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THE ROLE OF AFFECTIVE VARIABLES IN ADULT SECOND LANGUAGE
ACQUISITION (ENGLISH)

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LIST OF ABBREVIATIONS

ACC	Anterior Cingulated Cortex
AGFI	Adjusted Goodnes of Fit Index
ANS	Automatic Nervous System
CAH	Contrastive Analysis Hypothesis
CEFR	Common European Framework of Reference
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CNS	Central Nervous System
CPH	Critical Period Hypothesis
DNI	Documento Nacional de Identidad (Identity National Document-Passport)
EFA	Exploratory Factor Analysis
ERp	Event-Related Potential
FLCAS	Foreign Language Class Anxiety Scale
fMRI	Functional Magnetic Resonance Imaging
GABA	Gamma Amino
GFI	Goodness of Fit Index
IL	Interlanguage
IDs	Individual Differences
IP	Input Processing
KMO	Kaiser-Meyer-Olkin measure of sampling adequacy
LAD	Language Acquisition Device
L2	Second language
OCSI	Oral Communication Strategy Inventory
OFC	Orbito Frontal Cortex
QPT	Quick Placement Test
RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Model
SILL	Strategy Inventory Language Learning
SCT	SocioCultural Theory
SILL	Strategy Inventory for Language Learning
SLA	Second Language Acquisition
SORS	Survey of Reading Strategy
STG	Superior Temporal Gyri
TMS	Transcranial Magentic Stimulation
WTC	Willingness to Communicate

INTRODUCTION

“...every learner requires first and foremost: to be noticed, to be attended to, to be valued, to be affirmed. Out of that attention and affirmation grow the confidence and, yes, the courage to learn: if the teacher dares to teach, that is, to attend to and care for the learners, then the learners in turn can dare to learn”.
(Whitaker, 1995)

Learning a second language at an adult stage has been of major concern by researchers of different fields such as psychology, linguistics, and sociology, due to its complexity and multifaceted characteristics. Adults start learning a second language once their cognitive development has been completed and with an *emotional baggage* that complicates their own second language learning process.

In the last decades, there have been several attempts to understand the process by which adults develop language learning strategies in order to be more proficient in the L2. Besides, in the last years, research has focused on studying the neuronal connections and the plasticity of the brain that occur during the L2 learning process. These investigations have resulted into a new field of research (Dynamic Systems Theory - DST), which combines the analysis of data extracted from students' language learning strategies instruments, affective motivational variable instruments, neurophysiological tests and personal interviews. The compilation of this information provides a holistic view of adult second language learning process and development and enables researchers to understand better the intertwined process that entails learning a second language at an adult stage.

As an English teacher of adults during 10 years, I have observed how learners struggle to understand and learn English, facing several linguistic, neurological and psychological obstacles. Thus, adult learners use several resources in order to overcome the difficulties of learning English as a second language. For example, they use a variety of language learning strategies related to reading, writing, speaking and listening skills. Besides, these students take advantage of their L1 language in an attempt to fill the gaps existing between both languages. However, adult learners present multiple affective

motivational variables, such as motivation, anxiety, attributions, and self-concept among others, that hamper their ability to be more efficient in the L2.

The aim of this thesis is to analyse the affective motivational variables that affect students' language learning process and development. Thus, we want to analyse the affective variables that are often unseen in the learning process, which, in contrast, play an important role in the complex process of learning a second language at an adult stage. The specific objectives of this study are following:

1. Firstly, to study the interaction of language learning proficiency and the affective variables according to student's language level.
2. Secondly, to analyse the oral communication and reading strategies used by adult second language learners.
3. Thirdly, to analyse the relationship between the different affective variables such as motivation, anxiety, self-esteem, self-concept, and attributional variables and adult second language learning strategies.

Overview of the Thesis

This thesis is structured in five main chapters.

Chapter one is divided in three parts: the first part explains the neurological basis of L1 and L2 learning; the second part defines the scope of Second Language Acquisition (further SLA) theories from the linguistic, the psychological, the sociocultural, and the neurolinguistic approaches, and other new theories concerning second language learning research, such as the Dynamic Systems Theory (DST). Chapter two explains the concept of emotion and the models regarding the emotional field. It also describes the relation between emotion and SLA, focusing on the main affective motivational variables that have been considered in the research part of this thesis (motivation, anxiety, self-concept, and attributions) and the language learning strategies that students use during language learning process. It also provides research that has been conducted in both affective and language learning variables. Chapter three shows the research design, introducing the sample collected, the methods and instruments used and it also describes the procedure developed to carry out the analysis of the data collected. Chapter four presents the main research questions of this thesis and the results obtained for each of the instruments analysed. This

chapter presents statistical analyses, which are divided in three parts. Firstly, we analyse the relation between the language learning instruments and the levels of English (A1-B2). Secondly, we analyse the relation between the affective motivational variables and the levels of English (A1-B2). Finally, we examine the relation between affective motivational variables and the language learning instruments via a structural equation modelling (SEM). The conclusion of this study is presented in Chapter five, which presents a discussion of the main results found in the previous chapter, and it also explains the limitations of this work and the future lines of research.

Significance of the Research

The contributions made with this research root amongst the following ideas:

1. - Ecological validity of the study: the study gathers a heterogeneous sample that covers all layers of society in terms of age, social background and social status. The study has been carried out in two EOIs (Escuela Oficial de Idiomas.- Official School of Languages) in Comunidad Valenciana, which confers a holistic view of the problematic situation that Spanish adult learners face when learning English as a Second Language.
2. - The study attempts to combine several affective variables instead of studying these variables in isolation. This is very important in order to understand that several factors intervene in the process of learning a second language at an adult stage.
3. - The affective variables will be observed in comparison with levels of performance in different language learning skills (reading, speaking and general skills knowledge) and different levels of language proficiency.
4. - Several methodological conclusions will be drawn after the analysis of the data has been done, which will contribute to understand better adult second language development and ultimate attainment in the L2.

CHAPTER ONE

1. LITERATURE REVIEW

- 1.1. Introduction
- 1.2. First Part: Language and the Brain: A biological Approach
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1. LITERATURE REVIEW

“It is the theory that decides what we can observe” (Albert Einstein)

1.1. Introduction

This chapter reviews the approaches and theories that had already been developed in the field of SLA affective variables, and the new promising theories that will shed light on the complex framework of SLA research from both linguistic and psychological points of view.

There have been many controversies surrounding the study of SLA during the last 20 years, as several theories and hypothesis have tried to tackle the multifaceted phenomenon that implies learning a second language at an adult stage. SLA research addresses the following question: How are second languages learned? Scholars approach the field from a wide range of disciplines including sociology, psychology, education, and linguistics. This is the reason why the field of SLA has an interdisciplinary basis, which has both advantages and disadvantages. The advantage is that through different perspectives, we are able to further understand the complexity of the process of learning a second language, as it entails several factors related to the previously mentioned disciplines. However, multiple perspectives can lead to confusing concepts over the same matter; this is because each discipline explains its theories and frameworks based on its own research and methodologies. Despite the many disciplines that are involved in SLA development and learning, I have based my study on two main disciplines, the linguistic and the psychological view. A terminological and methodological unification of both disciplines may be possible through a common construct. However, linguistics bases its construct on the language itself (metalanguage) and this may complicate the whole understanding of SLA processes and developments from a common discipline.

This study focuses on the emotional variables of SLA process, considering the varied and entangled affective motivational variables that intervene in the process. Consequently, these affective variables create a difficult scenario to understand the Second language learning development at an adult stage. The aim of this chapter is to provide a

literature review on the main theories of SLA from a linguistic and psychological perspective, in order to identify how students perceive their own language learning process and how affective variables may interfere positively and negatively in this process.

This chapter is structured in two main parts:

The first part will be devoted to a biological approach of the brain and its main areas within language processing. Furthermore, we will describe the cognitive pattern that is developed in the first language (L1) acquisition process, and finally we will analyse the paths that learners follow whilst developing and processing L2, trying to establish differences and similarities between both L1 and L2.

Secondly, a review of the main theories that have contributed over the years to the study of second language acquisition (SLA) will be presented, mainly focusing on the linguistic and the psychological point of view. Other contributions made by sociolinguistics and neuroscience framework will be described in this section, and the new Dynamic Systems Theory in the field of SLA will be presented. This theory has been devised as a new framework to offer a full comprehensive construct that can account for the complexity of second language acquisition, development and learning.

1.2. First Part: Language and the Brain- A biological approach.

The twenty-first century is going to be the century of the brain (Hulstijn 2002: 214)

The brain is a special organ which weighs 1.2kg, and it contains 100 billion nerve cells; these cells are interconnected by trillions of transmission points. According to Murre (2005) the brain has a storage capacity of 10 terabytes of information.

The largest part of the brain and the most important for cognitive function is the cerebrum. The cerebrum is composed of two hemispheres; each hemisphere can be divided into four lobes: the frontal, temporal, parietal, and occipital. The central sulcus divides parietal lobes from frontal lobes, and also separates temporal lobes from frontal and parietal areas (see Figure 1).

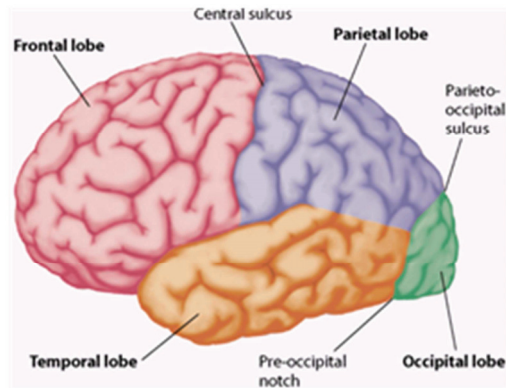


Figure 1. Cerebral Cortex lobes
Extracted from Psicología General. Terapia Ocupacional

Additionally, each hemisphere contains multiple smaller anatomical structures known as gyri (singular:gyrus) and sulci (singular:sulcus). The gyri are the plateaus on the convoluted surface of the brain, and the sulci are the valleys and canyons that lie between them. These areas are found in specific parts of the brain, such as the inferior frontal gyrus, or the superior temporal sulcus. The naming of these specific areas is important when referring to the different regions of the brain. Some areas of the brain which are named under gyri and sulci contain terms like “superior” or “inferior” that are used to refer to different directions of the brain. For example, the superior temporal gyrus is located above the middle temporal gyrus. Additionally, lateral means towards the outside of the brain on both sides, whereas medial means towards the middle of the brain on each side, in other words towards the place where both hemispheres meet. Finally, the term ventral refers to the bottom of the brain, and dorsal to the top of the brain.

Each cerebral hemisphere is covered with cortex. The cerebral cortex contains neurons, which are cell bodies made of nerve cells. The primary cortex has simpler functions such as vision, hearing, and somatic feelings. Moreover, the association cortices produce more complex functions, which are mainly developed in the prefrontal cortex, the frontal lobe, areas in the posterior parietal lobe, the temporal lobe and the anterior part of the occipital lobes. These areas develop more complex cortical functions such as synthesis of movement, memory, language, abstraction, creativity, judgement, emotion and attention.

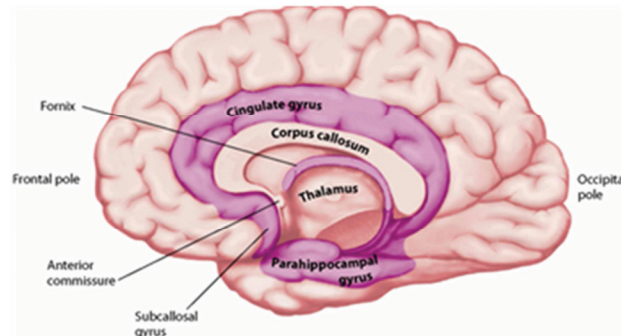


Figure 2. Brain Areas

Extracted from *Psicología General. Terapia Ocupacional. UGR Prof. Eduardo Madrid*

Some of the major functional features of subcortical structures in the brain are (Ahlsén, 2006):

- Frontal lobes: these areas are responsible for planning and movement execution. Sub-areas inside the frontal lobes are, such as the primary motor areas, planification areas, and areas of central executive, memory and cognitive control.
- Parietal lobes: these areas are responsible for somatosensory perception.
- Occipital lobes: these areas are responsible for regulating visual perception.
- Temporal lobes: these areas are responsible for auditory perception, where the auditory cortex is found inside the sylvian fissure.
- Anterior parts: these areas are more active, productive.
- Posterior parietal regions: these areas are more receptive, analytical.
- Limbic system: (Figure 2) this area covers the cingulate gyrus, corpus callosum, the hippocampus, thalamus, hypothalamus, and basal ganglia. The limbic takes part in emotional processing, long-term memory, and arousal.

1.2.1. Neural Areas related to Language Learning

The question that arises now is, what are the anatomical structures, regions, brain networks, or other biological substrates that play a role in language acquisition, development or learning? In order to understand the areas that intervene in language learning, functional anatomy has largely examined areas and functions involved in language. The main areas involved in the most important aspects of language learning will be described in this section.

According to Schumann's (2004a) description of brain areas related to language functions, *Motivation* is found in the amygdala, nucleus accumbens and orbitofrontal cortex (OFC). The amygdala regulates memory and emotional reactions; the nucleus accumbens, involves reward, pleasure, laughter, addiction, aggression, fear and placebo effects; whilst the orbitofrontal cortex (OFC) regulates cognitive and decision making (located in Brodman's area). Thus, motivation is the result of the brain's reward system. The amygdala is found in both hemispheres, it is located in the temporal lobes and it is responsible for emotional memory and stimulus appraisal, therefore the appraisal system activates emotional and motivational behaviours. The stimulus appraisal evaluates the emotional relevance and motivational significance of stimulus events when information is gathered in category memory based on past experience. (Schumann & Wood, 2004b). The appraisal generates emotions such as joy, happiness, fear, anger, and shame (Gehm & Scherer, 1988). These emotions lead to action tendencies (Frijda, 1987; Frijda, Knipers, & ter Schure, 1989) such as the readiness to undergo mental or motor behaviours related to specific stimulus. Chapter number two will explain the relation between stimulus appraisal and cognition, which is considered as the emotional/affective axis of language acquisition.

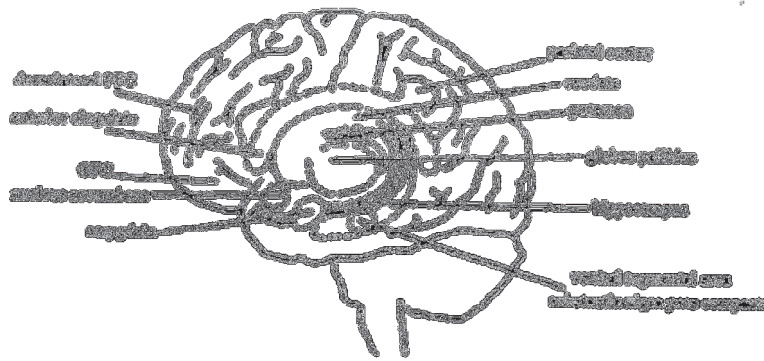


Figure 3. Brain areas involved in language learning. *Extracted from Schumann (2004a).*

The hippocampus is a structure found in the limbic system and it is responsible for memory storage. The larger hippocampal system is involved in spatial navigation and in marking emotionally significant experiences, as well as in goal-guided control of behaviour, episodic and declarative memory encoding and retrieval, and in slow-wave sleep (SWS) memory consolidation (Baars & Cage, 2010).

From a functional perspective, there are two types of memory: the declarative (or explicit) memory and the non-declarative (or implicit) memory. The former can be subclassified into semantic memory, related to past events or experiences, including relevant temporal and spatial details of those events. Declarative memory is found in the hippocampus, whose plasticity may be an important part of the system's capacity for foreign language acquisition (Davis & Gaskell, 2009), as well as for memory consolidation, which is achieved through interaction between various areas in the neocortex and the hippocampus. It is important to highlight that the hippocampus is involved in the memory processes that link conceptual meaning to particular sounds or signs during vocabulary acquisition (Breitenstein et al., 2005; Davis & Gaskell, 2009). Non-declarative memory (implicit) can be classified into conditioning, procedural memory, and priming. Non-declarative memories are promoted by the hippocampal and the basal ganglia systems. Procedural memory, largely supported by the basal ganglia, is found in the caudate, the putamen, and the globus pallidus. The caudate is located in the

basal ganglia and controls learning and memory, the putamen controls body movement, and the globus pallidus regulates controlled movement.

The dorsolateral prefrontal cortex, the parietal cortex and the anterior cingulate control attention. Attention is the cognitive mechanism that controls access to consciousness (Schmidt, 2001). Thus, it refers to a variety of mechanisms or subsystems, including alertness, orientation, detection, facilitation, and inhibition. Robinson (2003) highlights three elements regarding attention: 1) auditory and visual formation intake and processing; 2) central control and decision-making functions (allocation of attention to competing tasks demands and automatization); 3) response execution and monitoring via sustained attention.

In terms of the *sensory-motor aspects* of language, researchers (Davis & Gaskell, 2009; Demonet et al. 2005; Hickok & Poeppel, 2007; Price, 2010) highlight specific areas such as the left inferior frontal gyrus (IFG), the left middle frontal gyrus (MFG), which is involved in planning and control of articulatory processes (Hickok & Poeppel, 2007), and the superior temporal gyri (STG), which is involved in acoustic–phonetic processes, such as spectrotemporal analysis. The premotor cortex is involved in language processing, and it specifically plays a role in planning, semantic processes and categorization (Fadiga et al., 2002; Martin & Chao, 2001)

Two of the most well-known and related areas that are significant in L2 acquisition are *Broca's area* and *Wernicke's area*. These two regions are certainly related to language processing because Broca's area is part of the motor system and Wernicke's area is part of the auditory system. Broca's area plays an important role in syntactic processing, however it is not the only area in charge of syntactic processing, both anterior and posterior portions of the temporal lobe, especially in the left hemisphere are also related to this function. Finally, two other subcortical structures often related to language are the basal ganglia and the hippocampus, involved in important functions from motor control to memory. Additionally, several neurotransmitters take part in language learning. Neurotransmitters convey signals from one neuron to another, by producing or suppressing electrical signals in nearby neurons, that are specifically sensitive to particular neurotransmitters (O'Shea, 2005).

For example, dopamine plays an important role in motivation. Schumann (1997, 2001a, 2001b) showed that the neurotransmitter dopamine could affect the behaviour of a second language learner. The dopaminergic system is pivotal for the appraisal and motivation that drives a learner to seek to improve or to abandon the language learning process. Thus, there is a relation among the cortico-basal ganglia neurons, which are connected to the dopamine. These neurons either facilitate or diminish motivation, which in turn will produce or execute the L2. Acetylcholine mediates attention and conscious arousal (walking and alertness) in all sensory systems, and it also acts across the CNS (central nervous system) in the memory circuitry and reward. Also, GABA (gamma-aminobutyric acid) is the most common inhibitory transmitter and plays an important role in motor control, working memory and other cortical functions. Finally, the glutamate, the most common excitatory transmitter, is key in anxiety processes.

It is important to highlight that no part of the brain acts independently, but the brain is made up of structural networks that work together to execute actions. In the following part, the two main trends that arise from the analysis of brain areas and language processing will be presented.

1.2.2. Functional anatomy of the brain areas- Different perspectives

One vital question in the study of language is whether different language functions depend on distinct or common cognitive substrates. For example Dörnyei (2005) proposes that there are arguments for and against a functional anatomy of the brain.

On the one hand, Pulvermüller (2002) states, firstly, that the human brain provides the mechanisms for the language to be produced; and secondly, that there is no doubt that brain mechanisms are organized by nerve cells and mutual synaptic connections. Ullman (2006) also considers that if a part of the brain is damaged, and the person no longer has the capability to do certain things, it is therefore presumed that the lost functions depended on the damaged parts of the brain. Besides, the fact of localising the motor system of the brain in Broca's area and the auditory system in Wernicke's area, supports the theory of domain-specificity of brain areas.

On the other hand, Dörnyei (2005) references several authors, who explain that there are arguments against domain-specific areas in the brain. In other words, new technological advances have proved that not only one area of the brain is in charge of a language function or execution, but also several areas are activated at the same time. Vigneau et al. (2006) identified in their study 700 regions of peak activity in the left hemisphere associated with phonology, semantics, and text/sentence processing. Thus, the authors concluded that “there is a large-scale architecture network rather than modular organization of language in the left-hemisphere” (p.1414). Other scholars such as Baars and Coge (2010), and Uttal (2001) conclude that for some high-cognitive functions, certain parts of the neuron system are heavily interconnected and therefore cannot be isolated in functional modules.

1.2.3. First Language Acquisition

L1 acquisition usually starts from the age of three; it is learned subconsciously in a naturalistic environment. Children possess an innate capacity to learn language. They acquire an impressive amount of language in a comparatively short time with hardly any tuition and remarkable commonality (Shatz, 2007).

Gleason (2005) claims that around the same time that infants take their first steps, they also produce their first words. This happens at the age of 12 months approximately, and the speech production and perception timeline up to this point seems to be quite universal. Tomasello (2003) adds that the last few months of children’s first year of life is also the time for developing certain language-specific social-cognitive skills related to reading and categorizing. Thus, by the end of the first year, children are able to understand perfectly their native language, and by the time they are 3-4 they are able to command basic linguistic systems.

