of the data analysis, several categories of recurrent topics were found among the students' responses. These emergent topics were systematized in tags in order to identify their most salient features, facilitating in this way further analysis. The qualitative questions were taken from the questionnaire, and correspond to questions $N^{\circ} 13$ and $N^{\circ} 14$.

After reading each answer and systematizing the meanings behind them according to their emergent topics and tags, general categories were created in order to group each tag into broader classifications. There are four general categories or macro-tags: (1) Instrumentality,
which refers to a type of vision of English where the participant considers the pragmatic usefulness of the language, whether it be for academic, social, cultural, travelling or workoriented purposes, (2) Language Ideology, which includes the students' vision of what learning a language implies, and their like/dislike towards English, (3) Political Ideology, which refers to the political-related topics that may underlie and sometimes even hamper the learning of a new language, and (4) Education, including technical aspects of how the English classes that the students have had are perceived and managed.

There are 22 tags in total which have been classified into these four previously mentioned categories. In the following charts, the most common tags have been identified and displayed according to their appearances in both questions $\mathrm{N}^{\circ} 13$ and $\mathrm{N}^{\mathrm{o}} 14$ together.


Figure 1 Three most frequent tags found for questions $N^{\circ} 13$ and $N^{\circ} 14$
Figure 1 displays the three most commonly found tags among the participants' responses, which correspond to the tags of 'Necessary', 'Communication/Globalization', and 'Useful Tool'. The word 'total' has been added in order to indicate that, even though these tags are sub-divided, all the responses referring to them have been grouped according to their emergent topics regardless their subdivisions. The tag 'Necessary' has been defined as 'when the participant sees English as a necessary constituent in social, academic, cultural or working spheres', and it is sub-
divided into Academic necessity, Cultural necessity, Social necessity, Occupational necessity, Information/Media Access necessity, and Unspecified, when the participant only mentioned English as necessary without specifying for what purpose. The tag of
'Communication/Globalization' is defined as 'when the participant highlights the importance of English in a globalized and interconnected world and/or its role as a universal language'. Finally, the tag of 'Useful Tool' is identified when 'the participant regards English as a useful communicative tool in one or more of the following aspects', these aspects correspond to Academic tool, Cultural tool, Social tool, Occupational tool, Access to Information or Media Tool, Communication tool, and Unspecified, when the participant did not explicitly mention in which aspects he or she considered English as a Useful Tool. This latter aspect was finally regarded as 'general usefulness' in the analysis section.


Figure 2 English as a Useful Tool Tag

Figure 2 displays the subdivisions for the tag of English as a Useful Tool. About $1 / 5$ of the answers analyzed did not specify why English was regarded as a useful tool. Nevertheless,
the same percentage can be found in answers which make reference to the usefulness of English in terms of communication. The least recurrent of all the subdivisions was the 'Academic Tool' tag, where only a $9 \%$ of the sample mentioned the usefulness of English regarding Academic purposes.


Figure 3 English as 'Necessary' Tag
Figure 3 shows the subdivisions for the tag 'Necessary'. In this case, the most recurrent response focuses on the necessity of learning English and the possibility to have a competitive advantage in the job market, according to what has been expressed by the participants.

Information Access and Cultural Necessity were not as widely found, their percentages corresponding to $12 \%$ and $13 \%$, respectively.


Figure 4 Most Common Tags Found Among ICEI's Students.
Figure 4 presents the most common tags found among the responses given by ICEI's students. According to the gathered information, the Communication/Globalization tag was mentioned more times for the all three English levels evaluated. Similar frequencies are seen for the tags 'Necessary - Working', 'Hard to learn', and 'Interest in Languages'. Lastly, English as a Useful Tool for communication was also mentioned 15 times for all three levels together, this tag was the least frequent of the most commonly found tags among this portion of the sample.


Figure 5 Most Common Tags Found Among FACSO's Students.

The most commonly found tags for FACSO's students are displayed in Figure 5. In the case of FACSO, the tag 'Useful Tool' was mentioned more frequently, especially among the students who belong to the English IV level. The tag for 'Communication/Globalization' is the second most mentioned tag, although it seemed to be less frequent in this faculty than in ICEI. Finally, and regardless of the fact that the tags of 'Useful Tool - Communication' and 'Interest in Languages' are still some of the most common tags for this portion of the sample, they were not cited by the students at the English II level.

The participants' preference for English has also been considered. This information is displayed in Figure 6.


Figure 6 Number of students who likeldislike English
Figure 6 shows the students' preference towards English. The information gathered proves that most of the students seem to like English classes, according to their answers for question $\mathrm{N}^{\mathrm{o}} 13$ in the questionnaire.

The following graph is introduced in figure 7, and corresponds to a general view of all the tags found in the sample.


Figure 7 Total Tag Frequency

Figure 7 provides the whole set of data for the analysis of qualitative answers. Some of the least common answers belonged to the tags of Lack of Usefulness, Xenophobia, Familiarity/Input Acknowledgement, and Fun to Learn.

Table 18
Definitions for the entire set of tags

| Tag Name | Definition |
| :--- | :--- |
| Hard to learn | The participant expresses dislike towards English for he/she perceives the language as hard in one <br> or more aspects (phonetics, grammar, etc.). <br> The participant explicitly declares that he/she does not consider English classes (or the language <br> itself) useful. |
| Lack of usefulness |  |

Finally, Table 17 shows the corresponding definitions for all 22 tags found. The tags for "Necessary", "Useful Tool" and "Communication/Globalization" are not explained in this table for they have been previously mentioned.

## Analysis of Results

In this section a detailed discussion of the results in relation to the literature review presented above will take place. The analysis and discussion of the results obtained in this study will take place in the following order: first, the descriptive data, then, the correlational results and, finally, the discussion related to the qualitative data.