1.2.3.1. L1 acquisition stages

According to Gass and Selinker (2008) children start to shape language at the age of six months, when they are able to produce consonant-vowel sequences; then, children start to use words instead of babbling chunks, this is called the *one-word stage*, because there is no word combination yet. Children use words to refer to objects, to express grammatical functions such as commands, or requirements, and they can also use words to express basic social conventions, such as *bye* or *hi*. After several months in the one-word stage, children start to combine words (usually at around two years of age). At this stage it is very typical that children use content words, such as nouns or verbs. However, function words such as articles, prepositions and grammatical endings are not yet articulated.

In addition, children use intonation in order to express meaning, at an early stage they start to distinguish the nature of the sound systems they hear. Thus, even before they have grammatical knowledge they can use the appropriate stress and intonation functions of their language to distinguish among questions, statements, or commands.

According to Gass and Selinker (2008), there are certain conclusions that can be drawn from learning the first language:

- Children go through similar developmental stages to L2 acquisition, although not necessarily at the same rate.
- Children create systematicity in their language and develop rules to command their language knowledge and use.
- The rules developed by children are not necessarily the same as the ones developed by adults in L2.
- The process of learning the L1 does not include overgeneralization of grammatical morphemes.
- There are processing constraints that govern acquisition and language use.
- Correction at this age does not always work.
- Language acquisition is not related to intelligence.

1.2.3.2. Nature vs. nurture

There is a great dichotomy in order to explain infants' capability to learn the L1. The question is how much, language knowledge, if any, do children bring to the learning process, and whether the learning mechanisms they apply are *domain-specific* (dedicated to language processing) or *domain-independent* (non-language specific general learning capacities). Both approaches attempt to explain what is learned (rules and representations, associations or both) and how it is learned, but they differ in scope, methods and assumptions. The first view is called the nativist approach, associated with the "Universal Grammar" within a generative linguistic framework. The second view is labelled as non-nativist, which claims that L1 competence fully emerges during development as infants apply general cognitive mechanisms to processing language input. These approaches will be explained in detail later in this chapter.

1.2.4. Second Language Acquisition

The genesis of SLA goes back to 1960s and 1970s with the publication of Corder (1967) "The significance of Learner's Errors" and Selinker (1972) "Interlanguage". These and other studies provide the initial framework to argue that not all learnt in L2 was inherited/ seen through the lenses of L1 acquisition processes.

A definition of SLA by Dutch scholars states that: "the field of Second Language Acquisition research focuses on how languages are learnt" (de Bot, Lowie, & Verspoor, 2007, p. 3).

Second language acquisition refers to the learner's process of learning a new language other than their L1. Gass and Selinker (2008) define SLA as "the study of how learners create a new language system" (p.1). However SLA research calls for a multifaceted research, which is sometimes difficult to define, as it implies a series of biological, psychological, sociological and linguistic features that together intervene in the process of learning a new language at an adult stage.

Two factors that have been identified as having a particular effect on the neural representation of languages are the age of L2 acquisition and the level of L2 proficiency (e.g. Meschyan & Hernandez, 2006; Abutalebi, Capa, & Perani, 2005).

The age at which the second language is acquired is thought to have an impact on the level of proficiency attained and the rate of learning. Generally, individuals who learn a language after a certain age do not reach the same degree of proficiency compared to young learners (Birdsong, 1992, 1999; Hakuta, Bialystok, & Wiley, 2003). Overall, the age of 6–7 years tends to be the cut-off point to determine “early” versus “late” second language acquisition (Dehaene et al., 1997; Zevin & Seidenberg, 2002).

However, recent investigations on language-related brain areas regarding second language learning (Martesson et al., 2012), confirm that structural changes in brain regions are responsible for some language functions during second language acquisition. Draganski et al. (2004) also confirmed that acquiring sensorimotor skills and conceptual knowledge in adulthood, alters the human brain’s gray matter structure, suggesting that adult foreign-language learning may lead to an increase of the gray matter volume in brain regions involved in language learning. The left inferior parietal lobe has rapid cortico-cortical connections to the STG (superior temporal gyri) and slower connections to the hippocampus, and may be involved in the phonological aspect of lexical items (Davis & Gaskell, 2009; Gaskell & Marslen-Wilson, 1997). Additional correlational is supported by a study of English-speaking exchange students who learned German in Switzerland (Stein et al., 2010).

1.2.5. Theories of L1 and L2 acquisition

Abutalebi (2008) mentions that during the early stages of L2 acquisition there may be a dependency on L1 to mediate access to the meaning of L2 lexical items (Kroll & Stewart, 1994). This is hypothesized to occur because L2 words are generally acquired with reference to existing L1 concepts (i.e., L2 is mediated through L1 translation while L1 is concept-mediated). It is also thought that increasing L2 proficiency reduces dependency on L1, thus higher levels of proficiency in L2 produce lexical-semantic mental representations that may be similar to those constructed in L1; according to Green’s ‘Convergence Hypothesis’ (2003), many of the qualitative differences between native and L2 speakers may disappear as proficiency increases (Abutalebi, 2008). Thus according to Ullman (2001) L1 is acquired implicitly and it is conditioned by an innate language learning mechanism, which is only triggered during critical period. However, an L2 is

generally acquired explicitly via formal instruction and, hence, grammatical knowledge for L2 may not be processed through the neural structures related to implicit processing such as Broca's area and the basal ganglia, as is the case for L1 grammar.

Ullman's hypothesis (2001) Declarative/ Procedural model (2001) states that acquiring L2 grammar in adulthood does not rely on the same brain structures (i.e. the fronto-striatal network) that are used in the native language. Thus, the acquisition of the L2 arises in the context of an already specified or partially specified language system (L1), which provides to the L2 system convergent neural representation of the native language (Green, 2003).

Other theories support the notion that the same structures form the basis of the acquisition of L1 and L2. Opitz and Friederici (2004) used fMRI to investigate the acquisition of language-like rules in an artificial language; increased proficiency for the artificial language was associated with increased recruitment of Broca's area. Abulatebi (2008) remarks on several studies that have been carried out with bilinguals, which contradict the predictions of the Declarative/Procedural model (Ullman 2001; Ullman 2004). Most of these studies show that overall both low and high proficiency bilinguals engage the same neural structures responsible for grammatical processing in L2, as they do for L1 (for a review of ERPs studies focusing on L2 acquisition, see Osterhout, McLaughlin, Pitkanen, Frenck-Mestre, & Molinaro, 2006).

According to Dörnyei (2009a), there are several differences and similarities between first and second language acquisition. These are detailed below:

- *Differences in success*: It is claimed that one of the most obvious differences between L1 and L2 attainment is the level of proficiency achieved. Thus, while L1 speakers attain native condition, L2 learners hardly ever reach the native ultimate stage. However, recent studies on neural plasticity have shown that in contrast to predictions of the critical period hypothesis and even if it occurs late in adulthood, L2 learning leads to both behavioural and neural changes that may approximate the patterns of native or first language (L1) (see reviews in Abutalebi, Cappa, & Perani, 2005; Costa & Sebastian-Gallés, 2014; Hernandez, 2013; Indefrey, 2006; Li & Tokowicz, 2012; van Hell & Tokowicz, 2010). Obviously, changes in some anatomical structures of the brain may not lead the learner to perform the second language as a native, but if there is sufficient,

consistent and long-term stimulation from the L2 across an extended period of the lifespan, brain changes will likely foster performance abilities that may resemble the skills used by native speakers, and in some exceptional cases, it may excel the average level of nativeness (Li, Legault & Litcofsky, 2014).

- *Automatic vs. Non-automatic learning process:* L1 learning process is automatic. The learner does not depend on motivation in order to be successful at L1 attainment, as this is done subconsciously and automatically. However L2 learners depend highly on motivation and other affective variables.
- *Homogeneous vs. Heterogeneous development:* L1 is learnt in a more homogeneous way as infants develop some cognitive structures that lead to L1 proficiency. Besides, this development in infants is accompanied by different rates of brain maturation and myelination in different regions, which constrain cognitive functions (Casey et al. 2000; Uylings 2006). In the case of the L2 learning process, there are many distinct aspects, other than physiological features, that are more specific to each language learner.
- *Knowledge of the language and knowledge of the environment:* children make use of the whole world while they develop other cognitive functions in parallel with language (Diamond, 2002). In contrast, L2 is learnt irrespective to the real environment of the L2, which inevitably affects the learning process.
- *Identity of the language usage:* L1 learners develop their own identity at the same time as they develop language. Thus, learning the L1 implies belonging to a social group and feeling identified in the group; whereas on the contrary, L2 learners already have their own L1 identity and must add a new one in order to feel strong enough to use the L2. In this sense, the *acculturation level* described by Boski (2008; based on Schumann's Acculturation Model, 1978; Schumann, 1986) refers to a degree of socio-cultural and linguistic integration which the L2 learner must follow in the host country.
- *Pre-existing L1 knowledge:* when infants learn the L1 they don't have any pre-existing linguistic knowledge of the language, whereas L2 learning is built on a pre-existing L1 knowledge. The prior knowledge of L1 is responsible for the transfer from L1 to L2 during second language development. Second language learners also possess real-world knowledge, in their initial stage, whereas infants

lack this real-world knowledge when they learn L1. Other pragmatic functions of language have already been learnt by L2 learners in their L1 development, such as requesting, commanding, promising, and apologising, which are not present in the L1 initial state. The pre-existing knowledge also gives rise to intermediate stages of learning, such as the development of interlanguage or L2 fossilisation.

- *Language input and the amount of exposure*: both quality and quantity of L1 exposure is more than L2 exposure. Unlike in L1 acquisition, the scaffolding of interlocutors is not guaranteed in SLA. Thus, L1 learners' knowledge of language goes beyond what could be learned from the input they receive.
- *Implicit learning versus explicit learning*: It is presumed that L1 acquisition relies on efficient implicit learning, which then shifts at some point in our lives to less-than-efficient explicit learning that characterises SLA. DeKeyser (2000) argued that, while infants develop their learning implicitly, using domain-specific mechanisms, L2 learners develop explicit learning, using problem-solving or domain general mechanisms.

In summary, despite the trends for and against L1 and L2 language learning, the fact is that second language acquisition takes place after complete cognitive biological development. Consequently, adults need to take much more advantage of other strategies in order to compensate for their own cognitive limitations as well as for the external factors such as, the classroom context, the input received, the time of exposure to L2, and the feedback given by the teacher to the students in communicative situations.

1.2.6. Neurological considerations regarding language learning

There is an attempt to explain the difference between first and second language acquisition through lateralisation in the brain. Steinberg (1997) explains lateralization as follows:

The brain assigns, as it were, certain structures and functions to certain hemispheres of the brain. Language, logical and analytical operations, as well as higher mathematics, for example, generally occur in the left hemisphere of the brain, while the right hemisphere is superior at recognising emotions, recognising faces and taking in the structures of

things globally without analysis. This separation of structure and function in the hemispheres is technically referred to as lateralization. (p. 179)

Scovel (1969, in Brown, 1994) explains that there is a relationship between lateralisation and second language acquisition. Scovel suggests that the plasticity of the brain before puberty enables first and second language acquisition to take place easily. After puberty, the brain loses its plasticity and lateralisation is accomplished. He argues that lateralisation makes it difficult for people to be able to easily acquire fluent control of the second language or native-like pronunciation ever again.

There is a counter argument related to the cognitive development of the brain. Cognitively, this lateralisation enables the person to reach the capability of abstraction, of formal thinking, and of direct perception which start from puberty onwards. This shows that adults possess superior cognitive capacity due to left hemisphere dominance. It is difficult to know why some adults achieve native-like competency, but some researchers claim affective variables play an important part in language learning.

Investigations on SLA agree that L2 learners follow a predictable path in the acquisition process, which is irrespective of their L1 aptitude, context of acquisition, and the level of ultimate attainment that characterizes adult language learning. As a result, learners' individual differences may vary the outcome of L2 language learning. The spectrum in which adult second language learners attain a proficient level in L2 is considerably wide and varied, formed by two main aspects.

On the one hand, there are the external factors that affect the language acquisition process. The external factors do not entirely depend on the learner control. For example, the learners' interaction, which occurs in a classroom context, is an external situation where learners interact with other students in order to negotiate meaning; this kind of interaction is called the Interaction Hypothesis (Gass, 1997, 2003; Long, 1996; Pica, 1994), which explains that second language development occurs when learners interact with other speakers. Besides, other external factors that may influence the second language development are: the input received by the teacher, the time of exposure to L2, and the feedback given by the teacher to students' communicative efforts.

On the other hand, the internal factors, also called Individual differences (IDs) implied in SLA, have been subject of too many controversies, as they are really difficult to

measure and investigate due to their subject interpretation and quantification. According to Dörnyei (2005) Individual Differences in psychology correspond to personality and intelligence (see e.g., Birch & Hayward, 1994; Eysenck, 1994; Snow, Corno, & Jackson, 1996). However, the term is more broadly understood. The International Society for the Study of Individual Differences includes a set of characteristics regarding individual differences, such as temperament, intelligence, attitudes, and abilities as the main focus areas. Besides, Cooper (2002) highlights four main branches of IDs: abilities, personality, mood, and motivation (cited in Dörnyei, 2005).

Among all the variables cited above, two of the most studied variables in the area of emotions are motivation and language learning anxiety. These factors are framed under the wide scope of emotions affecting the self language learning process (Schumann, 1997). These internal factors cover a wide spectrum of individual differences seen from different perspectives by linguists, psychologists, sociologists, socio-psychologists and anthropologists. However, despite these varying perspectives, factors such as age, sex, motivation, anxiety, attitude, and personality, have a great effect on the acquisition of an L2 and should be truly considered in adult second language learning and development.

In conclusion, SLA is a complex process, which implies many interrelated factors, belonging both to the learner and to the learning situation. The term second language acquisition refers to any language learnt naturally or instructed after mother tongue language is acquired. It is a general concept that embraces both untutored and tutored acquisition. Thus SLA has emerged as a field of study mainly within linguistics and psychology in order to cope with the multidisciplinary factors that intervene in the process.

1.3. Second Part: Main theories on SLA

The relationship between psychology and linguistics has been a curious one (Segalowitz 2001:3)

The study of SLA has been researched for many centuries, but it is only since the 1960s that scholars have formulated systematic theories and models to give responses to the process of second language learning. There have been important theoretical

frameworks that have attempted to explain the different aspects involved in the process of second language learning.

Language acquisition has been studied from two main perspectives: linguistics and psychology. Thus, language acquisition is closely related to linguistic theories, because linguistics is focused on a wide range of metalinguistic elements that are vital to understand the process of language learning. However, as language is more than a mere communication code or a cognitive linguistic system, it has also been researched from the field of psychology, which studies language learning as a human interaction activity from the most basic to the most profound act of socialization. Lightbown and Spada (2006) state that language is “one of the most impressive and fascinating aspects of human development”.

Broadly speaking, psychology has influenced SLA theory from two main aspects: 1) research on the brain in cognitive psychology, psycholinguistics, neuropsychology, and cognitive neuroscience; and 2) extensive research carried out on first language (L1) acquisition, which was traditionally studied by developmental linguistics. On the one hand, psychologists have focused on the mental processes and structures that people process, understand, store and remember in order to acquire language with little concern for the subtle linguistic patterns of the linguistic code. On the other hand, linguists have tried to study the mental representations of language, looking for patterns and rules of the language system, without any concern for neurological validity. Thus, Segalowitz (2001) remarks that both fields had a common research during the 1960s however these disciplines never ended to achieve the same objectives.

The breach between psychological and linguistic approaches has also been apparent within the field of applied linguistics. Skehan (1998) states that “Psycholinguistics, the study of the psychological processes underlying language learning and use, has been insufficiently influential on our profession as a foundation discipline, losing out on importance to linguistics and sociolinguistics” (p.1). Despite the fact that applied linguistics is still characterised by a dominant linguistic orientation, in the last decade there has been a profound transformation of the two disciplines. The gradual convergence of both linguistics and psychology has led to the emergence of cognitive

neuroscience as a new academic theory that could account for the existing gap between both disciplines in the field of second language acquisition research.

1.3.1. Linguistic Approaches to SLA

Linguistic approaches are concerned with the differences and similarities among the languages mainly focusing on: the linguistic competence (underlying knowledge) and the linguistic performance (language production) of learners at various stages of acquisition. The linguistic framework has its main construct in Transformational Generative Grammar (Chomsky, 1957, 1965). This framework had a deep impact on the study of first and second language acquisition. Chomsky rejected behaviourist beliefs about learning via stimulus-response-reinforcement methods, and stated that there is an innate capacity to learn any language which is biologically endowed. Further research gave rise to the concept of Universal Grammar that compiles the general principles and constraints found in all languages.

Before Chomsky's revolution

Structuralism was the linguistic model through the 1950s, which has its origins in Saussure, who considers language as a system with several elements that are interrelated and interdependent among each other. Structuralism evolved in language studies by examining the different levels of production in speech: phonology (sound systems), morphology (composition of words), syntax (grammatical relationships of elements in a sentence), semantics (meaning of words), and lexicon (vocabulary). According to Structural Linguistics, language is seen as a series of building blocks, beginning from the sound system all the way to the sentence. Thus language is considered as a set of predictable patterns. The goal of structural linguistics was entirely descriptive; it blended easily with behaviourism, which viewed learning as the acquisition of a discrete set of behaviours.

In the field of SLA, transfer is seen as a way of learning the L2. Transfer was said to occur when habits from the L1 were used in an attempt to produce L2. In this sense, the linguistic framework of Contrastive Analysis (CA) determined whether transfer was positive or negative for learning; it compared languages, structure by structure and sound

by sound, in order to predict learner difficulty. If languages were similar there would be a positive transfer, if two languages were different there would be a negative transfer resulting in learner difficulty and error. The main tenants of this approach were:

- L1 was the source of learner difficulty and error.
- Difference was related to difficulty: L1 and L2 differ slightly, little difficulty was expected; if they were too different, more errors were expected.
- Language teaching was based on: provision of correct models, frequent repetition without learner reflection, avoidance of error, and provision of appropriate feedback.

Lado formulated Contrastive Analysis Hypothesis (CAH) in 1957, based on Structuralism and Behaviorism. He attempted to explain that this approach tries to predict and explain the learner's problems based on the comparison of L1 and L2 in order to determine similarities and differences between both. The goal of CA was primarily pedagogical in nature, the intention was to increase efficiency in L2 teaching and testing. Lado (1957) with his pioneering work, "*Linguistics across Cultures*" presented his research trying to establish the problems that foreign language students would encounter in the learning process.

According to behaviourist psychology notions, early exponents of CA assumed that language learning involved habit formation in a process of Stimulus-Response-Reinforcement pattern (S-R-R). Through this process, transfer in learning was made from L1 to L2. Thus, positive transfer (or facilitating) is possible when the same structure is appropriate in both languages, whereas negative transfer (or interference) occurs when the L1 structure is used inappropriately in the L2.

With regard to negative transfer (or interference), there are two types noted in the literature: (Gass & Selinker, 2008):

- Retroactive inhibition: learning acts back on previously learned material, causing the learner to forget the information received (language loss).
- Proactive inhibition: a series of responses already learned tend to appear in situations where a new set is acquired. This is what usually happens in SLA because L2 is influenced, inhibited and/ or modified by L1.

Contrastive analysis is a way of comparing languages in order to determine potential errors for the ultimate purpose of isolating what needs to be learned and what does not need to be learned in a second-language-learning situation. As Lado detailed, one does a structure-by-structure comparison of the sound system, morphological system, syntactic system, and even the cultural system of two languages for the purpose of discovering similarities and differences. The ultimate goal is, then, to predict areas that will be either easy or difficult for learners.

Since even languages as closely related as German and English differ significantly in the form, meaning, and distribution of their grammatical structures, and since the learner tends to transfer the habits of his native language structure to the foreign language, we have here the major source of difficulty or ease in learning the structure of a foreign language. Those structures that are similar will be easy to learn because they will be transferred and may function satisfactorily in the foreign language. Those structures that are different will be difficult because when transferred they will not function satisfactorily in the foreign language and will therefore have to be changed (Lado, 1957, p. 59).

The pedagogical materials that resulted from contrastive analyses were based on a number of assumptions:

- Contrastive analysis is based on a linguistic theory that states that language is created by habit formation and therefore learning a language involves creating new habits.
- Native language or L1 is the major source of error in production and/or reception of a second language.
- One can account for errors by considering differences between the L1 and the L2.
- A basic principle of CAH is that the greater the differences, the more errors will occur.
- According to CAH learners should focus on learning the differences between the two languages, as the similarities do not account for new learning.
- Difficulty and ease in learning are determined respectively by differences and similarities between the two languages.