## Analysis of Descriptive Data

It can be seen in Table 6 an important difference regarding both Language and Math Standardized Test results among the participants from Beginner and Pre-Intermediate levels. Students of the latter level entered university with a higher score than students of the former level. It has been noticed by the research team that several participants' scores at both Math and Language Standardized Tests were far below from the minimum scores needed to apply for Universidad de Chile. These participants' scores can be explained by the educational inclusion programs such as Programa de Acompañamiento Efectivo a la Educación Superior (PACE) or Sistema de Ingreso Prioritario de Equidad (SIPEE). The first is a government program with the purpose to give the chance to enter university to students from vulnerable environments. The second belongs to Universidad de Chile, and it gives the chance to enter university to students from public schools with academic excellence despite the scores obtained in these Standardized Tests. Due to these inclusive programs, the differences among participants' outcomes might be
explained, since the number of students who could belong to PACE or SIPEE is possible to be higher in the Beginner level that the Pre-Intermediate level.

According to Table 4, the results showed a slight improvement in terms of the results obtained from the participants at the Pre-Intermediate level in comparison to participants at the Beginner level. The improvement in terms of scores of the Reading Comprehension test might not be conferred to the English Program Platform. According to Koda (2013), this improvement can be expected since reading skills can be transferred from one language to another, hence, the students with high scores at the Language Standardized Test had a better performance in the Reading Comprehension Test. It is possible that students obtained higher scores in the latter because they started with higher scores in the former, leaving aside a direct relation with the English Program Platform's influence in the performance of the participants. It can be seen from the Inferencing Test's results that, despite the slight improvement from Beginner to Pre-Intermediate level, the mode was 0 in both levels. It can be expected that this low performance is present in the Beginner level, because the objectives of the program are focused on developing basic communication skills, such as greetings and descriptions, rather than more complex ones as inferencing skills. However, this scarcity of inferencing skills is not expected at the PreIntermediate level, according to the objectives of the program. As reported by the English Program Platform, students are supposed to "recognize unknown words through inferences in a text related to their discipline" ("Platform - Programa de Inglés", 2017). This could imply that several students in the Pre-Intermediate Level might not have acquired any kind of inferencing skills.

Regarding the MAI and MARSI test's scores, since the results were not different, as expected, between the Beginner and Pre-Intermediate level, it can be deduced that students in all
levels are either not receiving explicit metacognitive instruction during their time in the program or they are not acquiring these skills in spite of the fact that they are being taught.

According to the literature previously discussed, Schmitt (2010a) stated that the size of vocabulary will change depending on the usage. Following this idea and taking into account the English Program Platform's objectives, participants from the Pre-Intermediate level should have expanded their vocabulary in comparison to the Beginner level. Nonetheless, the results from the X_Lex test showed that the gap between their Self-perception score and their Real Score in the Beginner level is of 1657,41 word families, in contrast with the 1850 word families of difference in the Pre-Intermediate level. This increased gap should not occur in this level, since the objectives of the Platform intend to reach an increment of vocabulary knowledge both in their area of study as in common topics, in relation to the Common European Framework of Reference for Languages' standards for the B1 level. Hence, results can be interpreted as a tendency of students to believe themselves as more knowledgeable, which might lead them to commit more mistakes. This overconfidence, according to Levine (2014), is an augmented selfassessment of one's knowledge, that is to say, a person's subjective confidence of performance is greater than the actual knowledge. One of the possible causes of this overconfidence is participants' lack of knowledge for self-assessment of their performance on a task. This might also support the idea of a lack of metacognitive strategies as it has been stated previously.

## Analysis of Correlational Results

Regarding the correlations obtained using the program SPSS, significant yet moderate correlations were found for the Reading Comprehension variable, which is directly correlated with the Inferencing test's results and the Language Standardized Test (Language PSU). In this sense, whenever high scores are obtained for the variable of Reading Comprehension, high
scores are as well expected for Inferencing Skills and Language Standardized Test variables. Adding to the discussion held above, even though, , correlations between Reading Comprehension and X_Lex test, Math PSU, MARSI and MAI were expected, no significant correlations between these last variables were found.

According to the literature discussed in previous sections, most of these correlations are expected. Even though a significant correlation between X_Lex test and Reading Comprehension does not seem to be present in the current sample, Laufer and Ravenhorst-Kalovski (2010) found that in order to have an adequate level of reading comprehension it is necessary to have a $96 \%$ text coverage for simple texts (like the one used for this study), which means learners must know around 3000 word families. They also say that when learners understand what is going on in a text they will more likely have the capacity of successfully infer the meaning of novel words in a text. Since Koda (2013) explains that these reading skills are cross-linguistic, or, in other words, transferable from one language to another, it makes sense that regarding the Standardized Language Test students that are able to be more successful in a second language are also successful in their first and vice-versa.

Regarding the variables in which correlations were expected to appear in relation to Reading Comprehension, it is possible to assume that these did not occur due to the small number of participants in some of the groups.

Additionally, the variable of Inferencing Skills shows a moderate but significant ( $p<0.01$ ) correlation with both the Real Score obtained in the X_Lex test and the Math Standardized Test (Math PSU). The correlations existing between these variables are directly proportional as well. Despite the fact that significant correlations were expected between the variables Inferencing Skills, Language Standardized Test, MARSI and MAI, none of them occurred in this sample.

The correlation between Inferencing Skills and X_Lex test was highly expected. Nassaji (2006) and Laufer and Ravenhorst-Kalovski (2010) state that the size and depth of vocabulary knowledge is crucial for the task of inferencing meaning of novel words. On the other hand, regarding the correlation between Math PSU and Inferencing Skills there is much to be said.

Radford and Burwell (2016), when analyzing papers written on psychology of mathematics education from 2005 to 2014, explain that the main common thread between their theoretical frameworks is that language plays a central role in "the processes of mathematical thinking, learning and teaching, and, as such, is the link between the individual and the social." (p.283). This important idea is closely related to the correlation found in this study between Inferencing Skills and Math PSU. Plus, Bergqvist (2009, as in Radford \& Barwell, 2016) says that, knowing the categories words belong to, facilitates their correct interpretations and he mentioned that some items in other standardized tests are known for the influence of reading abilities of students when answering successfully, he further explains that through this language the student connects with the culture. Also referring to vocabulary, Radford and Barwell (2016) present the idea of natural language (language used in an everyday basis, therefore, in the L1) as a factor that may complicate students at the moment of facing mathematical problems that include technical words which in mathematical language convey a really specific meaning since they are not aware of this. To illustrate, let us take the example of natural numbers and rational numbers; these are high frequency words in the English language (natural food, rational ideas, for example) but when in a mathematical context they mean something specific that students need to be aware of in order to solve problems properly.