There were two positions developed in the field of Contrastive Analysis Hypothesis (CAH), the strong versus the weak. In the strong view, it was maintained that one could make predictions about learning and therefore successful language-teaching materials was based on a comparison between the two languages. The weak version analyses what learners do and the errors they make; thus it focuses on the errors on the basis of the native and the target language. This version focused its emphasis on the learner, the forms they produced and the strategies they used in order to attain their interlanguage (IL) forms. The criticisms against the strong version of contrastive analysis claim that the areas where the predictions were made were not carried out in actual learner production.

Behaviourist learning theory in CA attempted to attribute L2 success dependent on the relation between L1 and L2, and also based on the circumstances of learning, which promoted poor versus good habit formation. CA received many criticisms. First of all, it did not explain the logical problem of language learning (which implies how learners know more than they have heard or have been taught). Secondly, CA did not account for learner errors as it only considered the existing differences between L1 and L2 performance. Thirdly, a major limitation was found in application to teaching, as materials based on this approach are language-specific and unsuitable for use with speakers of different native languages. The fundamental difficulty of this theory is based on its underlying behaviouristic theory of learning, according to which all learning is repetition, and therefore a question of habit-formation (Jordan, 2004).

In the 1970s there was a great concern surrounding errors made by students when learning the language, Corder's (1967) essay "*The Significance of Errors*" shed light on how errors should be treated in the learning process. Corder claimed that errors provide evidence of the language system that a learner is using at a particular point in his/her language learning process, and also of the strategies or procedures the learner is using. Corder distinguished between input and intake, defining input as the language available from the environment, but intake as the language that actually makes its way into the learner's developing competence.

Selinker (1972) studied the transitional stages between L1 and L2 achievement, coining the term "Interlanguage" (IL) to refer to the interim state between the learner's

language and the target L2. He also posited two constructs in his theory, as taking part in the process of learning: transfer and fossilization. Selinker devised this concept as having the following characteristics:

- Systematic: IL is governed by the learner's internal grammar rules. The rules can be observed as the learner uses the language.
- Dynamic: the learners' system of rules changes continuously, resulting in a series of interim grammars. Selinker (1972) views this change as a discontinuous progression "from stable plateau to stable plateau" (p. 226).
- Variable: Although the IL is systematic, differences in context result in different patterns of language use.
- Reduced system of rules: the patterns of IL are less complex grammatical structures than target L2, both in form and also in function, as learners use of IL is significantly more basic and only responds to the learners' need of communication.

Selinker (1972) also stresses the differences between IL development in SLA and L1 acquisition of children, including different cognitive processes involved. SLA learners develop the following: (McLaughlin, 1987. p. 61)

- Language transfer from L1 to L2.
- Transfer of training, as the L2 learner is taught or tends to transfer L1 systems into L2 systems.
- Strategies of second language learning, which include L2 materials and didactic approaches.
- Overgeneralization of the target language linguistic material, L2 rules are learned and applied too broadly.

Furthermore, during the process of language learning and IL development, the L2 learner may encounter a fossilisation phase, which is understood as the probability that they will cease their IL development to a more L2 native-like stage. This phenomenon is related to age of learning, social identity, and communicative needs. The concept of IL is viewed as a system of language learning that continuously evolves from L1 to L2 target language. This construct has been highly productive in the study of SLA.

In the 1960s and 1970s a rejection against behavioural approaches to language learning was latent. Language learning research proved that learning a language was not possible through operant conditioning, due to the following reasons:

- Because the linguistic system was far too complex.
- Children were innately capable of learning the language.
- Children could interpret complex questions.
- Children acquired grammatical features in fixed orders without variation of the context or social environment.

As a result, neither Contrastive Analysis nor behaviourism could predict or explain learners' errors. Another called Creative Construction Hypothesis theory (Dulay & Burt, 1975) claimed that L2 was similarly learned as L1 acquisition. This theory explains that language learning is a creative process in which the learner makes subconscious hypotheses on the basis of input. The processing of input is, in turn, controlled by innate mechanisms, which also operate in L1 acquisition. This theory was the cornerstone of the Monitor Theory.

A great contribution was made during the 1980s, when Krashen developed the first theory specifically concerned with SLA, the Monitor Model Theory, which has its construct in the concept of language acquisition device (LAD). This concept is closely related to Chomsky's idea of childrens' innate knowledge of language. Krashen's (1975) approach is a collection of five hypotheses which attempt to explain that L2 code is learned via a process of interaction, through comprehension of the input to which students are exposed. However, his theory was criticised because of vague and imprecise in defining some of its constructs. The sub-hypotheses included in this model are following:

- *Acquisition-Learning hypothesis*: states that learning and acquiring are two separate ways of gaining knowledge. Acquisition is subconscious, and involves the innate language acquisition device (LAD), which accounts for childrens' L1. Acquisition takes place naturally and outside of awareness. Whereas, learning is conscious and it is mainly developed in a classroom setting. Besides, learning involves gaining explicit knowledge about language such as rules and patterns, which occurs when L2 is the object but not necessarily the medium of instruction. Thus, learning is conscious, arduous and undertaken intentionally.

- *Monitor Hypothesis*: the input learned is only available as a monitor, for of editing purposes or to make changes in the output.
- *Natural Order Hypothesis*: this is related to the predictable stages through which the learner passes in his/her acquisition process; which are independent of instructional sequences or even of the complexity of the structures which are later acquired. An example is the –s in 3rd sing in English, which is a struggle for students. This theory states that these regularities occur because language acquisition is guided by the innate language acquisition faculty. Thus, learners acquire the rules of language in a predictable order.
- *Input Hypothesis*: according to Krashen (1975) humans acquire language by receiving comprehensible input. The current level of learners' proficiency is considered "i"; the level beyond the current level of learner's proficiency is represented as "i+1". Input is represented as "i+1" to be the most valuable data for SLA. Thus, instruction is based on language production; learners need rich input combined with the power of the language acquisition faculty in order to successfully acquire language. Language acquisition takes place because there is comprehensible input, if the input is understood the necessary grammar is automatically provided.
- *Affective Filter Hypothesis*: Positive attitude towards the language learning is needed to access comprehensible output; a stressful environment raises the affective filter, blocking the learners' input. Input may not be processed if the affective filter is "up" (e.g. if conscious learning is taking place and/or individuals are inhibited).

This model had a major influence on language teaching in the USA in the 1980s and 1990s, mainly focusing on avoidance of the explicit teaching of grammar in the classroom. However, the tendency has shifted into the opposite direction, especially with adults, who benefit from explicit grammar structure teaching methods in the classroom.

Krashen's Model promoted nature versus nurture (Herschensohn & Young-Scholten, 2013), claiming that personality variables are linked to motivational variables under the Affective Filter. He also predicted that learners with an outgoing personality, high self-esteem, and low anxiety would be more successful in SLA (lower filter). A

research made by Ozanska-Ponikwia and Dewaele (2012) confirmed that low anxiety students would be more successful in SLA, however this study did not find a link between L2 motivation and personality (Dewaele, 2005), but in contrast it is likely that some personality traits make the learner more or less prone to experience language learning process in different ways. This model has been subject to criticism as it is proved to be incoherent when applied to “real” language classroom (Payne, 2011). Finally, other criticisms were pointed to language instruction. According to Krashen’s Input Hypothesis, formal instruction is not necessary as input is enough for SLA. Thus, acquisition occurs when learners have access to input and have low filter (i.e. anxiety is low), then optimal input is measured as $i+1$ input, or input with structures slightly beyond one’s current level of competence. In contrast to this idea, Herschensohn and Young-Scholten, (2013) argued that it is very difficult to measure optimal input following Krashen’s theories (1975). In conclusion, despite the contribution made by Krashen, his model has been criticised for lacking theoretical validity and being imprecise.

Chomsky’s revolution - Universal Grammar (UG)

Chomsky’s (1957) Universal Grammar hypothesis redirects much of SLA study to an internal focus. As mentioned before, the first linguistic framework with an internal focus is Transformational-Generative Grammar (Chomsky, 1957; 1965). This work revolutionised linguistic theory and had a profound effect on the study of both first and second language.

Chomsky’s theory states that there is a special mechanism called the language acquisition device (LAD) that is an innate domain-specific language faculty, which includes the universal grammar (UG). The UG is required for the child’s ability to acquire his or her native language. According to Chomsky, language is not viewed as speech to be used in real-time communication but as a set of formal properties inherent in any natural language grammar. Two main concepts are of central importance to Chomsky’s view. Firstly, the difference between linguistic competence and linguistic performance or pragmatic competence; the former is understood as the underlying knowledge of language mainly restricted to syntax; the latter is viewed as the speaker-hearers’ actual use of language in specific instances, although not in real-time situations. Secondly, the idea that

language learning goes beyond what could be learned from the input learners receive; this is known as the logical problem of language learning or the *poverty-of-the-stimulus paradox* (POS) (Chomsky, 1980). This paradox explains that learners acquire the language they observe from experience. During the 1980s a re-conceptualization of UG led to the Principles and Parameters Theory that thoroughly explained the general properties and the main parameters of all languages and the limited aspects that are particular for each language.

Three questions are of particular importance in the study of SLA from a UG perspective:

- What is the initial state?
- What is the nature of interlanguage, and how does it change over time?
- What is the final state in SLA?

In the initial state, when L2 acquisition begins, learners already have L1 command; this means that they have already made the parametric choices that are appropriate for learning the L1, guided by UG. Some L1 knowledge is clearly transferred to L2, although the exact features being transferred may be different depending on the relationship between L1 and L2. This transfer could be positive or negative, and as mentioned before, when the transfer is negative, it is called interference. Furthermore, the result of linguistic interference between L1 and L2 is called interlanguage. Thus, interlanguage is defined according to the Principles and Parameters perspective as the intermediate states of L2 development, the parameter settings change continuously as the learner acquires more competence in L2. Finally, the Universal Grammar comprehensively explains the varying differences which exist among students when they reach the ultimate level of attainment in second language learning, the degree of access to UG, the different relationships between L1 and L2 in terms of transfer and interference, the input received, and the learner attitudes towards the L2.

In summary, the linguistic approaches are aimed at explaining the nature of first language acquisition, and consequently linguists have tried to equate this process to the one undergone in second language acquisition, from an internal (Chomsky, 1965) or external (interaction hypothesis) point of view.

Input Processing in Adult Second Language Acquisition

Based on the Input Hypothesis developed by Krashen (1982), the Input Processing Theory (IP) studies the fundamentals of SLA comprehension, the misinterpretations of L2 forms and the ways learners receive the input in L2. Thus, it is concerned with three fundamental questions that tackle an integral part of language acquisition:

- Under what conditions do learners make initial form-meaning connections?
- Why, at a given moment in time, do learners make some and not other form-meaning connections?
- What internal strategies do learners use in comprehending sentences and how might this affect acquisition?

As VanPatten (2002) asserts “IP is concerned with how learners derive intake from input regardless of the language being learned and regardless of the context (e.g. instructed, non-instructed)” (p.757). In general terms, VanPatten (2004) defines IP as a process involved in SLA, by which learners connect grammatical forms with their meanings as well as the interpretation of the rules of nouns in relationship to verbs. Benati (2013) explains that “the main scope of input processing theory and research is limited to examine which psycholinguistic strategies and mechanisms learners use to derive intake from input” (p.93).

Taking into account the limited input processing capacity of L2 learners, VanPatten (2002) explains that some grammatical elements are registered by the students, while others are omitted. According to VanPatten (2002), when learners process the input received, they transform it into a new message which is called the *intake*. Consequently, IP consists of a set of principles, each of which includes a series of sub-principles to account for second language input processing. One of the main principles is making form-meaning connections, VanPatten (2000) claims that when L2 learners interact with other students, they pay more attention to meaning than to other formal aspects of the language such as grammatical forms. Another important principle concerns with parsing, which means that the learner can develop a syntactic structure that allows him/her to infer several elements of the sentence, such as the subject and the object. The model makes a number of claims regarding the way in which the learners process the linguistic data of the input as they are engaged in comprehension:

- Learners are driven to obtain meaning while comprehending: (learners seek meaning in the speech).
- Comprehension for learners is initially quite arduous in terms of cognitive processing and working memory.
- Learners process language in a limited way and cannot process and store the same amount of information as natives.
- Learners may use certain universal principles of input processing but may also use the L1 input processor.

In biological terms, this model is supported by the role of the working memory, which is in charge of storing information received as input. Thus, it is important to point out the role of working memory in this model since the first principles are predicated on a limited capacity for processing information; that is to say, learners can only process so much in their working memory before attentional resources are diminished, and working memory is forced to eliminate information in order to accommodate more (incoming) information.

According to VanPatten (2002; p.758) the Principles of Input Processing are:

Principle 1. Learners process input for meaning before they process it for form:

- a) Learners process content words in input before any other forms.
- b) Learners prefer processing lexical items than grammatical items (e.g. morphology) for the same semantic information.
- c) Learners prefer processing “more meaningful” morphology before “less” or “non-meaningful” morphology.

Principle 2. Learners process non-meaningful forms, thus they must be able to process informational or communicative content at no (or little) cost to attention.

Principle 3. First Noun Strategy: Learners have a base strategy that assigns the role of the subject or the agent to the first noun (phrase) in a sentence:

- a) The first-noun strategy may be ignored by lexical semantics and event probabilities. Consequently, learners interpret sentences by relying on lexical forms or event probabilities instead of using the first noun strategy.

- b) Learners may adopt other processing strategies for grammatical role assignment, this may occur once their developing system has incorporated other cues (e.g., case marking, acoustic stress).

Principle 4. Sentence Location Principle:

- a) Learners tend to process items positioned at the beginning of a sentence, better than those positioned in the middle or at the end of a sentence

Some criticisms have been made on the IP model. Dekeyser et al. (2002) questioned several aspects of the model, arguing that the model could not account for the complexity of the second language classroom learning. Carrol (2004) stated that “(...) the input processing model does not seek to be a model of input perception, parsing or sentence interpretation” (p. 297). Thus, Carrol (2004) asserts that if the IP theory describes processing constraints, it should fully define the constraining processes. VanPatten (2004) assumed these criticisms, revisiting his model and reformulating some of the input processing principles.

1.3.2. Psychological Approaches to SLA

From the psychological point of view, there are three main foci of concern: languages and the brain, learning processes, and learner differences.

The first research which related the brain and language function was carried out by Paul Pierre Broca, who observed an area in the left frontal lobe (Broca's area) responsible for the ability to speak. Broca discovered that an injury to the left side of the brain was much more likely to result in language loss than an injury to the right side. Further to these studies, Wernicke identified a nearby area, which is linked to the part of the cortex that processes audio input (Wernicke's area), which is also central to language processing. For most individuals, language is represented primarily in the left half (or hemisphere) of the brain within an area around the sylvian fissure (a cleavage that separates lobes in the brain). Subsequent research has shown that many more areas are involved in language processing.

1.3.2.1. Early theories in Second Language Acquisition

Prior to the 1990s SLA theories were based on two periods. The first period was marked by behaviourism (from psychology) which accounted for both first and second language acquisition, and the second period was characterised by the use of structural descriptions of language.

1.3.2.1.1. Behaviourism and structuralism

The most influential cognitive model of learning applied to language acquisition during the 1950s was Behaviourism (Skinner 1957), which emphasized the notion of habit formation resulting from S-R-R: stimuli from the environment (linguistic input), responses to those stimuli, and reinforcement if the responses produced the desired outcomes. Repeated S-R-R (based on Hebb, 1949) sequences are “learned” (i.e. strong stimulus-response pairings become “habits”). The Audiolingual Method appeared as an approach to language teaching which highlighted repetition and habit formation during the 1980s.

Contributions to behaviourism were made by several researchers. Pavlov experimented with dogs (i.e., a tone sounded whenever the dog was fed, thus when the dogs heard the sound (stimulus) they anticipated the meal, and began to salivate (the response), and when the dogs heard the sound, but there was no food, they salivated anyway. Thus, Pavlov termed the concept of *classical conditioning*, which means that in a given context, two events are naturally connected (eating and salivating), then when a third event (the sound) is introduced, it results that this third event can trigger the response after several repetitions.

A further step was taken by Skinner (1957) with the Operant Conditioning Theory (based on Thorndike, 1905), which is a feedback system in which reinforcement and punishment can induce an organism to engage in new behaviours. Skinner (1957) developed the idea of Verbal behaviour, which included language, reference, and meaning in the behavioural field.

According to behaviourists, learning is seen as the acquisition of a new behaviour, where the environment is considered as the main factor. Thus, learning consists of developing responses to environmental stimuli. If these responses receive positive reinforcement it creates a habit; if they receive punishment they will be abandoned.

According to behaviourists SLA (Skinner's Verbal Behaviour) consists of imitating models repeatedly, or by analogy. The main tenets involved are the following:

- Positive reinforcement of accurate imitations.
- Correction of inaccurate imitation results in learning process.
- Output is an important source of learning.
- Active participation by the learner is required in order to improve learning.

Learners should be exposed to a large number of target examples of language, and imitate these models. Thus, learning occurs when learners are exposed to the language by practising and making the correct response to a certain stimulus. It is important to highlight that in relation to L2 acquisition, behaviourism could only account for what could be directly observed (e.g., the "input or output), whereas it ignored the learner's cognitive process when learning the language (Ellis, 1997).

Firstly, the main criticism is that behaviourism cannot adequately respond to L2 acquisition process. This is because learners do not always produce the output in the same way as they receive the language (input). Secondly, learners are active in the language learning process, as proven in their systematic errors production, and therefore they produce their own rules which are very different to the rules given by the input. In conclusion, "learning is not just a response to external stimuli" (Ellis, 1997, p. 32).

1.3.2.1.2. Critical Period Hypothesis and L2 acquisition

Cognitive perspectives about language acquisition began in the 1960s with the contribution of neuro-linguistics. Lenneberg (1967) postulated the Critical Period Hypothesis, which has a neurological basis. Lenneberg defined it as the "*termination of a state of organizational plasticity linked with lateralization of function*" (p. 176), and the author also emphasised the age onset of the second language acquisition as one of the decisive factors to attain proficiency in the L2. He argued that puberty represents a biological change associated with the firm localization of language-processing abilities in the left hemisphere. Besides, post-pubertal language acquisition was far more difficult and far less successful than acquisition during the pre-pubertal period, which is characterised by rapid neurological development.

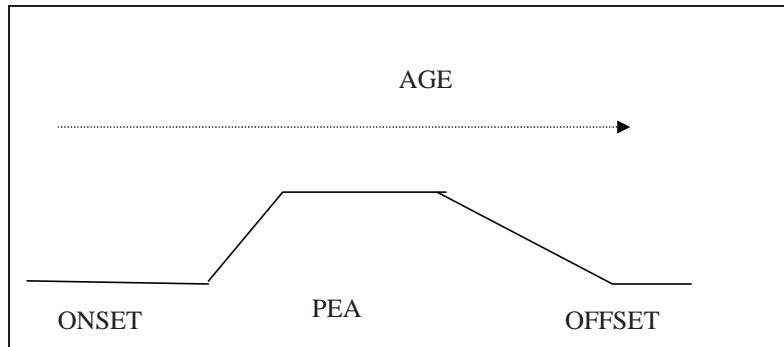


Figure 4 The Critical Period process

However the Critical Period Hypothesis (CPH) has been doubted in the field of second language acquisition, as there have been diverse and vague positions in this field. Singleton (2005) writes: “for some reason, the language acquiring capacity, or some aspect or aspects thereof, is operative only for a maturational period which ends sometime between perinatal and puberty”(p. 280).

Birdsong (2005) defines a critical period as: “the temporal span during which an organism displays a heightened sensitivity to certain environmental stimuli, the presence of which is required to trigger a developmental event. Typically, there is an abrupt onset or increase of sensitivity, a plateau of peak sensitivity, followed by a gradual offset or decline, with subsequent flatter of the degree of sensitivity” (p. 111).

According to the book “Language Acquisition: The Age Factor” (Singleton & Ryan, 2004) there are two main versions that explain the CPH. The *weaker version* states that the acquisition of the language should start at the onset of the critical period. In other words, the sooner the acquisition starts the more efficient it is. On the contrary, the *stronger version* claims that acquisition does not continue naturally after the critical period even if it begins within this critical period (p. 33).

Singleton (2003) states that there are some critical periods in biology, which can be characterised as follows:

- They relate to very specific activities or behaviours.
- Their duration is limited within well-defined and predictable termini.

- Beyond the confines of the period related the relevant behaviour, language acquisition is not longer acquired.

According to this biological explanation, L1 development only begins at the onset of this period and unless it occurs then, it will not happen at all. Another implication may be that even if L1 development begins within the critical period it will not continue beyond the end of that period.

There are some misconceptions, regarding the CPH in L1 acquisition as evidence does not support a specific CPH in L1. Lenneberg (1976) states that the critical period to learn a language appears from two years of age. However, this is contradicted by Lenneberg's own synthesis of the language acquisition timetable, which is set between 4 and 20 months "from babbling to words" (p. 180). Also, research relative to phonology acquisition suggests that there is no sharp break in the developmental progression from pre-speech to speech (see, e.g., Stark, 1986, p. 171), and research into conceptual and lexical development indicates that comprehension of linguistically communicative functions appear early in the second half of the child's first year (see, e.g., Griffiths, 1986).

With regards to the idea that unless L1 development begins during the critical period it will not happen at all, there is evidence of the so called "wolf-children", these children have grown up in isolation from standard human society and have then been rescued (Genie's case), and there is evidence from the late acquisition of sign language (Singleton, 2003) . In the case of Genie, research suggests that some post-rescue progress in language development is observed regardless of limited and abnormal progress. Some researchers see this lack of proficient attainment in L1 as "first language acquisition after the critical age of puberty" (De Villiers & De Villiers, 1978, p. 219), whereas other researchers consider that it only indicates "specific constraints and limitations on the nature of language acquisition outside of (...) the critical maturational period" (Curtis, 1977, p. 234).

Thus, with regard to the age limit for L1 development, there are ample indications that language development continues after puberty (see studies: Smedts, 1988; Carrol, 1971; Diller, 1971; Singleton, 1989).

Regarding L2 acquisition, there are several interpretations of the role of CPH according to researchers' theoretical positions. Three common views, which are not incompatible but describe different extents, explain the CPH in L2 acquisition:

- After a certain maturational point the L2 learner is no longer capable of attaining native-like levels of proficiency.
- After a certain maturational point the learner requires more effort than before in order to be successful at L2 learning.
- After a certain maturational point L2 learning is no longer available by the same mechanisms that are used at child language acquisition.

In the first assumption, a number of researchers have claimed that there is a maturational limit (around puberty) beyond which it is impossible to learn native-like L2. Scovel (1988; 2000) claims that the age limit to acquire L2 as a native is 12 years old, later than that age it is impossible to fully acquire the phonological traits of the L2. Long (1990) underpins the evidence on accent in a similar way as Scovel (1988), and adds that for the complete L2 acquisition, one requires exposure to the L2 before the age of 15. Such claims have been rejected by several studies which have focused on older beginners who have attained high levels of L2 proficiency (for a review see: Birdsong, 1992; Bongaerts, Mennen, & Van der Slik, 2000; Bongaerts, Summeren, Planken, & Schils, 1997; Ioup Boustagui, Tigi, & Moselle, 1994; Palmen et al., 1997).

In the second assumption, it is assumed that after a certain maturational point the learner requires more effort than before in order to be successful at L2 learning and attainment. Lenneberg (1967) stated that: “automatic acquisition from mere exposure to a given language seems to disappear [after puberty], and foreign languages have to be taught and learned through a conscious and laboured effort” (p.176). Researchers, despite the fact of not supporting Lenneberg’s hypothesis, have upheld the idea that post-pubertal L2 learning tends to be more conscious and demanding. For instance, Krashen (1975) states that adults tend to adopt a rule by rule approach to language learning, which might condition and limit the whole language learning acquisition: “the person who has reached the stage of formal operations may have not only the ability but also need to construct a conscious theory [...] of the language he is learning” (p. 220).

Finally, a third perspective on the critical period is the notion that children and adults use different mechanisms to acquire the language. Thus, researchers in the line of Universal Grammar (UG) parameters, defend that post-pubertal L2 language learning has no access to UG principles and structures.

Cook and Newson (1996) explain the previous arguments with the following idea:

General arguments in favour of no access are: the knowledge of the L2 is not complete (Schachter, 1988; Bley-Vroman, 1989); some L2s are more difficult to learn than others (Schachter, 1988); the L2 gets fossilized (Schachter, 1988); and L2 learners vary in ways that L1 learners do not. The proponents of no access have therefore sought to find explanations for how it is possible to learn an L2 without UG; the typical solution is seen as general problem solving combined with the knowledge of the L1 (Bley-Vroman, 1989) (Cook & Newson, 1996, p. 295).

However empirical basis for this perspective has never been convincing (cf., e.g., Flynn, 1987; Martohardjono & Flynn, 1995; see also Hawkins, 2001). It must be added that further research indicates that post-pubertal L2 learners deal in the same way as L1 acquirers with features, which are supposed to have a UG basis (see, e.g., Bruhn de Garavito, 1999; Dekydtspotter et al., 1998).

Thus, evidence in this field supports the view of Krashen, Long, and Scarcella (1979), which defends that, with regard to long-term outcomes in “naturalistic” exposure, the earlier the exposure to the target begins, the better it is for language attainment (see, e.g., Hyltenstam, 1992; Johnson & Newport, 1989; Oyama, 1976, 1978; Patkowski, 1980). However, as Singleton (2003) remarks, in the initial stages of learning, older beginners tend to outperform juniors in certain areas. Therefore, L2 formal instruction also follows this condition. Thus, in the long run view, the younger the better.

The existence or non-existence of a cut-off point in language development, known as the Critical Period, has been quite controversial. Bialystok (1997) and Bialystok and Hakuta (1994) analysed Johnson and Newport’s investigation. The authors explain that “the tendency for proficiency to decline with age projects well into adulthood and does not mark some defined change in learning potential at around puberty” (Byalstok, 1997:122). Thus, it appears that the decline in L2-learning capacity that occurs at the end of childhood is not the same for all individuals. In conclusion, any decline in L2-learning capacity with age is not only based on the critical period or cut-off, but rather on a continuous and linear progress, which entails many other factors, such as motivation, cross-linguistic, educational and general cognitive factors.

1.3.2.1.3. Learning process theories and SLA

The focus on learning process theories is based on computer-based Information Processing (IP) models of learning, which were established by cognitive psychology in the 1960s. Many of the approaches to SLA based on IP focus on sequencing development and point out the question of how learners acquire the L2.

IP accounts for declarative and procedural stages of knowledge, which implies learning from controlled to automatic processing. The declarative stage involves the acquisition of isolated facts and rules, via a process which is carried out slowly and often under attention control. Development from declarative to procedural stages involves processing longer associated units and increasing automatization. Thus, Information Processing has three stages: controlled-automatic processing, declarative-procedural knowledge, and restructuring. An explanation of fossilisation from the IP perspective is that aspects of L2 language may become automatized before they have developed the target levels, and positive input is no longer sufficient to lead to improvement.

The Information Processing approach makes a number of assumptions (McLaughlin, 1987):

1. Second language learning means developing a complex skill. Thus, language learning is seen in the same way as the acquisition of any other complex skill.
2. Complex skills can be categorized to simpler component skills in a hierarchical way, thus lower-order component skills are a pre-requisite to learning higher-order skills.
3. Learning a skill requires the learners' attention, which implies controlled processing.
4. Controlled processing needs considerable mental "space," or attentional effort.
5. Humans have a limited-storage capacity. They can only cope with a limited number of controlled processing requirements at one time.
6. Learners follow a process from controlled to automatic processing, which occurs after practising. Thus, automatic processing requires less mental "space" and attentional effort.
7. As automaticity is latent, learners are able to have free controlled processing capacity in order to acquire higher-order skills and new information.

8. Learning implies several processes such as restructuring and reorganising mental representations.
9. The fact of reorganizing mental representations in the learning processes implies making structures more coordinated, integrated, and efficient, which, in turn, favours a faster response time when they are activated.
10. In SLA, restructuring internal L2 representations, along with larger stores in memory, accounts for increasing levels of L2 proficiency.

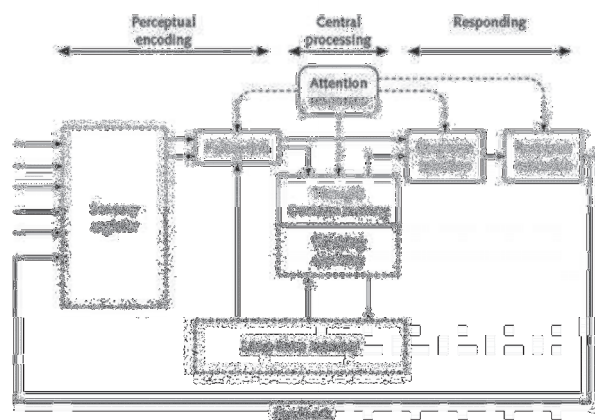


Figure 5. A generic model of human information processing with three memory systems.
 Source: Wickens, Gordon, and Liu (1997:p.147)

There are five major theories on how humans process information (long-term information retention):

- **The Working Memory Model (Baddeley & Hitch, 1974; Baddeley, 2003)**

The original model proposed by Baddeley and Hitch (1974) originally included three main components, the *phonological loop*, concerned with verbal and acoustic information; the *visuospatial sketchpad*, which caters visuospatial data, and the *central executive*, which are include the elements previously mentioned. The central executive is responsible for the attentional control of the working memory. The central executive relies heavily, but not exclusively, on the frontal lobes (Stuss & Knight, 2002), and can almost certainly be fractionated into a number of executive sub-processes (Baddeley, 2002; Shallice, 2002).

A fourth subsystem was proposed later, the *episodic buffer* (Baddeley, 2000), which is a limited capacity system that depends heavily on executive processing. The main difference between the central executive and the episodic buffer is that, while central executive is responsible for attentional control, the episodic buffer is concerned with the storage of information. It is called “episodic” because it is capable of linking information from a number of different sources into chunks or episodes; thus, it is a buffer in the sense that it provides a way of combining information from different modalities into a single multifaceted code. Baddeley (2000) adds that the episodic buffer is able to support the capacity for conscious awareness.

- **Levels-of Processing Model**

This theory is based on the work of Craik and Lockhart (1972). The major proposition is that all stimuli that activate a sensory receptor cell are permanently stored in memory, but that different levels of processing (i.e., elaboration) contribute to the ability to access, or retrieve, that memory. Craik and Lockhart (1972) believe that the retrieval of information is based on the amount of elaboration used as the information is processed; this is achieved on a continuum from perception, through to attention, labelling, and finally meaning.

- **Parallel Distributed Processing model (PDP)**

According to this model, processing takes place in a network of nodes (or “units”) in the brain and these units are connected by pathways. As learners are exposed to repeated patterns of units in input, they extract regularities in the patterns. Information is processed simultaneously by several different parts of the memory system, rather than sequentially as hypothesized in the aforementioned theories. Research has focused on the way humans process emotional data supporting this view (see Goleman, 1995).

- **The Connectionist Model**

This theory, proposed by Rumelhart and McClelland (1986) extends the Parallel-Distributed Processing model. The model emphasizes the fact that information is stored in multiple locations throughout the brain in the form of network connections. These network connections are formed and strengthened through associations, thus from a connectionist

perspective, learning implies the strength of connections, which changes with the frequency of the input and nature of the feedback.

▪ **The Competition Model**

In the 1980s Bates and MacWhinney (1981) propose the competition model (Bates & MacWhinney, 1981; MacWhinney, 2001). This functional approach assumes that all linguistic performance involves “mapping” between external and internal functions. An infinite number of functions therefore compete for a limited number of forms. The approach relates meaning and context by displaying several cues in the input, and the reader/listener chooses the correct one. These cues are related to various levels of language system (word order, grammar, semantics, etc). From this perspective, language development involves the process whereby children gradually match their interpretations and responses to the adult speech they hear. Consequently, the cues that correspond to adult patterns are reinforced and the incorrect ones disappear, as they get older these matches are produced quicker. Nativists criticised the Competition Model, for example Gibson (1992) claimed that the Competition Model did not include the UG principles, as there was a confusion regarding the notion of ‘cue’, the inclusion of ungrammatical stimuli. Thus, the model did not explain transfer issues from L2 to L1 (e.g., Su, 2001). Bates and MacWhinney (1996) argued that the Competition Model should not be seen as a competing model of UG, but more as a complementary way of dealing with the linguistic data.

1.3.3. The Sociocultural Theory and SLA. A different perspective (SCT Vygotsky)

The Sociocultural (S-C) Theory (Vygotsky 1962; Vygotsky, 1978) enhances the fact that interaction facilitates and is the cause of language learning, and therefore language learning is seen as a social process, grounded on sociocultural settings. The Sociocultural Theory differs substantially from other linguistic approaches, as it gives limited attention to structural patterns of L2. In contrast, it emphasizes the learner activity and involvement over innate and universal mechanisms. This approach also differs from most psychological approaches because S-C Theory focuses on factors that are external to the learner, rather than factors that depend on the learner. Finally, it differs from most *social* approaches

because it considers interaction as an essential force, rather than a pure condition for learning.

The Sociocultural Theory defends that learning occurs when simple innate mental activities are transformed into “higher order” complex mental functions. This transformation usually involves *symbolic mediation*, which is the link between a person’s current mental state and higher order functions. Learning through mediation provides the learners more abilities to be aware of their own mental abilities and have more control over their mental processes.

One form of mediation is regulation. Thus, learners regulate their own production through linguistic means by participating in activities (mental and physical) in which their activity is initially subordinated or regulated by others. This process of regulation has 3 stages:

- 1) Object-regulation phase: children use objects in the environment.
- 2) Other-regulation: includes implicit and explicit mediation (scaffolding).
- 3) Self-regulation: final stage, the ability to accomplish activities with minimal or external support. This phase is possible through internalization.

The interaction that occurs between the learner and experts, according to this model, is favoured by the Zone of Proximal Development (ZPD), an area of potential development, where the learner can achieve potential only with assistance. S-C Theory assumes that mental functions which are beyond an individual’s current level must be performed in collaboration with other people until they are achieved independently. The process through which others help the learner in language development within the ZPD is through scaffolding. This includes the “vertical constructions” which consists in interaction, in which experts provide learners with chunks of speech that the learners can then use to express concepts which are beyond their independent means.

In summary, *Sociocultural Theory* claims that language is learned through socially mediated activities. The S-C framework claims that some learners will be more successful than others, depending on their level of language attainment, when participating in L2 contexts, or on the amount of intervention they receive from experts or peers. Thus, recent research (Zhao, 2010; Tang, 2012) support that, teachers, peers and the context itself contribute to the second language learning and attainment.

1.3.4. Neurolinguistic Approaches to SLA

Neurolinguistics share some features with psycholinguistics, although it focuses more on neuropsychology rather than on cognitive psychology. Originally this discipline arose with the aim of filling a gap between neurosciences (neurology, neuroanatomy, neurophysiology, and neurochemistry) and human communication (linguistics and psycholinguistics), and its main concern was to study the linguistic deficits from cortical lesions. Therefore, it was associated with linguistic pathologies. Recently neurolinguistics has extended the scope into the cognitive neuroscience of language.

Ahlsén (2006) states that neurolinguistics studies the relation between language and communication to different aspects of brain function, that is to say, it tries to explore how the brain understands and produces language and communication. This process involves attempting to combine neurological/neurophysiological theory (how the brain is structured and how it functions) with linguistic theory (how language is structured and how it functions).

Neurolinguistics covers fields of neurology, linguistics, psychology, psychiatry, speech pathology, and computer science; however, several other disciplines are also highly relevant, having contributed to theories, methods, and findings in neurolinguistics. Thus, neurolinguistics includes neurobiology, anthropology, chemistry, cognitive science, and artificial intelligence. Studies of language and communication after brain damage are perhaps the most common type of neurolinguistic studies. However, experiments, model construction, computer simulations, and neuroimaging studies are methods very frequently used today.

Several views about the relationship between brain and language have been developed. The main perspectives are (Ahlsén, 2006):

- Localism, which tries to locate different linguistic functions in the brain.
- Associationism, which pinpoints brain areas related to different linguistic functions.
- Dynamic localization of functions, which considers that functional systems of localized sub-functions perform linguistic functions. As the systems are dynamic, they can be organized during language development or after brain damage.

- Holistic theories, which support that many language functions, are covered by widespread brain areas.
- Evolution-based theories, which emphasize the relationship between brain development and language evolution over time in different species, thus differentiating between child and adult linguistic functions.

Some of the central questions for neurolinguistics are (Ahlsén, 2006):

- What happens to language and communication after different types of brain damage?
- How did the ability to communicate and the ability to use language develop as the species evolved? How can we relate this development to the evolution of the brain?
- How do children learn to communicate and use language? How can we relate their acquisition of language to the development of their brains?
- How can we measure and visualize processes in the brain that are involved in language and communication?
- How can we make good models of language and communication processes that will help us to explain the linguistic phenomena that we study?
- How can we make computer simulations of language processing, language development, and language loss?
- How can we design experiments that will allow us to test our models and hypotheses about language processing?

The following sub-disciplines of neurolinguistics (cognitive science and cognitive neuroscience) have tried to investigate the questions posited by researchers.

1.3.4.1. Cognitive science

Cognitive science is an academic field based on the study of biological substrates underlying cognition, focusing on neural substrates of mental processes. Cognitive science is described as the “scientific study of minds and brains, be they real, artificial, human or animal” (Nadel & Piatelli-Palmarini 2003, p. xiii). It is a field seen to develop the study of the mind, which is also known as “the black box”. Thus, Cognitive science draws on

concepts from linguistics, psychology, artificial intelligence, computer science, philosophy, neuroscience, and anthropology.

Regarding the relation between cognitive science and SLA, Long and Doughty (2003) state that cognitive science can be more appealing to SLA research than social psychology. Research topics such as maturational constraints, explicit vs. implicit learning/memory, automatization, computer modelling of language processes, grammaticalization, and aptitude complexes, are obvious targets for cognitive scholars. As Doughty argues (2003):

For SLA to achieve the stability, stimulation, and research funding to survive as a viable field of inquiry, it needs an intellectual and institutional home that is to some degree autonomous and separate from the disciplines and departments that currently offer shelter. Cognitive science is the logical choice. (p.869) (ibid)

Cognitive science offers a multidisciplinary theory as it accounts for concepts and methods from linguistics, psychology, artificial intelligence, computer science, philosophy, neuroscience, and anthropology (Dörnyei, 2009a). Cognitive approaches have studied a range variety of mental processes, such as pattern recognition, attention, memory, imaging, and problem solving (Friedenberg & Silverman, 2006). Furthermore, within cognitive science, the most prominent field of research has been cognitive neuroscience.

1.3.4.2. Cognitive Neuroscience

Cognitive neuroscience is concerned with the study of neural substrates of mental processes. The aim of Cognitive Neuroscience is to understand the process by which psychological and cognitive functions are produced by neural circuits in the brain. Cognitive Neuroscience is a branch of both psychology and neuroscience, but it also overlaps disciplines such as physiological psychology, cognitive psychology, and neuropsychology. This framework rests on theories developed in cognitive science, together with evidence from neuropsychology and computational modeling. However, the main difference between cognitive neuroscience and cognitive science is that cognitive neuroscience tries to understand the neural implementation of mental abilities. Thus, researchers can analyse cognitive and perceptual mechanisms of the brain related to some

kind of behaviour. Thus, Cognitive Theory integrates elements of neuropsychology, neuroscientific evidence, and computational techniques.

1.3.4.2.1. Foundations of Cognitive Neuroscience

Several advances in neurobiology, experimental psychology, and computer science laid the foundations for the emergence of cognitive neuroscience (see Kosslyn & Andersen, 1993). In the last years of the 1960's researchers began to record electrical activity in cortical neurons in awake, behaving monkeys (Evarts, 1966). This technique gave accurate correlated behavioural and physiological data, and researchers were able to characterise the functional organisation of some parts of the brain. Hubel and Wiesel (1968) discovered the parcellation of brain into discrete functional components, by measuring the neural activity.

A computer-based approach appeared in cognitive psychology (e.g., see Neisser, 1967), which tried to find analogies between internal processing in humans and internal processing in computers. For example, Sternberg (1969) developed a technique for isolating distinct information processing stages, in terms of storing, encoding, interpretation, or comparison of information. Posner (1978) developed tasks to tap simple component processes of complex activities such as attention. Through these experiments, researchers conceptualised behaviour as arising when specific types of processing are performed upon specific internal representations.

Recently, cognitive neuroscience has offered an entirely new perspective of the human brain, allowing the online study of the brain while it is engaged in various cognitive tasks (Dörnyei, 2009a). Thus, several research methods for investigating the language and the brain used by psychologists and neuroscientists have shed light on the relationship between brain functions and brain areas.

Current neuroimaging techniques introduced towards the end of the 20th century measure changes in the brain activity, which are correlated with changes in behavioural responses. Firstly, PET (Positron emission tomography) and Functional Magnetic Resonance Imaging (fMRI) which offer observations of activated regions in a given task as compared to a control condition. These techniques give accurate and complex data about the brain functions, shaping the way in which behaviour is modelled. For example, fMRI is a method based on monitoring regional changes in blood oxygenation resulting from neural

activity. However, the PET scan has some disadvantages as it involves injecting a radioactive substance in the carotid artery. This substance is similar to glucose, which accumulates in the activated regions of the brain, so that they can be measured.

Secondly, Event-related potential (ERP) analyzes the neurological activity associated with specific cognitive tasks. Using ERP enables the identification of specific activation patterns within the brain according to the changes in signal intensities across time (Baars & Cage, 2010). This technique has been widely used in language-related neuroresearch. ERP provides measures to investigate language-specific aspects. One significant ERP component is the N400, first reported by Kutas and Hillyard (1980, cited by Kutas, VanPatten, & Kluender, 2006). This label (N400) refers to a salient negative voltage peak around 400 milliseconds (300-500 ms) after the stimulus has been presented, related with words and other meaningful stimuli. Another important component of ERP is the P600, which has been described as reflecting processes of reanalysis and syntactic repair.