In short, when they refer to natural language and mathematical language they are referring to one of the aspects Nation (2001) includes in his Process Model when indicating what
it means to know a word. Being able to recognize a word and its meaning in a given context (vocabulary depth), thus, becomes essential. Moreover, it seems like linguistic ability may help students perform better when dealing with mathematical problems but not the other way around, since mathematical abilities may not improve the linguistic ones (S. Caruman, former DEMRE director, personal communication). This becomes important when dealing with standardized tests such as PSU, since these are important tools that provide a lot of implicit information that may help institutions such as universities to take measures to help students that enter these institutions without a very good performance in these tests, such as PACE and SIPEE students at Universidad de Chile. Nonetheless, addressing the purpose of this study, it would be interesting to apply this in an investigation referring to L2. This relation also applies when referring to the correlation between both PSU tests.

The scores of both Standardized Tests present a moderate yet significant association, which is, as the results display, directly correlated. This correlation may also be explained because for solving math problems a good degree of understanding is necessary. The exercises displayed in the Math Standardized Test are of mathematical reasoning and its objectives include applying, analyzing and evaluating (www.demre.cl), which are cognitive domains positioned higher in Bloom's taxonomy (Wilson, 2013). Before the cognitive domains of applying, analyzing and evaluating, there are two other domains: remembering and understanding. The first levels in this taxonomy need to be developed before being able to perform in the following stages (Wilson, 2013). Following this line, understanding necessarily requires comprehension, and since this test is written, reading comprehension is essential. Due to these reasons in addition with what was mentioned above, a correlation between both tests is logic.

The aforementioned elements (found correlations) relate to each other in a very clear, circular way: participants who did well in the Language Standardized Test are more likely to have a better performance in Reading Comprehension; plus, the ones who performed well in Reading Comprehension are, at the same time, more likely to show better results in the Inferencing Skills test. Those students who did better in the Inferencing Skills test are more likely to have a higher score in the Math Standardized Test which is correlated to the Language Standardized Test. To clarify the relationship, the following diagram has been designed:


Figure 8 Relationship Between Correlations
Another significant and strong directly proportional correlation was found between MAI and MARSI tests, along with the sub-categories considered for the revision of the latter. Even though this was highly expected, these numbers represent the validity and reliability of these tests for this study. This means that both MAI and MARSI actually measured what they were
supposed to measure, namely general metacognitive awareness and reading strategy related metacognitive awareness.

Moreover, non-expected correlations did occur. The Self-Perception score of the X_Lex test presents a significant yet small correlation which is directly proportional with the Language Standardized Test. In the same way, it presents a significant and moderate directly proportional correlation with the scores obtained on the Reading Comprehension and Inferencing Skills tests. This is conflicting for this study since it does not go in line with what has been discussed in previous sections.

High Self-Perception in the X-_Lex test suggests that students might think they know more than they actually do in terms of vocabulary in the L2. Even though these abilities have been measured in the L2, Koda (2013) states reading skills are transferable. Following this idea, the fact that students believe they know more vocabulary might benefit them when giving tests like the Standardized Language Test, according to the correlations obtained in this study.

Those who thought knew more also performed better in the Reading Comprehension and Inferencing Skills tests. Since the correlation between these variables was weaker, and not as significant $(p<0.05)$ as the other correlations found in this study, this result might be influenced by the disparity of the number of participants per group or the small number of the sample in general. Nevertheless, it is also possible to think that students who performed better at the Standardized Language Test are more confident learners and therefore they face challenges such as the ones present in these tests with a better self-regulation. Even though no correlations were found between metacognition inventories and any of the other variables, it is possible that students who are more confident have the ability to self-regulate their cognitive processes more successfully, thus, students would perform better, since they actually tried harder to answer the
tests. For example, in the case of the Inferencing Skills test, the mode is 0 , which means that the majority of the students in the sample did not answer any of the questions presented. It could be that the ones who did respond, were more confident due to their past success in other tests related to language and a self-regulation process.

## Analysis of Qualitative Results

Regarding the answers given by participants to questions 13 and 14 of the questionnaire (Appendix B), the following analysis has been made:

Like and Dislike for English. The information presented in Figure 6, showed that the majority of this study's participants expressed their preference for the English language. Their liking for the language was explained by the students, who gave a variety of reasons, these reasons were tagged and analyzed in the subsequent charts. It is interesting to highlight that even though a portion of the sample declared to dislike the language, they were not reluctant to learn it, and did not dismiss the usefulness of English whatsoever, nor dismissed the several ways the language was viewed as a useful tool by the participants.

Most and Less Frequent Tags. In Figure 1 the most frequent tags are shown. According to the results, most of the students perceive English as a Useful Tool to achieve goals. This could be due to the way in which English is taught to them. As it has been claimed before in the methodology section, the program includes objectives such as being able to fluently and successfully communicate with English speaking people, or to understand texts within the discipline they are related to. In some answers, the tags were mixed, for example participant FACSO0201_01 answered to question 14 that the English language: "Es útil para vivir conectado en este mundo globalizado". This is an example of English being perceived as a useful tool and its important role in a globalized world ('Communication/Globalization' tag). Some
students in spite of the fact that they did not like English for a variety of reasons, they still perceived that the language is necessary. For example, the participant FACSO0301_03, answered question 14: "Es necesario porque lo exige el mundo académico y eventualmente sirve para viajar. De todas formas la masificación de la lengua se debe más a cuestiones político económicas en desmedro de otras lenguas, lo que es negativo.", holding a strong negative political view of the language. However, the student still considered English as a necessity regarding academy and travelling.

In contrast, the three least frequent tags were: 'familiarity/input 'acknowledgement', 'familiarity/input high' and 'xenophobia', with less than three occurrences. Therefore, despite the fact that they appeared in the answers, they are not representative for the whole sample. Regarding the first one, the student ICEI0402_15 answered: "Es bueno, pero difícil si no se practica con regularidad." to question 14 , being this answered tagged as 'familiarity/input acknowledgement' because the participant is aware of the importance of input to improve his/her performance. The student FACSO0401_01 answered question 13: "Crecí con el idioma en mi contexto cercano, por lo que me resulta muy fácil entenderlo. Permite expresarte de forma más amplia." The participant had a high input of the language which explains why learning English was not perceived as a burden to them.

The participant ICEI0402_08 answered that they did not like English and their answer to question 13 was: "Odio a los gringos." being this one out of the two 'Xenophobia' tags. It is exceptional since there is no argument for his answer rather than an unjustified hate for people from a specific country.

Most Frequent 'Useful' Sub-Tags. The results presented in Figure 2, give an understanding about the view of the participants regarding the English language as a useful tool.

This tag was subdivided in seven sub-tags, from which the ones with the most appearances in the results were 'Unspecified', ‘Communication' and 'Occupation'. The students probably accept that English is a useful tool in general aspects, which could serve as an explanation to why they do not specify in which way the language would be useful for them. For example, the participant ICEI0402_02 answered to question 13: "Es útil y necesario." not specifying why or how the language was useful and necessary. Regarding the second most found sub-tag, Communication, the students are mainly from ICEI, which could be a possible reason why they consider English as a useful tool for communicating due to the fact that participants from that faculty were studying disciplines such as journalism, movie-making and TV-making . For example, the student ICEI0402_01 when answering question 13 said: "Es una herramienta muy útil en un mundo intercomunicado." Finally, regarding English as a useful tool in the working aspect, the students in this sample think that English would be useful for them in order to find suitable and better job positions or to improve within their careers. To illustrate this in a clearer way, an example regarding this reason is presented by participant ICEIO402_03, who answered question $\mathrm{N}^{\mathrm{o}} 14$ in the questionnaire in the following way: "Que es la herramienta más necesaria para ingresar al mundo laboral profesional y que brinda grandes oportunidades sociales." Therefore, English is seen as the most important tool regarding their job opportunities.

Most Frequent 'Necessary' Sub-Tags. The percentages presented in Figure 3, provide some insight on the necessary approach to learning English from the participants' point of view. The 'Necessary' tag was the second most mentioned tag with (N). This tag held different subtags, being the 'Occupational Necessity' tag the one which was mentioned the most, with $22 \%$ of the total, showing that participants approached English as a necessary tool to achieve more work opportunities. Notwithstanding their discipline, the English language has been regarded by the
population of this study, as a necessity when it comes to become a valuable applicant for a good job position. This perception could be connected to highly publicized governmental public programs such as 'Inglés Abre Puertas' (English Open Doors) ("Antecedentes sobre el Programa Inglés Abre Puertas (PIAP)", 2017), a slogan also used by politicians to refer to English as a language that improves life opportunities, which is also a recurrent tag in the result of this study, encountered 19 times throughout the answers of the participants.

The next most frequent sub-tag of the 'Necessary' tag mentioned is the 'unspecified' one, with $19 \%$ of the total. This tag was used to describe answers which mentioned English as a necessary tool without specifying the reason why. This could be interpreted as a view of English as a necessary tool in general terms, whether being a necessity for work, social, academic, among other needs.

The following two sub-tags of English seen as a necessity with the most appearances are the 'Academic' and 'Social' sub-tags, with $17 \%$ of the total each. Furthermore, for the participants from FACSO, this might point out that participants acknowledge the fact that much literature written about the disciplines they study are written in English. In the case of participants from ICEI, it seems that they tend to acknowledge the necessity to learn English as second language more for communicative purposes between countries and cultures than anything else, which makes sense because they aim to be communicators themselves in a near future.

Comparison of Emerging Topics Between FACSO and ICEI. It is of interest for the purpose of this study to notice the difference between the number of appearances of the tag ‘Communication/Globalization' regarding the students of FACSO and ICEI. The tag appeared 13 times in the answers provided by the participants from FACSO yet the same tag appeared 38 times in the answers of the ones from ICEI. This could be strictly related to the disciplines taught
in both faculties. ICEI's students are more likely to be interested in learning English in order to be able to communicate with the rest of the world, while FACSO students understood English as a useful tool without specifying their need. This might lead to understand the learning processes and goals of the students of both faculties as of a different nature, ICEI's needs would appear to be more oriented to communicative interaction than FACSO's. One example about this is the participant ICEI0402_01, who answered question number 14: "Creo que es importante, especialmente en el rubro de las comunicaciones tanto para adquirir conocimientos como para difundir nuestro trabajo." In this example the previous idea of English as playing an important role for communication purposes such as journalism or audiovisual disciplines is reaffirmed

## Conclusions

English teaching programs' curriculum requires to focus on specific aspects, such as, vocabulary acquisition (including reading comprehension and inferencing abilities), and metacognitive instruction, in the best interest of achieving an efficacious learning development of the students involved. Proper instruction on these matters, will allow learners to develop receptive and productive abilities, facilitating their comprehension and communication in their L2. As a result, from the present investigation, it can be concluded that the lack of awareness about these subjects is reflected in the students' tests results.

In the aforementioned results, only the English II (Pre-intermediate) and English IV (Intermediate) levels were considered, because it was expectable to have more progress in these levels. The majority of these participants belonged to ICEI, and by the time the instruments were applied they were enrolled in the English Program's Intermediate level.

All things considered, the obtained correlations, strongly support the information presented in previous sections. For this study's purposes' only significant correlations were displayed.

Koda (2013) stated that L1 reading skills can be transferred to the L2, which means that L1 performance can facilitate L2 proficiency. This can be seen in a significant correlation found among the results of the Reading Comprehension Test and the Language Standardized Test (PSU). Participants who did well in the Language Standardized Test are more likely to perform better in Reading Comprehension. Additionally, participants that presented a good performance in Reading Comprehension are likely enough to reach better results in the Inferencing Skills test. However, considering the students' diverse backgrounds, the improvement cannot necessarily be attributed to the influence of the English Program Platform.