Finally, Transcranial Magnetic Stimulation (TMS) studies localisation of function, connectivity of brain regions, and pathophysiology of neuropsychiatric disorders using electromagnetic fields which act as the medium between electricity and induced electrical currents in the brain. During a TMS procedure, a magnetic field generator, or “coil”, is placed near the head of the person. The coil produces small electric currents in the region of the brain via electromagnetic induction. The coil is connected to a pulse generator that delivers electric current to the coil.

Besides, the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) initiative is a collaborative public-private research recently launched by Obama’s administration. It is aimed at revolutionising the understanding of the human brain. The aim of this project is to produce a new dynamic picture of the brain that for the first time will depict how individual cells and complex neural circuits interact in both time and space. This process will be supported by the development and application of innovative technologies. Furthermore, this project will favour the knowledge of how the brain enables the human body to record, process, utilize, store and retrieve large quantities of information.

1.3.4.2.2. Cognitive neuroscience and SLA

Several investigations have been made on second language acquisition from a neuro-cognitive approach in the last years. The focus of these investigations has been to examine how the brain accomplishes language comprehension and production.

The study of adult language learning related to neuroplasticity, together with the understanding of neural correlates of language processing and representation, has developed significantly in the last decade due to the rapid advances in neuroimaging techniques (see reviews in Hickok, 2009; Poeppel, Emmorey, Hickok, & Pylkkanen, 2012; Price, 2000; Price 2010; Richardson & Price, 2009; Rodriguez-Fornells Cunillera, Mestres-Misse, & de Diego-Balaguer, 2009). The neuroplasticity is understood as the brain's ability to respond and adapt itself to changes derived from the environment (Goh & Park, 2009).

A meta-analysis of studies conducted by Adesope, Lavin, Thompson, and Ungerleider (2010) examined the cognitive correlates of bilingualism. Data collected from 63 studies (involving 6.022 participants) were extracted and analysed following established protocols and procedures for conducting systematic reviews and guidelines for meta-analysis. Results indicate that bilingualism is associated with several cognitive outcomes, including attentional control, working memory, metalinguistic awareness, and abstract and symbolic representation skills.

A research conducted by Yang, Gates, Molenaar, and Li (2015), using functional magnetic resonance imaging (fMRI), examined the neural activities associated with second language word learning. The participants of the study were 39 native English students with no prior knowledge of Chinese, were trained to learn a novel tonal vocabulary in a six-week training session (pre and post-training scans were obtained). Comparing the learner group with a control group, results indicated that: first, after training, learners and non-learners rely on different patterns of brain networks to process tonal and lexical information of L2 target words; second, within the learner group, successful learners compared to unsuccessful learners showed differences in language related regions and more coherent and integrated multi-path brain network. These results suggest that second language experience shapes neural changes in short-term training and the analysis of these neural changes reflect individual differences in learning success.

In a review of the recent literature on neuroanatomical correlates of individual differences, Kanai and Rees (2011) examined evidence from a large number of studies of motor behavior, perception, intelligence, and personality. They suggest that investigating individual differences in brain structure is a vital tool for understanding cognition and behavior in the domain of language learning.

1.3.4.3. Affective Neuroscience in SLA

Affective neuroscience has extended the knowledge of the emotional brain. The scientific goal of affective neuroscience is affect, which is integrated in or as a complement of cognitive neurosciences, depending on the relation between affect and cognition (see Sander & Scherer, 2009, for an overview of affective sciences), (see Forgas, 2008; Hilgard, 1980; Moors, 2007). There is a traditional controversy as to whether affective processes are a part of cognitive processes or qualitatively different in nature. In fact, the growing interest of affective neuroscience is rooted on the fact that emotions can be usefully studied using the concepts and methods of cognitive neuroscience, which has led to the “*cognitive neuroscience of emotion*” (for discussion see, e.g., Lane & Nadel, 2000; Ochsner & Schacter, 2000; Sander & Koenig, 2002). For example, Davidson and Sutton (1995) stated that affective neuroscience was an emerging discipline, because studies on emotion require a careful analysis of emotional processes into elementary mental operations, similar to the cognitive neuroscience approach.

Cognitive neuroscience is sustained by three approaches, *cognition* (brain mechanisms), *psychological mechanisms*, and *computational approach*. The *Computational approach* has developed models of cognitive neuroscience focused on traditional domains such as, perception, attention, memory, and action (Kosslyn & Koenig, 1992; Marr, 1982) and has also contributed to models of social cognition (see Mitchel, 2006) and emotion (see Moors, 2007; Sander & Koenig, 2002). Computational analysis within cognitive neuroscience provides processing subsystems that are required to produce specific behaviour according to specific input (Kosslyn & Koenig, 1992). Therefore, computational analysis provides explicit functional patterns of the mind that can be simulated by artificial neural networks or other computer-based models. Thus, Affective Neuroscience could benefit from implementing computational models; thus affective

computing can be defined as the type of computing that relates to, arises from, or deliberately influences emotion and other affective phenomena (Picard, 2009).

Affective neuroscience and affective computing converge to examine emotion from biological, psychological, and computational methods (see e.g., Roesch et al., 2011). This convergence is very similar to the task also developed by cognitive neuroscience; namely to “map the information-processing structure of the human mind and discover how this computational organisation is implemented in the physical organization of the brain” (Tooby & Cosmides, 2000, p.1167).

An important advantage of adopting a complete affective neuroscience approach is that it allows researchers to develop functional structures based on hypotheses that can be subject to computational simulations, conceptual analyses, and empirical experiments.

1.3.5. Dynamic Systems Theory (DST) and SLA or Second Language Development (SLD)

The chaotic nature of SLA was already remarked by Larsen-Freeman (1997), who offered a chaos/complexity theory as a perspective that had the potential to shed new light on a variety of issues related to the complexity of how people use, learn, and teach languages. Recently this author has stated that Dynamic Systems Theory (DST) seems to better suit the whims of SLA demands, so as to fulfil every divergent detail that this process entails. De Boot et al. (2013) point out the difference between SLA and SLD (Second Language Development). They support the view that SLD refers more to the ongoing bidirectional change of one’s language ability and performance (involving both growth and attrition) over time, in contrast to the unidirectional factor related to the term acquisition. Furthermore, according to the author, there is a shift in the way language is viewed, which is considered a process instead of a product.

Dynamic Systems Theory is concerned with examining any change over time. Thus, this approach is highly relevant to the complex system of sustained L2 learning process. DST considers that SLA variables are highly interrelated, and consequently, changes in one variable will have an impact on all other variables that are part of the system. Thus, DST is the new approach that seeks to encompass linguistic, psychological, sociocultural, and neuroscience approaches, in an attempt to finally give response to the

gaps these disciplines have not been able to fulfil in the field of second language acquisition. Ellis (2007) states that “a DST characterization of L2 acquisition as an emergent process marks the coming of age of SLA research” (p. 23).

1.3.5.1. Origins of DST

Dynamic Systems Theory started as a purely mathematical approach for the development of complex systems over time, but it is now considered more as a set of tools and approaches than a fixed and all-inclusive theory of change. Dynamic systems are systems that change over time, Van Gelder and Port (1995) use the following definition: “Roughly speaking, we take dynamical systems to be systems with numerical states that evolve over time according to some rule” (p.5).

Several theories such as Chaos, Complexity, or DST share a common factor, the development of complex systems over time. The general picture that DST suggests is a system of complexity, with all the parts of the system interconnected, and is one of an ongoing change that results from the multiple interacting influences, so that language is seen as:

a complex dynamic systems where cognitive, social, and environmental factors continuously interact, where creative communicative behaviours emerge from socially co-regulated interactions, where there is little by way of linguistic universals as a starting point in the mind of ab initio language learners or discernible end state, where flux and individual variation abound, where cause-effect relationships are nonlinear, multivariate and interaction, where language is not a collection of rules and target forms to be acquired, but rather a by-product of communicative processes (Ellis: 2007: 23)

Dynamic Systems Theory is related with other theories: “complexity theory”, “chaos theory” and “emergentism”. Chaos theory is a branch of mathematics that examines the frequency of occurring unpredictable behaviour (i.e. the weather).

De Bot, Lowie, and Verspoor (2007) explain that DST has been recently developed as a branch of mathematics and has been successfully applied in many scientific disciplines such as in natural sciences, social sciences, and in cognitive sciences. DST can

be understood as a complex system in which there are at least two variables impacting the outcome; while the two variables exert their effect on the outcome, these variables change and so the outcome will change, too. Thus it starts a chain reaction, including a time reaction reference, as changes occur over time. De Bot, Lowie, and Verspoor (2007) say that DST provides a set of ideas and a wide range of tools to study complex systems, “we can no longer work with simple cause-and-effect models in which the outcome can be predicted, but we must use case studies to discover relevant sub-systems and simulate the process” (p.19).

DST and connectionism have some features in common as they both share a mathematical background. However DST focuses on explaining the nature of change in behaviour. Thelen and Bates (2003, p. 389) argue that DST is seen as “the entire coalitional contributions to behaviour”, and they also examine the mechanisms and time-related trajectories involved within the process. In contrast, connectionism is concerned with changes of mental representations, explaining the way in which elementary neural building blocks can form a dynamic network. Smith and Samuelson (2003, p. 436) explain the differences between both theories: Connectionist theories are about systems that follow statistical patterns, taking regularities that exist in the world and internalising them in connection weights. DST considers multiple causality and levels of interactions, and agglutinates a great variety of causes, from strengthening of muscles, exploration, to energy consumption, and finally memory.

A system is formed by different interconnected components called subsystems, which in themselves are also made up of other sub(sub)systems. As a result, a hierarchical structure of systems is created, which in turn results in fractal shapes. Figure 6 shows a simple illustration of the different subsystem levels and their interconnections. The components in the Figure 6 shows the interrelation among the different systems, and also the effects one system may have on other systems. As de Boot & Larsen-Freeman (2011) argued a complex system contains many nested, interconnected subsystems (Rosmawati, 2013).

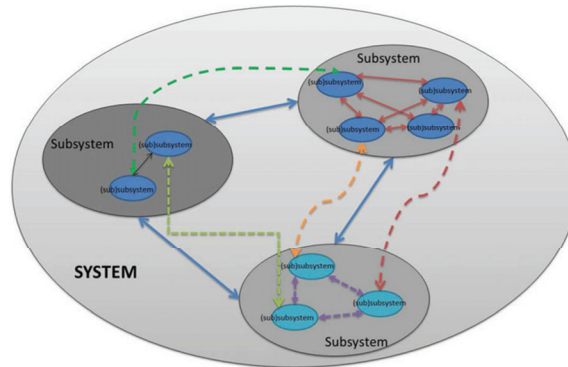


Figure 6. Simple illustration of a highly interconnected system (extracted from Rosmawati, 2013).

1.3.5.2. Basic properties of Dynamic Systems Theory

Dynamic systems build a structure where every system is always part of other systems, thus subsystems are created to operate at all levels. A series of publications (de Bot, Lowie & Verspoor, 2007; Dornyei 2009b; Larsen-Freeman & Cameron 2008; Verspoor, de Bot & Lowie, 2011) have described the main characteristics of dynamic systems and their application in the study of SLD. Therefore it may be useful to briefly mention the main characteristics of dynamic systems as far as they are concerned with SLD.

- **Sensitive dependence on initial conditions**

One of the most distinctive characteristics of dynamic systems is their sensitive dependence on the initial conditions. In chaos theory this is called the *butterfly effect* (a term first used in meteorology to refer to the huge impact small local effects may have on global weather) which refers to the fact that the relatively small differences in the initial conditions can have a profound effect on the behaviour of the system, as they cascade through it, causing continuous changes in the system itself.

- **Nonlinear nature of development**

Dynamic systems also tend to show nonlinearity in development, which refers to a discrepancy between input and effects. The term “non-linear” implies here that a change in

one element does not produce a proportional change in other elements; this explains the fluctuating level of language learners' L2 production mechanisms. Sometimes a slight influence from an element may lead to considerable consequences, whereas at other times even a profound impact may not be noticeable. In other words, the resultant system behaviour does not correspond to its causal factors (Larsen-Freeman & Cameron, 2008).

- **Self-organization**

It refers to the “spontaneous formation of patterns and pattern change in open, non-equilibrium systems” (Kelso 1995: 161). According to DST, patterns emerge from the complexity of the system spontaneously, without any priority of one over another, and the whole system reorganises itself continuously. An example is two contradictory states that emerge at the same time; high anxiety and high willingness to communicate (WTC) that at simultaneously during L2 learning development.

- **Attractor and repeller states**

DST employs computer models and simulations to describe changes of systems over time. It should be noted that typically change, is not continuous. Thus, systems tend to settle in what they are called “attractors”, which can be defined as “a set in the phase space that has a neighbourhood in which every point stays nearby and approaches the attractor as time goes to infinity” (Meiss, 2008: 8). *Attractor states* determine a system in enduring equilibrium, where a static or fossilized stage is present, regardless of the considerable change over time that dynamic systems represent; attractor states have its counterpart in the repeller states. A linguistic example offered by Larsen-Freeman and Cameron (2008, p.185) concerns the dynamic process of conversations. These attractors include “conventionalized patterns of talk that shape the landscape and emergent features such as local routines, conceptual pacts, and shared metaphors”. According to this example, stable phases are guided by attractors, where the system is more predictable, whereas unstable phases are characterized by weak changing attractors.

- **Co-adaptation**

Dynamic systems are often characterised by the interaction of subsystems that gradually align with each other. Larsen-Freeman and Cameron (2008) refer to this

negotiation and adjusting process between systems as “co-adaptation” and describe it as a “kind of mutual causality, in which change in one system leads to change in another system connected to it, and this mutual influencing continues over time” (p. 233).

- **“Noise” is important**

Dynamic systems theory focuses on the singularities and details that are crucial in each learner, instead of focusing on group average measured through traditional quantitative statistical methods. Larsen-Freeman (2006), for example, found that when she disaggregated group data of five Chinese learners of English, several different developmental paths emerged that were lost in the composite results. Thus what is considered as “noise” in quantitative studies may give a great insight into the language learner development, and therefore should not be eliminated.

1.3.5.3. DST and Second Language Acquisition/Second Language Development

Regarding the relation between DST and SLA/ SLD, Larsen-Freeman (1997) highlighted the importance of this theory applied for Second Language Development (SLD). The author investigates the fact that language shows all the characteristics of a dynamic complex system; it is *dynamic* as it changes over time both synchronically and diachronically, and it is *complex* because it includes different subsystems (syntactical, phonological, lexical, and textual) that interact with each other; it also develops nonlinearly and sometimes it is unpredictable and chaotic.

The key concern of DST is to examine any change over time and, with this being the case, this approach is highly relevant to the complex system of sustained L2 learning process and development. It is well known that the variables affecting SLA are highly interrelated and hence changes in one variable will have an impact on all other variables that are part of the system (de Bot, Lowie, & Verspoor 2007). Therefore from a DST perspective, language acquisition emerges through interaction with other human beings within a social context.

1.3.5.3.1. Research studies of Dynamic Systems Theory and Second Language Development

In recent years, several studies have looked at SLD from a DST perspective, focusing on the way in which different sub-systems may develop differently and show non-linear development over time. In the line of research, Vespoor, Lowie and Dijk (2008) found in their study of Dutch English learner of academic writing, that when academic writing proficiency increases, there seems to be a win-win situation between more varied word use and longer sentences at different stages in the developmental process.

The aim of DST researchers to understand the complexity of language learning and development was highlighted by Spoelman and Vespoor (2010), who examined the development of different complex measures of a Dutch beginner of Finnish; they found that as word complexity increases, it also increases noun phrase and sentence complexity, concluding a symmetrical relation. However there seemed to be a competition relation between noun phrase and sentence complexity as they alternate in their development.

One of the most important features of Dynamic Systems Theory (DST) is to measure language learning development of nonlinear conditions across time. Thus, in a longitudinal study on L2 writing development, Caspi (2010) examined the interaction over time of different subsystems in L2. The author assigned four variables in four different advanced learners over a period of approximately 10 months: lexical complexity, lexical accuracy, syntactic complexity, and syntactic accuracy. The results showed that there were relationships among these four variables in the order given, which means that learners first make their words more complex, before they are used more accurately, the same occurs with syntax.

A cross-sectional study from a DST perspective carried out by Verspoor, Schmidt and Xu (2012) revealed that five different proficiency levels (from beginner to high intermediate) could be distinguished from each other by using measures of level proficiency such as: sentence length, all dependent clauses combined, all chunks of sentences combined, all errors, and the use of the present and the past tense. However, almost all specific constructions showed non-linear development, variation and changing relationships among the variables as could be expected by a DST perspective.

According to DST perspective, language learning is a fluctuating process of continuous changes in its elements. Taking this into account, MacIntyre and Legato (2011) conducted a research using an idiodynamic methodology in order to study changes in the Willingness to Communicate (WTC) dimension. The methodology consists of recording students' responses to different levels of communicative tasks, by registering their self-ratings changes in WTC during the performance of these tasks, in order to see fluctuations and attributions in WTC. The results showed that conceptualising WTC as a dynamic system allows for examining the development of students' WTC over time, which highlights the difference between *beginning* and *continuing* to speak.

In another study by Gregersen, MacIntyre and Meza (2014) used the idiodynamic method. The researchers collected data from six participants, three low anxiety language learners and three high anxiety language learners. It is important to highlight that the idiodynamic method reduces previous limitations of DST regarding the continuous internal emotional and psychological changes (MacIntyre & Legatto, 2011). Consequently, this method allows tracking learners' continuous changing affect in context, and then learners can report their fluctuating affective reactions via stimulated recall interviews. The research developed several gradual tasks. The first task was a video-recording in L2 classroom presentation, while wearing a heart rate monitor. In the second task, researchers used this video-recording to elicit participants' idiodynamic self-ratings of the moment by moment changes of their levels of foreign language anxiety. Finally, the third task was to account for these changes in an interview. The results showed that there was a strong relationship among the data collected, which demonstrates that language learning development should be approached from both quantitative and qualitative perspectives in order to understand the complex, dynamic process that entails. The limitations of the study reflected a very conditioned non-natural task for students which could enhance their levels of anxiety while performing the presentation.

In summary, this theory defends a more qualitative research, as it focuses on how one state is transformed into another, and by which mechanisms this phenomena occurs. Thus, according to Dynamic Systems Theory, SLA has to be studied from an entire perspective, focusing on the individual and his/her differences in the language learning development. Dörnyei, MacIntyre, and Henry (2015) emphasize the importance of personal interviews in research studies, focusing on the individual learning process, in

contrast to traditional quantitative research, with the focus placed on the learners' individual differences. However, one of the weakest points of this theory is to measure the different variables that intervene in SLA at the same time, as it is difficult to obtain conclusions from so many different details. Dewaele (2017, p. 445) states that "the Dynamic Approach is fine, as long as it does not imply a rejection of quantification".

It should be pointed out, that the present study is concerned with the individual differences of adult learners. Thus, despite the possible positive contributions that some of the DST principles could provide to this study, a traditional quantitative approach has been developed in this present work, in order to analyse the large sample (400 students) that is included in this work. Thus, the aim of this study is to establish a relationship between the affective variables and the language learning strategies that learners use at adulthood.

The following chapter will examine the different affective variables that intervene in the process of second language learning and development. Firstly, a brief description of affective emotional variables in SLA field will be explained. Secondly, a more detailed review of the main affective variables and the studies done in the field will be described.

CHAPTER TWO

AFFECTIVE/EMOTIONAL VARIABLES IN ADULT SECOND LANGUAGE
AQUISITION

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2. AFFECTIVE/EMOTIONAL VARIABLES IN ADULT SECOND LANGUAGE AQUISITION

Emotion is that which leads one's condition to become so transformed that his judgement is affected, and which is accompanied by pleasure and pain. (Aristotle, 384-322 BC)

2.1 Introduction

What is an emotion? Fehr and Russell (1984) already stated the difficulty in defining this term: “everyone knows what an emotion is, until asked to give a definition. Then, it seems, no one knows” (p. 464). Aristotle defined pathê as “those things on account of which people change and differ in regard to their judgments, and upon which attend pain and pleasure”(Konstan, 2009). According to Konstan (2009) this definition can be considered as one of the first explicit definitions of emotion. Thus, this definition implies a link between emotions and judgments (cognition) and it also includes the “valence” (pain and pleasure) of the emotional state.

Damasio (1998) distinguishes between emotion and feeling, “the term feeling should be used to describe a complex mental state that results from the emotional state” (p. 84). This mental state is what LeDoux (1994) called emotion.

In general terms, the term “affect” refers essentially to the area of emotions, feelings, beliefs, moods and attitudes towards a socially interactive situation that clearly influences our behaviour. Oatley and Jenkins (1996) maintain that “emotions are not extras. They are the very centre of human mental life [...]”. (p. 122)

Furthermore, Reeve (2005) states that: “emotions are short-lived, feeling-arousal-purposive-expressive phenomena that help us adapt to the opportunities and challenges we face during important life events” (p. 294). The aforementioned definition entails four main features; firstly, the feeling component refers to a subjective experience; secondly, the arousal component refers to physical responses associated with certain emotions, for example blood pressure, heart rate during anxiety, etc; thirdly, the purposive component is the aim or purpose of that emotion; and finally, the expressive component is related to the social and communicative dimension of emotions. Thus an emotion is originated from the coordination of these four components, which means that emotions are states that students

project in their future activities and outcomes within the language learning process and development.