Moreover, those students who performed better in the Inferencing Skills test were expected to have a higher score in the Math Standardized Test, which is, at the same time, correlated to the Language Standardized Test. Furthermore, it was expected to find correlations between Reading Comprehension and X_Lex test, Math PSU, MARSI and MAI, nonetheless no significant correlation between these variables was found.

Withal, a directly proportional correlation of depth of vocabulary knowledge, and the performance of a student in word inferencing activities (Nassaji, 2006; Laufer and RavenhorstKalovski, 2010) was obtained from the X_Lex test and the Inferencing Skills Test.

With respect to the MAI and MARSI questionnaires, there is no relevant difference between the results of the Beginner and Pre- Intermediate. This fact leads to infer that students are not being explicitly taught about metacognitive strategies, even when this aspect is included in the program's objectives. Meanwhile, students from the Intermediate level obtained higher
average scores in the Self-perception variable (X_Lex Test) than the ones from Pre-Intermediate. These results show a tendency from students to believe they are more knowledgeable than they actually are, leading them to commit mistakes. This situation supports the previous idea of a lack of metacognitive instruction in classroom settings.

Likewise, in the case of metacognitive strategies, from the Inferencing Test's results it can be concluded that inferencing strategies are not being explicitly taught either. However, there is a slightly higher score of the Intermediate level students.

Considering what has been mentioned, it is possible to say that the Intermediate level performed better than the other levels, as the three main variables presented higher average scores. Nevertheless, a minor progress from English II to English IV can be observed. The found correlations support the idea that the improvement achieved by the students may not be entirely attributed to the program instruction.

Regarding the English Program Platform, results support the fact that students are achieving a level closer to A2 of the Common European Framework rather than the B1 level expected by the program, for students did not achieve neither the level of English expected by the program regarding vocabulary knowledge, reading comprehension and inferencing performance, nor the development of metacognitive strategies.

## Limitations

Despite the fact that this study reached its aims, there were some ineludible limitations regarding the data gathering, the number of participants and the homogeneity of the sample. When carrying out this study, it was impossible to maintain a constant and regular data gathering process because of bureaucratic reasons that made the process more difficult, and due to university activities and strikes the process became slower.

The number of participants was also a limitation to this study, primarily because of the variety in numbers of students who belonged to the different levels of the English program. Moreover, the analysis of results of this study was limited to a heterogeneous sample, as special considerations or differentiation for students with PACE / SIPEE from regular students were not made.

It would have been useful to differentiate the different programs that students belong to, in order to know their strengths, lacks and needs according to their field of study. If these aspects had been considered, a broader overview in the results could have been achieved.

Consequently, this study is worth since it sheds light on a phenomenon that seems to have been unnoticed for a while, which is English learning at the university and also because it opens new avenues for research and for the search of answers to very specific questions related to performance in English in our student population.

## Further Research

The present research studied the English Program Platform of Universidad de Chile, but only in two faculties, FACSO and ICEI. A replication of this study, whether in more faculties or in other universities, could be extremely useful in the interest of enhance the English learning process of students. Nonetheless, it is pivotal to consider the previously mentioned limitations.

It would also be optimal to test a larger sample of students with the aim of obtaining a more inclusive and diverse sample. It is necessary to request more specific information about the participants, to give a better account of the variety of students through the sample. Also, in order to differentiate the characteristics of the tested levels, it would be very useful to identify the specific features of each one, such as the program they belong to, whether they have been
admitted to University, accepted through special entrance programs or through regular admittance.

Additionally, it is of utmost importance to examine the unexpected correlations obtained so as to have a better understanding of the association of variables. At the same time, it would be highly beneficial to corroborate if they occur in a larger sample.

Finally, a correlation between Language and Math Standardized Tests should be addressed in a replication of this study. This with the aim of determining if those results have a direct influence in the performance of students in different areas. Likewise, a study between the Inferencing Skills Test and Math Standardized Test could be carried out so as to broaden the study. It would provide the academy with Chilean literature about this topic as it has not been extensively researched neither at university level nor national.

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## Appendices

## Appendix A

## Consent Form

## Universidad de Chile

# Facultad de Filosofía y Humanidades 

Licenciatura en Lengua y Literatura Inglesa
Departamento de Linguíística
Seminario de Grado

## Santiago,

## Consentimiento Informado

El presente documento le informará sobre los objetivos, procedimientos, confidencialidad, beneficios y las personas a cargo de la presente investigación, con tal de ayudarle a decidir si desea ser parte de esta. Su participación es voluntaria y esencial para el desarrollo de este estudio.

Como grupo de Seminario de Grado sobre Adquisición de Vocabulario realizaremos una investigación de la cual usted es pieza fundamental para lograr nuestro propósito. Por lo que en el presente documento se le informará cabalmente sobre esta investigación en cuanto a sus objetivos, procedimientos, confidencialidad y las personas a cargo. Su participación es voluntaria y esencial para el desarrollo de este estudio.

Esta investigación está dirigida por los estudiantes Gabriela Becerra, Felipe Moebis, Yanira Labbé, Ámbar Oliveras, Catalina Pezoa, Javiera Ramos, Macarena Soto y Victoria Traverso, pertenecientes al Seminario de Grado del programa 'Licenciatura en Lengua y Literatura Inglesa’ de la Universidad de Chile, a cargo de la profesora guía Rosa Bahamondes, quien forma parte del Departamento de Lingüística de la Facultad de Filosofía y Humanidades de la Universidad de Chile.

## Objetivos de la investigación

El propósito de este estudio es conocer y describir algunos aspectos del proceso de aprendizaje del idioma inglés de los estudiantes que están cursando el ramo Inglés impartido por la plataforma UChile.

## Procedimientos

Cada participante rendirá pruebas que no tomarán más de una hora cronológica en total. En esta ocasión la prueba será presencial. Esto será la base de la investigación que se llevará a
cabo y nos proporcionará datos necesarios sin los cuales sería imposible cumplir los objetivos de la investigación.

## Confidencialidad

Absolutamente todos sus datos serán confidenciales y serán utilizados solamente para esta investigación. Su participación no será evaluada y no tendrá repercusión en su vida académica. Además, su nombre no será utilizado en ningún reporte, por lo cual su anonimato estará totalmente asegurado.

## Beneficios y derechos

La participación en el desarrollo de este estudio no es remunerada, sin embargo, a modo de retribución, los estudiantes a cargo están dispuestos a realizar una tutoría de inglés a todos aquellos participantes que lo requieran en alguna ocasión durante el presente año académico (2017). Si desea contactar a alguno de ellos, la información puede ser encontrada al final de este mismo documento.

De la misma forma, los participantes que decidan formar parte de este estudio deben tener en claro que pueden abstenerse de participar en cualquiera de las evaluaciones que este estudio conlleve y, del mismo modo, pueden retirarse en cualquier momento sin recibir sanción alguna.

En caso de tener dudas, consultas o sugerencias, o si desea conocer los resultados de esta investigación, puede escribir al siguiente correo y se le responderá a la brevedad posible:
seminario.av2017@gmail.com
Si usted ha leído el documento y está de acuerdo con lo expuesto, por favor firme según se indica y escriba los datos solicitados con letra imprenta y clara. Una vez hecho esto, se le hará entrega de una copia de este documento.

Nombre del participante: $\qquad$
E-mail del participante: $\qquad$
Confirmación de e-mail: $\qquad$

## Appendix B

## Questionnaire

## Cuestionario

Nombre: $\qquad$ Edad: $\qquad$ Género: $\qquad$
Indica el nivel en el cual comenzaste a cursar inglés en tu facultad (1,2,3,4): $\qquad$

## Sección 1

Las siguientes preguntas tienen relación con su información personal y académica. Por favor, responda las siguientes preguntas en el espacio indicado. En las preguntas con opciones (Sí, No, etc) marque con una X en el espacio correspondiente.

1. ¿Cuál fue su puntaje aproximado en la Prueba de Selección Universitaria (PSU)?
-Lenguaje: $\qquad$ -Matemáticas: $\qquad$
2. ¿Cuál fue su promedio de Notas de la Enseñanza Media (NEM)? $\qquad$
3. ¿A qué edad comenzó a tener clases de inglés? (Colegio, clases particulares, etc.) $\qquad$
4. Si asistió a un colegio público, ¿Es su colegio considerado emblemático?
_ Sí
_ No
5. ¿Asistió a un colegio bilingüe?
$\qquad$ __No
6. ¿Ha asistido a algún instituto de inglés (Ej: Tronwell)?
_ Sí. ¿Por cuánto tiempo? $\qquad$ _ No
7. ¿A qué tipo de colegio o liceo asistió?
_ Colegio público _ Particular subvencionado _ Particular pagado
8. ¿Alguien en su familia habla inglés? Si la respuesta es sí, especifique parentesco.
_ Sí. ¿Quién? __ _ No
9. ¿Ha visitado algún país de habla inglesa (Ej: Estados Unidos, Inglaterra, etc)?
$\qquad$
$\square$ No
10. Si la respuesta a la pregunta anterior es "Sí", ¿Por cuánto tiempo?
_ Menos de un mes __ Entre 1 y 3 meses _ Entre 3 y 6 meses
__ Entre 6 meses y un año __ Más de un año
11. Marca la casilla con el rango de horas que ocupas realizando las siguientes actividades en inglés a la semana.

| Actividad | $0-30 \mathrm{~min}$ | $1-3 \mathrm{hrs}$ | $4-6 \mathrm{hrs}$ | $6+\mathrm{hrs}$ |
| :--- | :--- | :--- | :--- | :--- |
| Ver series de televisión y/o películas. |  |  |  |  |
| Escuchar música. |  |  |  |  |
| Jugar video juegos. |  |  |  |  |
| Otras. ¿Cuáles? |  |  |  |  |

12. ¿Cuál es su percepción de las clases de inglés que tuvo en el colegio?
_ Me resultaban fáciles _ Se me hacían fáciles en ocasiones
_ Se me hacían difíciles en ocasiones _ Se me hacían muy difíciles
13. ¿Le gusta el inglés? Justifique brevemente su respuesta en el espacio indicado.
_ Sí _ No
14. ¿Qué piensa acerca de aprender inglés? ¿Por qué?
$\qquad$
$\qquad$

## Sección 2

Las siguientes preguntas corresponden al desarrollo de las clases de Inglés que cursa. Por favor responda en el espacio indicado.

1. ¿Qué tipo de actividades se realizan en la sala de clases? ¿Puede describirlas de manera general?
$\qquad$
$\qquad$
$\qquad$
2. ¿Usan recursos en línea para el desarrollo de las clases? Si la respuesta es sí, ¿qué recursos utilizan?
$\qquad$
$\qquad$
$\qquad$
3. ¿Cuál es tu opinión sobre de la utilidad de los materiales y actividades utilizadas en la clase para el aprendizaje del inglés?
$\qquad$
$\qquad$
$\qquad$
4.- ¿Por qué cree que se imparte inglés de forma obligatoria en la malla curricular de su carrera?
$\qquad$
$\qquad$
5.- ¿En qué aspectos del inglés cree usted que tienen mayor dominio? ¿Cuáles le gustaría mejorar? Marque con una X. (Puede marcar más de una opción).

| Habilidad | Me gutaría mejorar | Tengo buen dominio |
| :--- | :--- | :--- |
| Hablar en inglés. |  |  |
| Escribir formalmente en inglés. (Ej: ensayos) |  |  |
| Escribir informalmente en inglés. |  |  |
| Leer textos en inglés de cualquier índole. |  |  |
| Leer textos en inglés relacionados con su carrera. |  |  |
| Entender cuando le hablan en inglés. |  |  |

¡Muchas gracias por su participación!