2.2. Emotion: A Biological foundation

According to Damasio (2003) some of the brain regions identified as emotion-triggering are the amygdala, which is located in the deepest part of the temporal lobe; the ventromedial prefrontal cortex, which is a part of the frontal lobe; and the frontal region, which is located in the supplementary motor area and anterior cingulate. Damasio (2003) suggests that these areas respond to both the natural stimuli, which are the electrochemical patterns that support the images in our minds, and to very unnatural stimuli, such as an electric current applied to the brain. These sites do not produce an emotion by themselves. Thus, for an emotion to occur subsequent activity in other sites must take place. In summary, an emotion results from the mutual participation of several sites within a brain system. The main brain regions responsible for emotion states are the following:

The *amygdala*, found in the medial temporal lobes, has a role in processing and storing memory associated with emotional events. The amygdala is considered to play an important role in affective biases, as it monitors emotional responses (Domínguez-Borras & Vuilleumier, 2013). Thus, there is a strong correlation between emotional modulation of cortical sensory areas with the activation of the amygdala (Peelen, Atkinson, Anderson, & Vuilleumier, 2007; Pessoa, McKenna, Gutierrez, & Ungerleider, 2002; Sabatinelli, Bradley, Fitzsimmons, & Lang, 2005). Also, the amygdaloid complex exerts modulations on cortical pathways involved in perception and attention, because it stimulates bidirectional connections with all sensory systems (Freese & Amaral, 2006).

A direct sub-cortical thalamo-amygdala pathway facilitates pre-attentive processing of threat-related stimuli (LeDoux 2000; Tamietto & de Gelder, 2010). The amygdala therefore provides the basis of the preattentive threat detection mechanism developed in cognitive models of anxiety (Bishop & Foster, 2013).

The *frontal lobe*, specially the *ventromedial prefrontal region*, when activated, identifies the emotional significance of more complex stimuli, such as objects and situations, either natural or learned, and social emotions. For example, the sadness emerged by one's personal loss, or someone's accident activates this region. Many of the stimuli that acquire their emotional significance in one's life trigger the respective emotion via this

region. Imaging studies show that activation of the prefrontal cortex is related to activity in the amygdala (Lewis & Stieben, 2004).

In the *frontal region*, the anterior cingulate cortex (ACC) is considered to play an important role in complex emotional facets, such as processing moral emotions (e.g., guilt), self-regulation of negative emotions, and reinforcement (Viding, Sebastian, & McCrory, 2013).

As previously mentioned, an emotional state is activated by means of several neural connections. The sites identified to execute an emotion are the hypothalamus, the basal forebrain, and some nuclei in the brain stem tegmentum. The hypothalamus is the master executor of many chemical responses of emotions. Thus, it releases chemical molecules either directly or via the pituitary gland into the bloodstream, altering the internal milieu, the function of the viscera, and the central nervous system function.

Then, the processing of emotions involves a dual path: the cascading of mental contents that bring along the triggers for the emotional responses, and the executed responses themselves, those that constitute emotions, which eventually lead to feelings. For example, the activation distributions associated with three basic emotions differ significantly: fear is activated within the amygdala, disgust is triggered by the insula and globus pallidus, and anger is fostered by the lateral orbitofrontal cortex.

Furthermore, in the interaction of emotion and physiology Harrison, Kreibig, Critchley, and Hugo (2013) state that we can identify two important conceptualisations: the *efferent* (outwardly conducting nervous impulses to an effector organ) and the *afferent* (inwardly conducting impulses toward the central nervous system) effects in the autonomic nervous system (ANS) of emotion. The autonomic nervous system, regulated by the hypothalamus, consists of multiple discrete pathways, which together with somatic motor, skeletal muscle, and neuroendocrine pathways, are used by the central nervous system (CNS) to send commands to the rest of the body. Additionally, autonomic regulation of mechanical aspects of sensory organs, such as the eye and ear, assist attentional focusing on emotional salient environmental stimuli. Moreover, the regulation of immune responses to host infection or bodily injury (Tracey, 2002) implies that the ANS is involved in the regulation of emotional and behavioural sickness responses (Harrison et al., 2009).

A common idea that highlights the role of efferent outflows of ANS activity conceives emotion as a multi-component response, prompted by assessing an event as relevant to personal goals, needs, or values, with coordinated effects on subjective feeling,

physiology, and motor expression (Scherer, 2009). This interpretation enhances the multi-component characteristic of an emotional response, including emotional feelings, physiological reactivity, and instrumental and expressive behaviour, as well as the coordinated structure of the response.

In contrast, highlighting the role of the afferent input from the ANS, Scherer (2004) suggests that subjective emotional feelings reflect a “multimodal integration of synchronised changes in component processes” (p. 139). Thus, feelings are considered as the main mechanism of the appraisal system that take place in emotion.

Consequently, it can be concluded that emotion is a multi-component response, elicited by appraising an event as relevant to personal goals, needs, or values, with coordinated effects on subjective feeling, physiology, and motor expression. This means that feelings are seen as a central representation of the appraisal-driven changes occurring in emotion. It can be stated that affectivity or in other words, emotions, have a neural basis, since they are demonstrated by certain physio-anatomical symptoms of bodily behaviour and reactions.

Neuroimaging techniques have allowed scientists to observe that, the specific areas of the brain responsible for forming and processing emotions (amygdala), which are called “the emotional brain” (LeDoux, 1996) and the separate areas responsible for cognitive functions (the prefrontal cortex), which are called the “thinking brain”, are alike. Research projects have demonstrated that there is an interaction between “the two brains” (Gabrys’-Parker, 2010), thus the information entering the brain is received first by the emotional brain and filtered by the cognitive brain. So it may be concluded that with regard to the acquisition and learning process, successful outcomes are driven and conditioned by emotional states (Schumann, 1997).

2.3 Models of Emotion

Sander (2013) states that major theories of emotion meet the following criteria:

- Emotions are multi-component phenomena: both theories and emotion models consider that an emotion is produced by the convergence and interaction of several components, including physiological, feelings and cognitive responses.
- Emotions are two-step processes involving emotion elicitation mechanisms and emotional responses. It has been suggested that, the process entails the following

pattern: emotion elicitation is regulated by rapid emotional responses through feedback connections from the initial emotional responses that would consequently trigger emotion elicitation mechanisms (see Sander, Grandjean, & Scherer, 2005)

- Emotions have relevant objects: most of the theories related to emotion agree that there is a link between an emotion and the elicited situation of the element. This means that basically the emotional system evaluates the biological significance of the stimuli (LeDoux, 1989).
- Emotions have a brief duration compared to other affective phenomena. Verduyn, Van Mechelen, and Tuerlinckx (2011) argue that there are no studies regarding the duration of an emotion. Thus, it is difficult to study the duration of an emotion, as its briefness in time hinders the measurement of emotional episodes, in contrast to other affective phenomena such as moods, preferences, affective styles, etc.

According to Sander (2013) the three current dominant models of emotion, *basic emotion models*, *circumplex/bidimensional models*, and *appraisal model*, share a common idea of the multi-component aspect of emotion, as these models consider that emotion is not a unit but rather composed of several components.

2.3.1. The Basic Emotion Theory

Basic emotions are typically categorised as innate, easy, categorical and immediate (see Russel, Bachorowski, & Fernandez-Dols, 2003). Thus, the basic emotion system is responsible for both *emotion elicitation*, through perception and schema production, as well as schema evaluation based on pattern matching with an emotion schema database, and *emotional responses*, through emotional responding, cognition, physiology, subjective experience, and expressive behaviour (Sander, 2013).

The Basic Emotion Theory defends the notion of independent emotion packages, where each emotion is triggered by the activation of a unique neural pathway of the central nervous system (CNS). Therefore, each emotion maps one neural system (Posner, Russel, & Peterson, 2005).

Matsumoto and Ekman (2009), main representatives of Basic Emotion Theory, emphasise the notion of multiple integrated responses when describing emotion elicitation, the term “emotion” is a metaphor that refers to a group of coordinated responses:

If the perceived schemas do not match those in the emotion schema database, no emotion is elicited and the individual continues to scan the environment. A match, however, initiates a group of responses, including expressive behaviour, physiology, cognitions, and subjective experience [...] In our view, the term 'emotion' is a metaphor that refers to this group of coordinated responses. (p. 69)

From another basic emotion perspective, Panksepp (2005) also considers the multifaceted nature of emotion: "I use the term emotion as the "umbrella" concept that includes affective, cognitive, behavioural, expressive, and a host of physiological changes" (p. 32). Neuroimaging experiments (Phan, Wager, Taylor, & Liberzon, 2002; Murphy, Nimmo-Smith, & Lawrence, 2003; Vytal & Hamman, 2010) have further supported the notion of specific brain systems for basic emotions. In this field, Murphy, Nimmo-Smith, and Lawrence (2003) conducted a meta-analysis on the activation distributions related to three basic emotions: fear was associated with the amygdale, disgust with the insula and globus palidus, and anger with the lateral orbito-frontal cortex. However, there was no difference in the activation distributions for happiness and sadness.

Some authors (Posner, Russel, & Peterson, 2005), who are against the theory of basic emotions, have argued that the theory is unable to explain the specific characteristics of affective disorders, meaning that basic emotion theories are incompatible with behavioural genetics. Moreover, investigations on the subjective components of emotion have suggested that emotions arise from cognitive interpretations of physiological experiences (Cacioppo, Berntson, Larsen, Poehlmann, & Ito, 2000; Russell, 2003), instead of examining the one-to one relationship between an emotion and its underlying neural system.

Furthermore, these studies have promoted the investigation of dimensional models, in order to understand the physiological grounds of affective experiences. Dimensional models present a different line of investigation focused on affective and clinical neurosciences, as they use experimental approaches such as neuroimaging, genetics, and developmental studies of emotion and affective disorders (Posner, Russel, & Peterson, 2005).

2.3.2. The Circumplex/ Bidimensional Theory

The Circumplex/Bidimensional Theories of emotion (valence and arousal) consider emotions in a wider spectrum. In fact, researchers have shown the interconnections established among several emotions (Russell & Carroll, 1999; Watson, Wiese, Vaidya, & Tellegen, 1999). Russell (2009) emphasises the psychological construct of emotion expression, based on strong contextual and cultural components. The term “components” refers to the fact that an emotional state is formed by several elements (mainly emotion’s components, associations among components-contextual and categorisation of components). Russell’s model has a bidimensional structure, which suggests that all affective states arise from two fundamental neuro-physiological components, one related to valence (a pleasure-displeasure continuum, positive or negative) and the other to arousal (high and low), also known as alertness (Sander, Grafman, & Zalla, 2003). For example, the emotion related to fear is viewed by circumplex theorists as a neurophysiological state that contains the negative valence and high arousal combined in the CNS (central nervous system), which produces a physiological activity within the elicited stimuli context. This means that as emotions are encountered and communicated, cognitive interpretations appear to identify the neurophysiological changes in the valence and arousal systems, thus these changes are reorganised in relation to stimuli, prior experiences, behavioural responses, and semantic knowledge (Russel, 2003).

2.3.3. The Appraisal Model of emotion

The Appraisal Models of emotion also agree that emotions are multi-component phenomena, a feature that has been emphasised in the model proposed by Scherer (1984; 2009). Appraisal Theories acknowledge that cognitive processes evaluate the subjective meaning of an event. Thus, cognition is viewed as the origin of emotion (Sander, 2003). However, despite the fact that appraisal dimensions are considered in most theories as the major origin of emotion elicitation, other mechanisms, such as instincts, memory associations, reflexes, and direct sensory elicitation, can also elicit emotions (Sander, Grafman, & Zalla, 2003).

In summary, according to these major theories of emotion, five components are considered as part of the emotional models: 1) appraisal, 2) expression, 3) autonomic reaction, 4) action tendency, and 5) feeling. As seen in Figure 7, the appraisal component

is typically considered responsible for emotion elicitation, whereas the other four components are considered as comprising the emotional response.

In recent years affective neuroscience approach has attempted to study the appraisal mechanisms by means of electroencephalography measures, and examine the temporal order of some of the elements involved in appraisal structures.

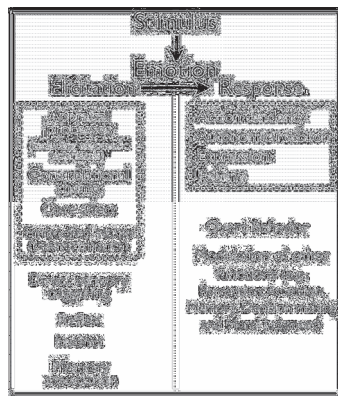


Figure 7 Mechanisms involved in emotion elicitation and its effects on the emotional response.
Extracted from Sander (2013)

As can be seen in Figure 7, the effects of emotion on behaviour and on other psychological functions are considered in the theories of emotion. Besides, dashed lines surrounding some mechanisms indicate that these mechanisms are considered in some theories to be part of the emotion process.

2.4. Cognition and Affect- the Appraisal System

The relationship between cognition and affect is illustrated by the *Appraisal Theory* (Schumann, 1997; Schumann & Crowell, 2004), where a stimulus generates mental activity that enhances or inhibits learning. Hence, affective stimulus appraisal, which is considered as one's evaluation of potential harms or benefits of external stimuli in any given situation, is the central element of cognition. Therefore, affect has two important roles in learning, "emotional reactions influence attention and effort devoted to learning, and patterns of appraisal may underlie what has been considered motivation in SLA" (Schumann, 1997, p. 8). This means that if a student has a positive assessment of a stimulus his/her attention and effort will increase resulting in a positive outcome, whereas

a negative evaluation of the stimulus may give rise to avoidance and neglect. Schumann (1994b) also pointed out the twofold relation between affect and cognition, as constituting integrated neural systems, which are distinguishable but inseparable parts of a mutually interacting system

The *Stimulus Appraisal Approach* developed by Schumann to understand affect and motivation in SLA was based on Scherer's (1984) conceptualisation of how people assess stimuli in the environment by making appraisals under five categories, considering whether the situation is: 1) novel, 2) unpleasant, 3) if it contributes to one's goals or needs, 4) if we have the potential to deal with the consequences of this situation, and finally 5) to which extent engaging the situation may affect our self and social image.

Schumann's work focused on describing the biological basis of motivation in human activity, including language learning, highlighting the two innate systems operating in the human, the *homeostatic* (bodily/survival) and *socio-static* (interacting with others) regulation that motivate all our actions. The author claims that despite the innate regulation systems, everyone develops an individual system of *somatic* values:

Through experience in the world, individuals accrue idiosyncratic preferences and aversions, which lead them to like certain things and dislike others (...).Organisms seem to determine value on the basis of certain criteria (...).These appraisal systems assign value to current stimuli based on past experience(...). The value mechanisms influence the cognition (perception, attention, memory, and action) that is devoted to learning. (Schumann, 1997, p. 2)

The three values (homeostatic, sociostatic, and somatic) constitute the so-called *emotional memory* (Schumann, 1997, p. 36), which gives rise to individual (idiosyncratic) appraisal systems. Considering that the somatic value system is gathered through each individual's experience (e.g. in a learning context), appraisal systems are unique to a given individual and even the same stimulus may activate different appraisals. Therefore, the genetic and developmental influences produce certain neurobiological systems that sustain the stimulus appraisal, which may vary from individual to individual.

In the context of language learning, as Schumann emphasises, appraisals will determine the approach the learner takes towards the teacher, peers, methods, materials, and ultimately all of the observable variables of a learning process. Schumann (1997) states that the appraisal system:

[...] guide our learning and foster the long-term cognitive effort (action tendencies) necessary to achieve high levels of mastery and expertise. The appraisals also curtail learning, producing variable success. This stimulus appraisal system, then, is a major factor in the wide range of proficiencies in SLA, and SLA, in this formulation, serves as a model for all SDL (sustained deep learning). (p. 36)

Sustained Deep Learning (SDL) is understood as the individual variations found in each person, which are extensively modulated by affect. This type of learning is referred to as *sustained* because it occurs during an extensive period of time until it is achieved, and it is considered *deep* because when it is complete the learner is considered proficient, or an expert. Therefore, second language acquisition is a type of SDL, and “it is the brain’s stimulus appraisal system that modulates cognition, thus causing the variability in success that is so characteristic of SLA” (Schumann, 1994a, p. 236).

Memory also plays an important role in the Stimulus Appraisal Theory. Leventhal (1984) contributed to the idea of the notion of schematic emotional memory, arguing that there are two parallel memory systems- one for events and another for emotions that accompany these events. The record of emotional reactions to gain experience starts from birth and evolves through life and acts as a filter that influences the emotional appraisal of subsequent experience. As each individual’s experience in life is different, each individual will have a different emotional memory system. Therefore, two individuals may appraise the same stimulus situation very differently either positively or negatively. Affective factors, therefore, are viewed as individual phenomena that may vary and take place within each individual in response to external stimuli

Regarding the relation between cognition and emotion from an anatomical perspective, the brain’s structures that allow affect to influence cognition are elements of the limbic system embedded in the mid-brain that regulate hormones and are related to emotional behaviour. Some of these brain structures have already been described in section (2.2 Emotion: A Biological foundation), such as the amygdala, the orbito frontal cortex (OFC), located in the prefrontal cortex, which is involved in decision making (related to reward and punishment). The OFC and the amygdala are highly interrelated and play an important role in emotion and social behaviours (Blakemore & Choudhury 2006; Sowell et al., 2003). The cortex, the wrinkled exterior layer of the brain, takes care of higher mental functions, such as reasoning, language development and vision. Finally, the body proper is

part of the stimulus appraisal system, as changes in heart rate, breathing and perspiration feed back up to the brain to signal affective changes (Schumann, 1997).

The development of Stimulus appraisal begins from birth as newborns experience the sights, sounds, tastes, smells, tactile sensations (homeostatic) and inhabitants of the world (sociostatic), and the stimulus appraisal system (somatic) is built on top of the neurobiological structures available to newborns.

2.5. Emotions in the field of SLA

Researchers in the field of SLA have acknowledged affect as an important element of individual differences in learning outcomes (Ellis, 1994). The concept of affect includes a wide range of affective variables such as emotional and motivational aspects of behaviour (e.g., Dörnyei, 1995, 2003, 2005; Gardner, 1985, 2001; Gardner & Lambert, 1972; Horwitz, 1986, 2001) as well as personality characteristics (e.g., Dewaele & Furnham, 1999; Ehrman, Leaver, & Oxford, 2003).

A useful starting point to conceptualise affect in the area of non-native language (L2) learning is Stevick's (1980) statement: "success [in language learning] depends less on materials, techniques and linguistic analyses, and more on what goes on inside and between the people in the classroom" (p.4). According to Stevick (1980) the affective variables of each learner such as self-esteem, anxiety, attribution variables, and motivation are what occur inside the learner, whereas the transactions and interactions between students in the classroom are what *go* between people. Scovel (2000) also remarks the importance of emotions in language learning, as it is probably the main influential aspect in second language learning and development.

There have been criticisms on the developments and research in SLA, Kramsch (2009) argues that SLA researchers focus more on the process of acquisition than on the "flesh-and-blood individuals who are doing the learning" (p. 2). Thus, Kramsch echoes Scovel's (1978) reflection on the role of affect in SLA, which probably has been the least understood construct within the field (see also Swain, 2011). A prolific research of affect has been done in the last three decades focusing on studies concerning predominantly anxiety (e.g., Elkhafaiti, 2005; Horwitz, Horwitz, & Cope, 1986) and motivation (for a review see e.g., Dörnyei, 2005; Dörnyei & Csizér 2002; Gardner & Lambert, 1972).

However, critics have argued the theoretical ambiguity surrounding the notions of affect and emotions in SLA. Ortega (2009), for example, argues that “the area of affect and L2 learning is fraught with theoretical, conceptual, and methodological challenges” (p. 214), a view strongly supported by Pavlenko (2013), who claims that the affective factors paradigm “has exhausted its limited explanatory potential” (p. 8). Thus, as Costa (2015) states, an alternative way of overcoming this ambiguous impasse is to attain a complete final understanding of emotion, motivation, and affective domain in the field of SLA, instead of attempting to establish a whole theory of affect, which Dewaele (2013a) defines as the search for the Holy Grail (p. 1).

2.5.1. Research on the effect of affect in SLA

Traditionally research has focused more on the cognitive processes of language learning rather than on the affective variables that may interplay in language learning. However, the role of affect in language learning has been demonstrated in several research papers, highlighting the importance of affective variables in language learning (for a review see Gardner, Tremblay, & Masgoret, 1997) or in specifically affective variables such as motivation (Dörnyei, 2005) and anxiety (Dewaele, Petrides, & Furnham, 2008; Horwitz, Horwitz, & Cope, 1986).

Currently, emotion is a fundamental concept that enables to understand language learning process and development, and a prolific number of studies are being carried out in relation to several affective variables. Each variable, as will be presented in detail in the next section, corresponds to general investigations on affective variables in relation to language learning.