## Appendix C

## MAI

Nombre: $\qquad$ Curso: $\qquad$ Facultad: $\qquad$
El siguiente cuestionario es para saber cómo estudias y te enfrentas a nueva información. Después de leer cada afirmación, marca el número ( $1,2,3,4,05$ ) que aplique a ti. Cada número significa lo siguiente:

- Significa "nunca o casi nunca hago esto"
- 2: significa " hago esto sólo ocasionalmente"
- 3 : significa "a veces hago esto"
- 4: significa "generalmente hago esto"
- 5: significa "siempre o casi siempre hago esto"
- Ten presente que no hay respuestas correctas o incorrectas

|  | 1 | $\stackrel{2}{C N}$ | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Me pregunto periódicamente si estoy cumpliendo mis metas. |  |  |  |  |  |
| 2. Considero varias alternativas para un problema antes de contestar. |  |  |  |  |  |
| 3. Trato de usar estrategias que han funcionado en el pasado. |  |  |  |  |  |
| 4. Modero mi ritmo cuando aprendo para tener suficiente tiempo. |  |  |  |  |  |
| 5. Entiendo mis fortalezas y debilidades intelectuales. |  |  |  |  |  |
| 6. Pienso sobre lo que realmente necesito para aprender antes de comenzar una tarea. |  |  |  |  |  |
| 7. Sé cómo me fue cuando termino una prueba. |  |  |  |  |  |
| 8. Establezco metas específicas antes de comenzar una tarea. |  |  |  |  |  |
| 9. Disminuyo la velocidad cuando encuentro información importante. |  |  |  |  |  |
| 10. Sé qué tipo de información es más importante para aprender. |  |  |  |  |  |
| 11. Me pregunto si he considerado todas las opciones cuando resuelvo un problema. |  |  |  |  |  |
| 12. Soy bueno organizando información. |  |  |  |  |  |
| 13. Enfoco conscientemente mi atención en información relevante. |  |  |  |  |  |
| 14. Tengo un propósito específico para cada estrategia que uso. |  |  |  |  |  |



| 37. Dibujo imágenes o diagramas para ayudarme a entender cuando aprendo. |  |  |  |
| :--- | :--- | :--- | :--- |
| 38. Me pregunto a mí mismo si he considerado todas las opciones después de resolver un problema. |  |  |  |
| 39. Trato de poner nueva información en mis propias palabras. |  |  |  |
| 40. Cambio de estrategias cuando no logro entender. |  |  |  |
| 41. Utilizo la estructura organizacional del texto para ayudarme a aprender. |  |  |  |
| 42. Leo las instrucciones cuidadosamente antes de empezar una tarea. |  |  |  |
| 43. Me pregunto a mí mismo si lo que estoy leyendo se relaciona con lo que ya sé. |  |  |  |
| 44. Reevalúo mis suposiciones cuando me confundo. |  |  |  |
| 45. Organizo mi tiempo para cumplir mejor mis metas. |  |  |  |
| 46. Aprendo más cuando me interesa el tema. |  |  |  |
| 47. Trato de separar el estudio en pasos más pequeños. |  |  |  |
| 48. Me pregunto a mí mismo/a si he aprendido tanto como es posible cuando termino una tarea. |  |  |  |
| 52. Me hago preguntas sobre qué tan bien me está yendo mientras aprendo algo nuevo. |  |  |  |
|  |  |  |  |

## Appendix D

## MARSI

Nombre: $\qquad$ Curso: $\qquad$ Facultad: $\qquad$
El siguiente cuestionario es para saber cuáles son tus estrategias para retener información y entenderla cuando lees.
Instrucciones: Más abajo hay una lista de afirmaciones sobre lo que las personas hacen cuando leen materiales académicos o relacionados a la escuela tales como libros de texto o libros de biblioteca.

Cada afirmación está seguida por números ( $1,2,3,4,5$ ), cada número significa lo siguiente:

- 1: significa "nunca o casi nunca hago esto"
- 2: significa " hago esto sólo ocasionalmente"
- 3: significa "a veces hago esto"
- 4: significa "generalmente hago esto"
- 5: significa "siempre o casi siempre hago esto"

Después de leer cada afirmación, marca el número ( $1,2,3,4,05$ ) que aplique a ti utilizando la escala dada. Por favor, ten en cuenta que no hay respuestas correctas o incorrectas en este inventario.

|  | 1 | 2 | 3 | 4 |
| :--- | :--- | :--- | :--- | :--- |


| 13. Ajusto mi velocidad de lectura de acuerdo a lo que estoy leyendo. |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| 14. Decido qué leer con detención y qué ignorar. |  |  |  |  |
| 15. Uso materiales de referencia como diccionarios para ayudarme a entender lo que leo. |  |  |  |  |
| 16. Cuando el texto se complica, pongo más atención a lo que estoy leyendo. |  |  |  |  |
| 17. Uso tablas, números e imágenes en el texto para aumentar mi entendimiento. |  |  |  |  |
| 18. De vez en cuando me detengo y pienso acerca de lo que estoy leyendo. |  |  |  |  |
| Marque el número 2 en este item. |  |  |  |  |
| 19. Uso pistas contextuales para ayudarme a entender lo que leo. |  |  |  |  |
| 20. Parafraseo (reescribo ideas en mis propias palabras) para entender mejor lo que leo. |  |  |  |  |
| 30. Trato de adivinar el significado de palabras o frases que no conozco. |  |  |  |  |
| 21. Trato de visualizar información para ayudarme a recordar lo que leo. |  |  |  |  |
| 28. Me hago preguntas que me gustaría que el texto respondiera. |  |  |  |  |
| 22. Utilizo ayudas tipográficas como negrita o cursiva para identificar información clave. |  |  |  |  |
| 23. Analizo y evalúo críticamente la información presentada en el texto. |  |  |  |  |
| 25. Verifico mi entendimiento cuando me encuentro con información conflictiva. |  |  |  |  |

## Appendix E

## Reading Comprehension Test

Nombre: $\qquad$ Curso: $\qquad$

## Robot Birds

Liverpool city council wants to clear the city of fat pigeons (city birds), because their numbers have increased enormously in the past years. They say that that people are feeding the birds, which makes them fat. The pigeons get bigger because their normal diet would normally consist of seeds and insects, not high-fat junk food, such as hamburgers and French fries, they are eating in the city centre.
The council wants people to know that everyone who feeds the pigeons is responsible for the streets being so crowded with these birds. They hope to encourage the birds to move away from the city centre and into parks and open spaces.