Hashimoto (2002) carried out a study to examine affective variables as predictors of reported second language (L2) use in classrooms of Japanese ESL (English as a Second Language) students. The studies were based on the socio-educational model and the willingness to communicate (model), in an attempt to partially replicate a previous study by MacIntyre and Charos (1996). Descriptive analysis, correlation and construct validity were examined, and a model of L2 communication was tested using structural equation modelling. Results showed that motivation and Willingness to Communicate (WTC) affect reported L2 communication frequency in classrooms. Interestingly, perceived competence and L2 anxiety were the main causes of WTC, which led to more L2 use. In contrast L2 anxiety was found to have a negative influence in perceived competence, and the research

proved that there was a link between WTC and motivation. Finally, perceived competence had a strong and direct influence on motivation. According to Dörnyei (2003) the concept of *Willingness to Communicate* (WTC) shares aspects of motivation and communicative competence research. This construct consists of several layers and includes a range of linguistic and psychological variables, including linguistic self-confidence (both state and trait), the desire to affiliate with a person; interpersonal motivation, intergroup attitudes; motivation, and climate; parameters of the social situation; communicative competence and experience, and various personality traits.

Bown (2009) published a study using a qualitative approach (semi-structured interviews and narrative journals) to investigate the regulation of emotion by 22 beginner learners of Russian. The study presents a situated view of the processes and strategies used by the learners to manage their own instructional process. The author claims the importance of understanding the learner's beliefs and the social interaction among learners as these factors had an important effect on language learning outcomes. The results of the study show that "learner's cognitive appraisals of situations mediated their experiences of emotions and that they applied their cognitive abilities to self-regulate emotions during language learning" (Dewaele, 2011, p. 26). Furthermore, the study proved that effective self-regulation was a strong characteristic to modulate and shape their emotions and motivation, thus creating an affective environment appropriate for their language learning.

The author carried out another study on successful self-instructed language learning (Bown, 2006) using methodology of case studies. In this context successful learning may be attributed to internal locus learning and the use of the affective strategies, "which serve to regulate emotions, attitude and motivation" (Richards & Renandya 2002, p.121). Affective strategies allowed them to lower the anxiety and to realise how much progress they had made since they had started learning such a demanding language. Bown (2006) reported that those learners who were less successful did not use any affective strategies to manage the affective load which resulted in self-instructed learning context.

Bown and White (2010) were concerned with self-regulation of affect and individual foreign language instruction in Russian as an L2. Bown and White (2010) claim that "to intelligently process a range of emotions, learners must draw on and reflect on their knowledge of self, of emotions and of how to regulate those emotions" (p. 434). The results show that students experienced both positive (e.g., enjoyment, hope, pride) and negative emotions (e.g., frustration, shame, anxiety, despair) which were intertwined.

Besides, negative emotions exerted negative effects on students' cognitive processes because "powerful negative emotions were experienced as all-consuming, cancelling out any ability to focus on the language, to remember target language forms or to process the language in productive ways" (p.441). Thus, the negative emotions made learners avoid or even abandon learning the language. In general, the authors concluded that emotions guided students' learning Russian.

Mercer (2006) also studied the emotional experience of learners in the foreign language classroom. The sample taken was advanced tertiary level learners during a semester course. The learners wrote about their emotional experiences during the classroom on a journal. After that, the learners completed a questionnaire, based on the notes taken from the journal, which extracted information about the learners' beliefs and emotions during language learning process within the classroom. Students reported the help that the journals provided them during language learning, as they were able to identify their emotions and beliefs during learning.

Garrett and Young (2009) studied a single learner's emotional responses to an intensive Portuguese course. The study focused on how the learner's emotions, positive and negative, were produced and changed during the course. Their study was a novelty as previous longitudinal research on individual language learning focused on the development of linguistic ability or communicative competence in the target language rather than on emotion. Results showed that the learner was motivated by cultural interest and social interaction with the target language. The study shows that emotion should not be seen as the previous step to motivated actions but rather that it intervenes during the whole process of language learning.

Regarding the relation of language learning and affective motivational variables, Bernaus, Moore, and Azevedo (2002) conducted a study examining the affective factors influencing 176 students' of Catalan across different levels (12-17 years old) in a multilingual school community in Barcelona (Catalonia, Spain). It is important to highlight that most of these students were not born in Catalonia. The study met two main aspects: firstly, most of the students were simultaneously learning 2 official languages, Catalan and Spanish, both inside and outside the classroom, and a foreign language, English; secondly, the instrument used to assess the affective variables made use of scales from 2 different models, by Dornyei (2001b) and Gardner (1985). The results showed that: 1) students hardly ever used Catalan in comparison to Spanish even though Catalan is an official

language and is taught at school; 2) nationality of students had scarce influence on most affective variables; 3) attitudes and motivation decreased and language anxiety increased as year level increased too, and 4) the constructs assessed by the scales in the 2 models (i.e., Dornyei, 2001; Gardner, 1985) among the various affective variables are comparable to other studies (Gardner, 1985, 2005).

Another study in the same field was carried out by Latif, Fadzil, Bahroom, Mohammad, and San (2011) to determine the relationship between various affective variables such as attitude, motivation, anxiety and instrumental orientation on performance in English as a second language. The results indicated that all of the four variables were significantly correlated with learners' performance in the English course they were taking. Moreover, the regression analysis showed that all of the variables except for personal motivation exerted significant negative impacts on performance anxiety, whereas attitude and instrumental orientation had positive impacts.

Nowadays the Common European Framework of Reference (CEFR, 2001, 5.1.3), which sets the basis for language learning through lifespan, includes the Existential competence among its competences involved in second language learning (*savoir-être*). This entails affective features of the learner the learning process, such as individual differences, attitudes, motivations, values, beliefs, cognitive styles and personality differences, contribute to their personal identity. According to CEFR these affective features significantly influence language learners and users both in their communicative acts and their ability to learn; the development of an “intercultural personality” involving both attitudes and awareness is considered as an important educational objective.

2.6. Affective Motivational Variables in Second Language Acquisition

“I hear and I forget, I see and I remember, I do and I understand” Confucius

2.6.1. Introduction

In order to understand the complex system that SLA entails, a thorough approach to different variables must be considered. The following section is devoted to giving a theoretical approach and research carried out in some of the most important affective motivational variables in SLA, namely: motivation, anxiety, self-concept, and attributions.

There is no doubt that affective motivational variables play an important role in SLA; however research in this field is scarce and limited to the two main affective variables, *motivation* and *anxiety*, which have generally been studied in separate fields of the language learning process.

Research has shown that SLA entails many factors that interact with each other, contributing to the development of learners' interlanguage (Selinker, 1972). The main factors that intervene in language learning acquisition and development are age, language and aptitude, motivational factors such as anxiety, self-concept, or attribution variables, and language learning strategies and materials. Thus, the language learners' interlanguage mainly depends on the way these factors interact and develop through the language learning process.

Motivation is typically considered as being related to emotion, but most scholars make a distinction between the two concepts (motivation and emotion) (Frijda, 1987, 2007). Motivation can be considered both as a determinant (cause the elicitation of emotion) and as a constituent (motivation is expressed in action tendencies) of emotion. In this regard, Schumann (2004) states that motivation and cognition are elements of the same unit (as it has been frequently treated in SLA research) but rather a part of cognition (p.3), hence, there can be no "cognitive" approaches to SLA that do not include motivation.

2.6.2. Motivation in SLA

One of the major affective variables, which is considered as the basis for language learning success, is motivation. Motivation is considered as the first step to initiate and sustain second language learning through lifespan. As a result, lack of motivation could lead to failure in the language learning development, even for those students with the most remarkable abilities to learn. Robert Gardner and Wallace Lambert (1972) stated some decades ago that, despite the fact that language aptitude depends primarily on each learners' individual variables, students' success in language learning depends more on motivation factors than on aptitude.

L2 motivation research has been an important area within L2 research. The field of L2 motivation has evolved through different stages, each of them focusing on different aspects, such as integration or specific language learning motivation, related to motivational psychology. Dörnyei and Ushioda (2011) have identified the following stages of L2 motivational research:

- The **Social Psychological Period** (1959-1990) - characterised by the work of Gardner and his students and associates in Canada.
- The **Cognitive-Situated Period** (during the 1990s) - characterised by work drawing on cognitive theories in educational psychology.
- The **Process-Oriented Period** (turn of the century) - characterised by an interest in motivational change, initiated by the work of Dörnyei and Ushioda (2011) and their colleagues in Europe.
- The **Socio-Dynamic Period** (current), related with dynamic systems and contextual interactions.

The following section thoroughly describes the main characteristics of each period.

- **The social psychological period**

The first three decades of L2 motivation research, up until the early 1990s were largely inspired and fuelled by the pioneering work on social psychologists in Canada, most notably Gardner, Lambert, Clément, and their associates.

The social psychological approach had its major tenet in the fact that “students’ attitudes toward the specific language group are bound to influence how successful they will be in incorporating aspects of that language” (Gardner, 1985, p 6). Gardner and Lambert (1972) viewed motivation as an independent factor of aptitude or ability. Thus, SLA was determined by both social and psychological fields, which distinguished language learning motivation as a different motivator in comparison with other types of learning motivation (Masgoret & Gardner, 2003). The social dimension of this theory implied that learners were not only expected to acquire knowledge but also to identify with the target language community and, in turn, adopt specific community behaviours related to L2. Two kinds of motivational orientation were proposed by Gardner and Lambert (1972): *integrative* orientation “reflecting a sincere and personal interest in the people and culture represented by the other group”, and *instrumental* orientation “reflecting the practical value and advantages of learning a new language” (p. 132)

Integrative motivation is described as a solid construct consisting of three main elements:

- *Integrativeness*, defined as students’ feelings to approach the L2, to interact with natives, and their interest towards the foreign language. This reflects “individual’s

willingness and interest in social interaction with members of other groups” (Gardner & MacIntyre, 1993, p. 159).

- *Attitudes* towards the learning situation: students’ behaviour towards the language teacher and the course.
- *Motivation*, described as the effort, struggle, and desire that students show towards the learning process.

The last revision of Gardner’s (2001) theoretical framework has led him to reconceptualise *Instrumental Motivation*, as a satellite subcomponent of motivation which may contribute to motivation development. Gardner (2001) claimed that: “There can be other supports for motivation not directly associated with integrative motivation. Thus, there may be instrumental factors contributing to motivation, and we could label this combination of instrumental factors and Motivation as Instrumental Motivation” (p.7).

Applying versions of a standardised motivation test were developed by Robert Gardner’s research group at the University of Western Ontario, the *Attitude /Motivation Test Battery* (AMTB). Thus, a great deal of empirical research during this period was directed at measuring the association between various aspects of motivation and L2 learning achievement. Motivation was established as a principal factor of second language acquisition, comparable in its impact to another well-researched learner variable, language aptitude.

In summary, the key concepts of Gardner’s theory of L2 motivation are: motivational intensity or effort, desire to learn the language, and attitudes towards learning the language. Motivation was viewed as a central mental “power” that implies effort, want/will (cognition) and task enjoyment (affect). According to Dörnyei (2005), a key aspect in Gardner’s motivation theory is the relationship between motivation and orientation (understood as goal). Gardner’s theory was the dominant motivation model in the L2 field for more than three decades. However, as Dörnyei (2005) states, in the 1980s there was a “*cognitive revolution*” in psychology which forced this theory aside as there was an existing gap between the way motivation was envisioned in L2 acquisition and educational psychology. As Dörnyei states (2005) Gardner’s theory Socio-Educational Model of Second Language Acquisition is not a model in itself but rather an outline of the relation between motivation and other ID variables and language achievement (see Gardner 2001, for a review).

▪ **The Cognitive-Situated Period**

The cognitive-situated period had two main goals:

- 1) There was an attempt to introduce new concepts from motivational psychology, considering a cognitive perspective, which entailed one's abilities, possibilities, potentials, and limitations. New trends in motivational psychology were present and a desire to extend our understanding of L2 motivation started to flourish. These aspects were considered a cornerstone of motivation.
- 2) There was a desire to define in a more specific way the macroperspective of L2 motivation (e.g, classrooms) in order to understand its function in a more situated learning environment.

The *Cognitive-Situated Period* focused on motivation within L2 classroom contexts, including other cognitive aspects of psychology such as intrinsic motivation, self-efficacy, and attributions, as well as considering also the socio-psychological dimension. During this period some theoretical frameworks were developed (e.g., Dörnyei, 1994; Williams & Burden, 1997).

Noels's (2001a) theory adaptation of *Self-Determination Theory* (Deci & Ryan, 1985, 2002) to language learning situations focused on two motivational dimensions: *intrinsic* motivation, which acts for "its own sake (e.g., to experience pleasure or to satisfy one's curiosity", Dörnyei, 2014), and *extrinsic* motivation, where the student is conditioned to external sources such a reward or threat.

Further research (McIntosh & Noels, 2004; Noels, 2001a, 2001b; Noels, Clément & Pelletier, 1999, 2001; Noels, Pelletier, Clément, & Vallerand, 2000) based on the *Cognitive-Situated Period* led to investigating two main aspects: a) to relate the various intrinsic/ extrinsic components of motivational psychology in relation to orientations developed in L2 research, and b) to examine how classroom settings and practices may affect the learners' self-determination level.

In the last few decades research (Dörnyei & Csizer, 2002; Inbar, Donitsa-Schmidt, & Shohamy, 2001) has confirmed that students who are actively implied in learning a foreign language foster language attitudes and motivation.

▪ **The process-oriented Period**

In the 1990s, an “Educational Shift” gave rise to a more micro-level structure of learning environments such as language classrooms and individual L2 motivation. Thus, research changed into a *more social awareness* perspective, due to the own social nature of L2.

Gardner’s work criticism led to a new reinterpretation of integrative motivation within a broader scope known as the “*L2 Motivational Self System*”. The *L2 Motivational Self-System* (Dörnyei, 2005, 2009a) entails three main concepts, a) one associated with the *ideal self*, b) another with the *ought-to L2 self*, and c) third component related to the student’s *learning experience*. According to Dörnyei (2009a):

- The *Ideal-L2 Self* is a person’s vision of a future L2-using self, including personal hopes and desires. The ideal L2-Self motivates the learner to invest effort in learning the L2, which is a powerful motivator to learn the L2 because of the desire to reduce the discrepancy between our actual and ideal selves. (Traditional integrative and internalised instrumental motives belong to this component. Gardner, 1985).
- The *Ought-to L2 Self* is a vision of a future self that includes the wishes and expectations of significant others, and is thus extrinsic and prevention in nature. The ought-to self refers to the attributes one believes one ought to possess, which may be similar to the expectations and wishes someone attempts to have.
- The *L2 learning experience* concerns situated executive motives related to the immediate learning environment and experience’ (influence of the teacher, curriculum, peer group, experience of success) (Dörnyei & Ushioda, 2011, p. 82).

A neglected area of the cognitive-situated approach was the dynamic character and temporal variation of motivation. Dörnyei (2000) (2001a) argues that establishing a relationship between specific learner behaviours and classroom settings, requires a more process-oriented approach that can observe the changes of motivation over time. Because, as Dörnyei (2005) states “even during a single L2 class there are continuous changes in the language-learning motivation of the student, and therefore, in the context of language learning in the classroom, motivation may undergo diverse phases” (p.83).

The main aspects of this paradigm are:

- *Pre-actional stage*: this stage is characterised by students' choice to develop and pursue a task in order to accomplish a goal, at this stage motivation needs to be produced.
- *Actional stage*: this stage is referred to as executive motivation, and it is especially important for sustained activities such as studying an L2, especially the learning in classroom settings. At this stage the generated motivation needs to be maintained and protected while particular action lasts.
- *Post-actional stage*: this phase is called *motivational retrospection* - which concerns the learners' retrospective evaluation of the process.

Dörnyei (2005) explains that the main feature of the *process-oriented approach* is that the three actional phases are related to several affective reasons. This means that students are influenced by a set of factors while they are performing an activity and after it has been performed, these motivational components can be organised according to the stage the student is developing.

The approach was a good starting point to understand the motivational process in language learning, which has culminated in contemporary attempts to assume a *dynamic systems perspective* in motivation research, that agglutinates several factors related to the learner, the learning task, and the learning environment into one complex system (Dörnyei & Ushioda, 2011).

▪ **The socio-dynamic period (current), dynamic systems and contextual interactions.**

Ellis and Larsen-Freeman (2006) state that “motivation is less a trait than fluid play, an ever-changing one that emerges from the processes of interaction of many agents, internal and external, in the ever-changing complex world of the learner” (p. 563).

The Dynamic Systems Theory accounts for the researchers' needs to establish a wide spectrum of the second language learning research, considering specific individual differences of students in a constant changing environment. Thus, L2 motivation is viewed as a constant changing element in L2 learning and development, as shown in several studies focusing on longer periods in the learners' lifespan (Lim, 2002; Shedyiv, 2004).

The *Socio-Dynamic Period* focuses on the specific complexity of the L2 motivation process and its interaction with multiple internal, external, and contextual factors, that is, a shift to *dynamic systems perspectives* on motivation (e.g., Dörnyei,

2009a; Ushioda, 2009). These dynamic system perspectives consider L2 motivation as a more complex construct, which demands a more thorough data investigation, where interview, classroom observation, learner journals, and other information is collected to understand the complexity of the language learning process and language use, in order to obtain a rich holistic analysis of motivation-in-context, rather than relying only on quantitative methods (Ushioda & Dörnyei, 2012; Dörnyei, MacIntyre, & Henry, 2015). DST provides an ample panorama under which motivation and other affective variables could be framed, as these factors interact within a complex system. The individual is the focus of concern, and case studies represent the essential reference point from which the study of L2 motivation development is viewed.

Finally, it is worth mentioning a new novel psychological construct called Directed Motivational Currents (DMC) (Dörnyei, Muir, & Ibrahim, 2015), which draws on several aspects from main motivation theories in psychology and current theories from Applied Linguistics, such as L2 Motivational Self-System, language learning vision and Dynamic Systems Theory. Dörnyei, Ibrahim, & Muir (2015) argue that the notion of DMCs is in line with the socio-dynamic period. As asserted by the authors this is due to the capability of the relevant construct to coordinate a variety of complex factors and to eliminate different impediments by means of an intense commitment to an ultimate goal. Thus, this construct is described as an intense motivational drive which is capable of both stimulating and supporting long-term behaviour, such as learning a foreign/second language (L2). Thus, DCMs is viewed as an optimal disposition which is characterised by having a goal/vision orientedness, a salient and facilitative structure, a participative perceived behavioural control, a clear perception of progress and a positive emotional loading. Therefore, this theory is a powerful tool to implement in the L2 classroom. However its application is still to be developed.

In conclusion, despite the scarce research carried out on examining the temporal progression of L2 motivation, it is with no doubt a potential field of research that would enrich the understanding of the attitudinal/ motivational basis of language learning.

2.6.2.1. Research on motivation and SLA

Traditionally, many motivation studies attempted to describe, either motivational patterns of English language learners or to establish a relationship between motivation and other SLA variables. Pedagogical views were used to describe other SLA variables

associated with motivation, such as learner's proficiency, methodology of language learning, and impact of instructional materials (Balkır & Topkaya, 2009; Ajibade & Ndububa, 2008; Liu, 2007; Wang, 2007). As research on motivation has been widely extensive, I will highlight some of the most remarkable studies that have been carried out and are related to the objective of this study.

Motivation has been highly related to language engagement, Dörnyei and Kormos (2000) studied the motivational background found in student's engagement in communicative L2 tasks. They found that learner's overall disposition towards task performance has at least three distinct layers: a) generalised motives (e. g *integrativeness*), b) course-specific motives (*appraisal of the L2 course*), and c) task-specific motives (*attitudes towards the particular task*). They also integrated the WTC (Willingness to Communicate) concept (MacIntyre, Clément, Dörnyei, & Noels, 1998; MacIntyre, Baker, Clément, & Donovan, 2003) as a variable in the learner performance, considering the linguistic and psychological variables, including linguistic self-confidence (both state and trait) embodied in the Willingness to Communicate (WTC) concept.

The field of motivation and learning strategy use has been of great interest, notably Schmidt and Watanabe (2001) studied the relationship between motivation and learning strategy use with 2.000 university students. The study revealed that motivation does indeed affect strategy use and preferences for different types of classroom activities, but some associations are much stronger than others. For example the motivational factors that most affected strategy use and pedagogical preferences were *value*, *motivational strength* and *cooperativeness*, whereas the *heritage language* factor appears to have little or no influence on these variables. Among the different types of learning strategies, the use of cognitive and metacognitive strategies were mostly affected by motivation, and among the types of pedagogical preferences that were investigated, approval of challenging activities were mostly affected by motivation.

Qualitative research methodology has presented investigations focusing on issues such as attributions, motivational development, classroom motives, self-motivation, and the motivational impact of the learner's self-concept (see Ushioda, 1998, 2001; Williams & Burden, 1999; Williams, Burden & Al-Baharna, 2001; Nikolov, 1999, 2001; Syed, 2001).