Ten robotic birds have been brought into the city centre to scare the pigeons away and visitors are asked not to give the pigeons any food. The mechanical birds - known as 'robops' - will sit on the roofs of buildings. They can be moved around to different locations. They look like a peregrine falcon, which is a bird that kills pigeons. They even make noises and flap their wings to scare the pigeons. They hope that the pigeons will go away before the city becomes the European Capital of Culture in two years.

## Answer the following table:

| Statement | Right | Wrong <br> It doesn't <br> say |  |
| :---: | :--- | :--- | :--- |
| 1. Pigeons are fatter in Liverpool than in other cities. |  |  |  |
| 2. Pigeons get fat because they eat seeds and insects. |  |  |  |
| 3. According to the council, everyone is to blame for the <br> numbers of pigeons. |  |  |  |
| 4. They want the pigeons to move out of the city centre. |  |  |  |
| 5. Visitors shouldn't feed the pigeons |  |  |  |
| 6. The robotic birds can move around the city centre. |  |  |  |
| 7. Liverpool is the European Capital of Culture. |  |  |  |

8. What is the main idea of the text? (Responde en español)
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## Appendix F

## Inferencing Skills Test

## Ejercicio

Nombre: $\qquad$ Curso: $\qquad$
Lee el siguiente texto y responde las preguntas más abajo.
The town is very dirty. All the people are hot, have dust between their toes and the smell of adaist in their noses. We both fell ill, and at ten o'clock in the morning I got scared and took my friend to the only private hospital in town, where you have to pay. After being treated by a doctor, we caught the next aeroplane home.

Now, I believe that the money of the World Health Organisation (WHO) should be spenton bringing health to all people of the world and not on expensive doctors and hospitals for the few who can pay. But when we ourselves become ill, our beliefs hacquer. After we came back to the States we thought a lot about our reaction to this sudden meeting with health care in a poor country. When evaluating modern medicine, we often forget that without more money for food and clean water to drink, it is impossible to fight the diseases that are caused by infections.

Doctors seem to ignore this fact. They ought to spend much time thinking about why they themselves do not troact some of the serious and infectious diseases that so many of their patients die from. They do not realize that an illness must find a body that is weak either because of stress or hunger. People are killed by the conditions they live under, the lack of food and money and the cambulor. Doctors should analyze why people become ill rather than take such a strong interest in the mundive effect of medicine.

In the rich world many diseases are caused by paullence. The causes of heart diseases, for instance, are far from being mysterious and misabrogable-they are as well known as the causes of tuberculosis. Other diseases are due to dangers in the natural conditions in which we live. Imagine the typical American worker on his death-bed: every cell snelled with such things as chemicals and radioactive materials. Such symptoms are true signs of an unhealthy world.
I. Escribe lo que crees que significa cada una de las siguientes palabras. Puedes dar una definición, una traducción o un sinónimo.

## Ejemplo:

## Symptoms

R. Sensaciones provocadas por una causa específica
R. Sintomas

## Adaist

## Hacquer

## Troact

$\qquad$

## Cambulor

$\qquad$

## Mundive

$\qquad$

## Paullence

$\qquad$
$\qquad$

## Misabrogable

## Snelled

¿Qué piensas de este ejercicio? ¿Cómo lo mejorarías? ¿De qué te sirvió? ¿Qué te gustó?
¡Muchas gracias por tu participación y ayuda!

## Appendix G

## Spearman's Correlations Tables

Table 19
Spearman's rho for Reading Comprehension, Inferencing Skills, X_Lex's Self-Perception and Language
Standardized Test (PSU)

|  |  | Inferencin <br> g skills | X Lex Self- <br> Perception | Languag <br> e PSU |
| :--- | :--- | ---: | ---: | ---: |
|  | Correlatio <br> n |  |  |  |
| Reading | Coefficien | $.373^{* *}$ | $.383^{* *}$ | $.362^{* *}$ |
| Comprehension | t |  |  |  |
|  | Sig. (2- <br> tailed $)$ | 0 | 0 | 0 |
|  | N | 108 | 108 | 108 |

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 20
Spearman's rho for Inferencing Skills, X_Lex's test results and Math Standardized Test (PSU)

|  |  | X Lex SelfPerception | Math PSU | X Lex Real Score |
| :---: | :---: | :---: | :---: | :---: |
| Inferencin g skills | Correlatio <br> n Coefficien | . $362^{* *}$ | . 313 ** | . $227 *$ |
|  | Sig. (2tailed) | 0 | 0.001 | 0.018 |
|  | N | 108 | 108 | 108 |

Table 21
Spearman's rho found for MARSI (subdivisions and total results) and MAI

|  |  | MARS <br> I <br> Global St. | MARSI <br> Prob. <br> Solv. | MARSI <br> Support St. | $\begin{gathered} \hline \text { MARS } \\ \text { I } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MAI | Correlatio <br> n <br> Coefficien <br> t | . 540 ** | . $403{ }^{* *}$ | . $442{ }^{* *}$ | . $554 * *$ |
|  | Sig. (2tailed) | 0 | 0 | 0 | 0 |
|  | N | 108 | 108 | 108 | 108 |

[^0]Table 22
Spearman's rho for Language and Math
Standardized Test (PSU)

|  |  | Math PSU |
| :--- | :--- | ---: |
|  | Correlation <br> Coefficient | $.204^{*}$ |
| Language PSU | Sig. (2- <br> tailed) | 0.034 |
| N |  |  |

*. Correlation is significant at the 0.05 level (2-tailed).

Table 23
Spearman's rho for Language Standardized Test and $X_{-}$Lex's test results

|  |  | X Lex <br> Self- <br> Perception | X Lex <br> Real <br> Score |
| :--- | :--- | ---: | ---: |
|  | Correlation <br> Coefficient | $.212^{*}$ | 0.186 |
| Language PSU | Sig. (2- <br> tailed) | 0.027 | 0.054 |
| N | 108 | 108 |  |

*. Correlation is significant at the 0.05 level (2-tailed).


[^0]:    **. Correlation is significant at the 0.01 level (2-tailed).