A study by Kormos and Dörnyei (2004) emphasized that focusing on task performance as a unit of analysis brings a new way of understanding the approaches of L2 motivation research. This means that research has experienced a shift from a

macroperspective view to a more situation specific approach. However fewer studies have been carried out in this field, in comparison with the abundant research on cognitive aspects related to task performance (Ellis, 2003; Skehan, 2003).

Williams, Burden, and Lanvers (2002) used a questionnaire survey and pupil interviews to investigate British pupils' motivation towards learning foreign languages (FLs). They compared year 7 (11-12 years old) and year 9 (13-14 years old) pupil scores, showing pupils' desire to identify with FLs native speakers, their feelings about the competence their teachers have and the perceived importance of learning a FL, which diminished as they grew older. Perceived success, perceived ability, use of metacognitive strategies, and the amount of effort devoted to language learning considerably decreased over the first few years at secondary school.

A series of investigations have confirmed Dörnyei's L2 Motivational Self System theory (2005). Kormos and Csizer (2008) conducted a study on the effect of motivation when learning English as a foreign language in three distinct learner populations: secondary school pupils, university students, and adult language learners. The study revealed that the main factors affecting students second language (L2) motivation were language learning attitudes and the Ideal-L2 Self, which proves the empirical support for the main construct of the theory of the L2 Motivational Self-System (Dörnyei, 2005). The models of motivated behaviour varied among the three learner groups investigated. For example in the case of secondary school pupils, interest in English-language cultural products was what affected their motivated behaviour, whereas international posture was an important variable only for university students and adult language learners.

Papi (2010) developed a research in a formal context in Iran, which was also based on the L2 Motivational Self-System's Theory (Dörnyei, 2005). The results revealed that all the variables contained in Dörnyei's theory significantly contributed to intended effort, and while the ideal L2 self and the L2 learning experience reduced students' English anxiety, the ought-to L2 self significantly increased students' anxiety.

Another study in Iran in a public context was conducted by Rajab, Roohbakhsh, and Etemadzadeh (2012). The results indicated a strong relationship between the ideal L2 self and the intended effort to learn a second language.

Furthermore, Watanabe (2010) investigated motivational variables affecting female long-term learners of English in Japan. Conclusions of the study showed that the

Ideal L2 Self sustained females' interest to continue learning the foreign language, despite frustrating experiences through the learning process.

Finally, Takahashi (2013) carried out some interviews with six non-English major university students, to understand the ideal L2 selves in a formal context. Results indicated that the interviewees' ideal L2 selves changed depending on their contents and specificity.

Ghanizadeh and Rostami (2015) conducted a research on two distinct instructional settings: public and private schools, which are different in terms of learning objectives, approaches, and methods. The study followed Dörnyei's (2005) Motivational Self-System model with 905 high school EFL learners. Results showed that regarding L2 motivation and attitudes, volition was considered a key factor in learning, and variations in L2 motivation was seen in both settings.

Several studies are applying the Dynamic Systems Theory to motivational aspects. For example, a study carried out by Shoaib and Dörnyei (2005) with 25 language learners over two decades, revealed six motivation-specific aspects: a) maturation and gradually increasing interest, b) standstill period, c) moving into a new life phase, d) internalising external goals and imported visions, e) relationship with a significant other, and f) time spent in the host environment. Thus, adopting a systemic perspective in L2 motivation (Dörnyei & Ushioda, 2011) research helps to understand the specific aspects that produce motivation, because according to dynamic systems theory a system appears from dynamic interactions of various parts of that system, which are in constant flux (Spivey, 2007). Another study carried out by Papi and Teimouri (2012) investigated the temporal evolution of the motivational characteristics of Iranian learners of English as a foreign language (EFL) across three groups: secondary school, high school, and university students. From data collected of 1.041 Iranian English language learners, the results showed that the promotion-focus variables (e.g. the ideal L2 self, L2 learning experience, instrumentality promotion, attitudes towards L2 culture and community) generally improved with age up to entry into university. However, the variables that prevented regulatory focus (e.g., the Ought-to-L2 self, family influence, instrumentality-prevention) declined with age. Furthermore, multiple-regression analyses results showed that only promotional variables predicted motivated learning behaviour and factors associated with motivation, and the ideal L2 self were different to the factors associated with the ought-to L2 self. The study was carried out based on the socio-educational context of Iran. The

study provides strong evidence for a dynamic perspective towards L2 motivation and possible L2 selves.

Finally, a study by Saheb (2014) carried out among adult students of basic and upper secondary levels of English in Stockholm, has concluded that instrumental and integrative motivations of adult learners are concomitant. Differences are found between extrinsic and intrinsic motivations. Thus the results demonstrate that attitudinal motivation varies according to age range.

2.6.3. Anxiety

Anxiety is the dizziness of freedom (Søren Kierkegaard)

Language anxiety is one of the affective variables considered as worth studying because of its complexity when learning a second language. In fact, the anxiety variable has been regarded in some models of Second Language Acquisition/learning as the most prominent variable.

Krashen's Monitor Model and his Affective Filter Hypothesis (Krashen, 1981; 1982), Schumann's Acculturation Model (Schumann, 1986), and Gardner's Socio Educational Model (Gardner & MacIntyre, 1993) are examples of how anxiety has been approached by several theories.

According to Spielberger (1983, p.1) *anxiety* "is the subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the autonomic nervous system (ANS)". Moreover, anxiety-related behaviour differs from culture to culture (Oxford, 2003). Horwitz (2001) claims that one-third of all foreign language learners experience some level of language anxiety at some point of their learning process. Reeve (2005) states that Foreign Language Anxiety (FLA) is an emergent, coordinated emotion with feeling, arousal, purposive, and expressive phenomena.

The effects of anxiety on foreign language learning have been studied since the 1970s (Scovel, 1978; Tobias, 1979). However, in the 1980s a general theory about foreign language classroom anxiety was presented by Horwitz, who was the main researcher in language learning anxiety until that time. Horwitz, Horwitz, and Cope (1986) stated that foreign language anxiety is a specific syndrome that may be related to three types of anxiety, including *communication apprehension*, *fear of negative evaluation*, and *test anxiety* (Arnaiz & Guillén, 2012; Liu & Jackson, 2008).

- *Communication apprehension* refers to the uncomfortable feeling individuals experience when expressing themselves in front of others. MacIntyre and Gardner (1989) mentioned that there is a mismatch between foreign language students' mature thoughts and their incomplete foreign mastery, which sometimes leads them to experience self-consciousness, anxiety, and frustration.
- *Fear of negative social evaluation* is likely to appear in students who are too worried about their academic and personal evaluations of their performance and competence in the target language (Kitano, 2011). Making errors is part of the learning process, however for some students errors can be a source of anxiety because it can constitute an obstacle when speaking the second language.
- Finally, *Test anxiety* also seems relevant when examining anxious foreign or second language learners, when it refers to a type of performance anxiety that converts from fear into failure, as in the case of an exam situation. Thus, oral tests can cause both test and oral communication anxiety simultaneously.

MacIntyre and Gardner (1991b) found that *communication apprehension* and *fear of social evaluation* were the main causes of foreign language anxiety, while test anxiety was just a general problem, and it was independent from the foreign language anxiety.

There are three approaches to the study of anxiety: *trait anxiety*, *state anxiety*, and *situation specific perspectives*.

- **Trait Anxiety**

Trait anxiety is defined as an individual's likelihood of becoming anxious in any situation (Spielberger, 1983). A person with high trait anxiety will be more sensitive to become apprehensive in several situations in his /her life. Trait anxiety has been proved to impair cognitive functioning, disrupt memory, lead to avoidance behaviours, and to have several other effects (Eysenck, 1979). Considerable research has been done in trait anxiety showing the pervasive influence that anxiety can have on cognitive, affective, and behavioural functioning. However, some criticisms have arisen with regards to the "useless contribution that traits may have unless they are considered in interaction with situations" (MacIntyre & Gardner, 1991a, p. 88).

Furthermore, Foreign Language Anxiety (FLA) is distinct from trait anxiety, as the latter is considered a permanent, individual difference. In contrast, traits are concerned with stable, general patterns of behaviour, which means that an individual with a high level

of trait anxiety is likely to feel anxious in a variety of contexts. Spielberger (1983) developed a Trait Anxiety Scale that was not specifically designed for language production and showed no consistent link with L2 variables.

- **State anxiety**

State anxiety is considered as the apprehension experienced at a particular moment in time, for example, prior to taking an exam (Spielberger, 1983; Schmidt, 2004). Spielberger (1983) argues that there is a strong positive correlation between trait and state anxiety. At the state level, “the concern is for experiences rooted in a specific moment in time without much concern for how frequently those experiences occurred in the past or whether they might occur again in the future” (MacIntyre, 2007, p.565).

Second language performance seems to correlate negatively with higher levels of state anxiety (Gregersen, 2003; MacIntyre & Gardner, 1994). Thus, MacIntyre (2007) explains that *state anxiety* research is more complex as learners attempt to cope with and compensate the effects of anxiety increase, as well as for the automaticity created, which lessens the emotional arousal during lifespan. An example of such state *foreign language anxiety* (FLA) is described in a study developed by Dörnyei and Kormos (2000). The authors found that participants with low levels of FLA could momentarily experience higher levels of FLA with interlocutors that had less confidence in the L2. As Dörnyei and Kormos (2000) state: “the interlocutor with a higher level of FLA would pull the less anxious speaker along” (p. 296).

- **Situation Specific Perspectives**

Horwitz, Horwitz and Cope (1986) developed the concept of *situation-specific anxiety* construct to refer to Foreign Language Anxiety (FLA), which was responsible for students’ negative emotional reactions towards language learning.

Thus according to Horwitz, Horwitz and Cope (1986), Foreign Language Anxiety (FLA) “is a distinct complex of self-perceptions, beliefs, feelings, and behaviours related to classroom language learning, arising from the uniqueness of the (foreign) language learning process”(p. 128). This FLA was considered different from state anxiety, which occurs within specific, temporary situations and fades when the threat (or situation) disappears (MacIntyre & Gardner, 1991a; Spielberger & Vagg, 1995).

Horwitz, Horwitz and Cope (1986) confirm that FLA is distinct from other types of anxiety and is classified as *situation-specific anxiety*, which is prompted by a specific set of conditions for example, public speaking or participating in class (Ellis, 2005). As MacIntyre states (2007) with regards to the situation-specific level concept: “the concern is for concepts that are defined over time within a situation” (p.565). Thus, FLA stems from the inherent lack of reality associated with immature second language communicative abilities.

Horwitz, Horwitz, and Cope (1986) developed the *Foreign Language Classroom Anxiety Scale (FLCAS)*, in order to measure this situation-specific anxiety. This scale has been largely used among studies in second language learning anxiety (see Ortega-Cebreros, 2003; Frantzen & Magnost, 2005; Von Wörde, 2003). Horwitz, Horwitz, and Cope (1986) understand FLA as “a distinct complex of self-perceptions, beliefs, feelings, and behaviours related to classroom learning arising from the uniqueness of the language learning process” (p. 128). However, other researchers such as Sparks, Ganschow and colleagues support the idea that anxiety appears from language aptitude and difficulties (see Sparks & Ganschow 2007; Sparks, Ganschow, & Javorsky, 2001; Sparks, Ganschow, Artzer, Siebenhar, & Plageman, 2004).

In this field of work, Sparks and Patton (2013) consider that the FLCAS is an instrument, which is likely to measure individual differences in students’ language skills and self-perceptions rather than a type of anxiety uniquely related to L2 learning. Thus, they suggest that skill in one’s native language (e.g., reading, vocabulary, group achievement) may affect anxiety levels in the foreign language learning (Ganschow & Sparks, 1996). As Sparks et al. (2004) point out “students who have overt or subtle native-language difficulties in reading, writing, listening, and speaking are likely to experience similar difficulties in learning a foreign language” (p. 209).

Despite the contrasting views regarding the FLA, the *situation-specific anxiety* proposed by Horwitz, Horwitz, and Cope (1986) has been found to be largely independent of other types of anxiety in response to language learning; thus, as MacIntyre and Gardner (1994) state “it offers more to the understanding of anxiety because the respondents are queried about various aspects of the situation”. (p. 91)

Thus, *Foreign Language Anxiety* has been claimed to have a facilitating effect, a debilitating effect, and no effect at all on the learners’ performance and L2 achievement (Dornyei, 2005). Hence, some approaches have distinguished between *facilitating anxiety*

and *debilitating anxiety* (Alpert & Haber, 1960; Kleinmann, 1977; Scovel, 1978). The term *facilitating anxiety*, as its name suggests, is considered as a kind of anxiety that improves learning and performance, whereas *debilitating anxiety* is related to poor or unsuccessful learning and performance. For example, Scovel (1978) stated that anxiety can affect language acquisition differently. Some early research suggested that different quantities of *facilitating anxiety* and *debilitating anxiety* may be present in the same individual at the same time (Scovel, 1978). On the one hand, mild anxiety can be beneficial, or facilitating, and can also motivate the learner to approach and apply himself/herself to the learning task. In contrast, too much anxiety can be harmful, or debilitating.

Horwitz (2001) has always claimed that anxiety is debilitating, because as she states, it diminishes the learners' linguistic performance. Researchers have claimed that *debilitating anxiety* can be produced by several factors such as lack of self-confidence/self-esteem, oral production tasks, and unfriendly teaching environments (Cheng, Horwitz, & Schallert, 1999; Horwitz, 1987, 2000; Horwitz, Horwitz, & Cope, 1986). In this sense, Horwitz (2000) concludes that "the potential of anxiety to interfere with learning and performance is one of the most accepted phenomena in psychology and education" (p.256).

In summary, in order to understand the relationship between anxiety and achievement in language learning, it is important to consider the role of anxiety in language performance. It is often difficult to determine if anxiety actually interferes with learning, thus influencing achievement levels, or if anxiety restrains learners from achieving their desired language competence. Besides other elements such as classroom-related anxiety, peer-relation, and classroom practices may influence in students' anxiety (Zhang & Zhong, 2012), because as the authors state the main cause of students' anxiety is their unrealistic or erroneous perception of their language learning process.

Hence, the emphasis should be placed on understanding a complete view of anxiety-related factors, including feelings of frustration or discomfort, situation-specific concept, and other external elements that may intervene in the language learning achievement. However, as Dewaele (2017, p. 444) states: "...the number of independent variables that could have a direct or indirect effect on FLA/FLCA is so large that they cannot all be included in one massive analyses", this means that sometimes researchers are forced to focus on some independent variables related to FLA/FLCA.

In the following part, a description of some of the most relevant studies on FLA is presented.

2.6.3.1. Research studies on Anxiety and SLA

In general, studies on anxiety and language learning report a moderate negative link between FLCA and various measures of FL achievement (Gardner & MacIntyre 1993; Horwitz, Horwitz, & Cope 1986; MacIntyre & Gardner 1991a, 1991b, 1991c; Onwuegbuzie, Bailey, & Daley 1999, 2000, 2002; Mahmood & Iqbal, 2010; Sanchez Herrero & Sanchez 1992; Woodrow, 2006). Research on the relationship between language anxiety and language achievement has shown that language anxiety significantly affects language achievement (Dalkilic, 2001) or performance (Dewaele 2007; Lu & Liu, 2011), causing poor language outcomes (Horwitz, 2001; Skehan, 1989).

The following section presents studies of Foreign Language Anxiety related to several features.

2.6.3.1.1. Studies regarding the main factors of FLA

Several studies have attempted to establish the main elements of FLA, the most important variables that predict FLA, and other relevant factors related to anxiety. Thus, MacIntyre and Gardner (1989) found two orthogonal dimensions of anxiety which were labelled as *General Anxiety* and *Communicative Anxiety*. The former factor included scales of trait, state, and test anxiety. The latter was defined by French Class, French Use, English Class and Audience anxieties. It was found that only Communicative Anxiety is a factor in both the acquisition and production of French vocabulary.

A study that identifies the main variables predicting FLA was conducted by Onwuegbuzie, Bailey, and Daley (1999), who examined the effect of 26 factors on foreign language anxiety with 210 university students enrolled in French, Spanish, German, and Japanese courses. The authors identified seven variables that significantly predicted foreign language anxiety (i.e., age, academic achievement, prior history of visiting foreign countries, prior high school, experience with foreign languages, expected overall average for current language course, perceived scholastic competence, and perceived self-worth). These variables accounted for 40% variance in foreign language anxiety (p. 232).

Chen and Chang (2004) stressed the importance of not only identifying language anxiety, but also diagnosing which other factors were associated with it (e.g., classroom climate, particular teachers, and learning activities), in an attempt to understand the elements that may provoke anxiety.

A contrasting view on the role of anxiety in foreign language learning was researched by Sparks and Ganschow (2007), who conducted a longitudinal study over 10 years testing 54 students. The authors argued that anxiety is produced by native language aptitudes and difficulties. Students were tested with native language measures (e.g., native language skill, foreign language aptitude, foreign language proficiency, foreign language word decoding and spelling, and foreign language achievement). Students were divided into three groups based on their scores on the FLCAS. (All students had completed two years of Spanish, French, or German). The results showed that the low anxious group scored significantly higher than the high anxious group on all native language measures beginning in second grade, and the former group also scored higher than the latter in all measures of foreign language proficiency and foreign language aptitude, and also achieved higher foreign language course grades. The results also showed that the FLCAS was negatively correlated with native language measures of reading, spelling, and vocabulary as early as at the beginning of first grade. The researchers concluded that the *Foreign Language Class Anxiety Scale (FLCAS)* measures students' perception on their language learning skills.

2.6.3.1.2. Studies regarding FLA and General Language Learning Anxiety Perception

In regard to *general language learning anxiety perception*, a study developed by Gregersen and Horwitz (2002) analysed audio recording comments that language learners made while they were watching themselves interacting in a videotaped interview. The study showed that the more anxious the participants were, the more perfectionist they tended to be. It was also discovered that anxious learners established higher personal performance standards; they were also more fearful of evaluation, and more concerned about errors.

Similarly Ortega-Cebreros (2003) carried out a study describing the author's experience of measuring the language anxiety perceived by Spanish University students of English using a Spanish version of the FLCAS. The results showed that students were highly concerned with foreign language lessons in general. Furthermore, students also manifested high test anxiety, associated with fear of negative evaluation at speaking (communication apprehension) and listening anxiety, which was higher when error correction was involved in the process.

Another study conducted by Haley, Romero-Marin, and Gelgand (2015) used the FLCAS and Counsellor Self-Estimate Inventory (COSE; Larson et al., 1992) instruments. The COSE is an important construct for research and evaluation in counsellors' competencies and training effectiveness, and it is composed of five subscales: *Microskills*, *Counseling Process*, *Difficult Client Behaviors*, *Cultural Competence*, and *Awareness of Values*. The results showed: 1) that non-native English-speaking students have more language anxiety than native English-speaking students, 2) non-native English speaking students' language anxiety was negatively correlated with counselling self-efficacy, and 3) native English and non-native English speaking students significantly differed in their own perceptions of counselling self-efficacy.

2.6.3.1.3. Studies regarding FLA and Fear of Negative Evaluation (FNE)

Shabani (2012) examined the relation between *Fear of negative evaluation* and levels of anxiety. FLCAS and FNE (Fear of Negative Evaluation) scales were administered to 61 EF learners. Results showed that the first source of language anxiety and *fear of negative evaluation* was fear related to class failure and of leaving a negative impression on others. Pearson correlation analysis indicated a significant correlation between foreign language anxiety and fear of negative evaluation.

Lin, Chao, and Huang (2015) used the FLCAS with 100 college students, in order to investigate language learning anxiety. This study designed and developed an affective tutoring system to conduct an empirical study. The study aimed to improve students' learning interest and provided adequate feedback by recognising their emotional states during their learning processes.

MacIntyre and Gardner (1991b) suggested that anxiety declines consistently as learners' experience and proficiency increase. However, some researchers have argued that students' increase of course level will have a boost in general Foreign Language (FL) (Bernaus, Moore, & Azevedo, 2007; Kitano, 2001; Marcos-Llina's & Garau, 2009; Saito & Samimy, 1996; Samimy & Tabuse, 1992). An explanation of the different views could be found in the differences in the target foreign languages (Zhao, Guo, & Dynia, 2013). Kitano (2001) compared the language anxiety of a less commonly taught language (e.g. Japanese) and another more commonly taught (e.g. French). The results indicated that Japanese learners' anxiety level increased with more instruction, while French FL learners' anxiety decreased.

2.6.3.1.4. Studies regarding FLA and Personality and affective factors

Several studies have focused on the relationship between Foreign Language Anxiety (FLA) and *personality and affective factors*. Dewaele (2010) showed that there was a relation to some extent between FLCA (foreign language classroom anxiety) and FLA (foreign language anxiety) with regard to a variety of higher –and lower-order personality traits, affective factors (attitudes toward the target language, attitudes towards the language teacher) and a range of socio-biographical factors (gender, age, knowledge of multiple languages).

Dewaele and Thirtle (2009) investigated the link between FLCA and the decision to pursue foreign language learning in a group of 79 London teenagers. There were 3 subgroups: those wishing to pursue foreign language classes, those having decided to abandon, and those undecided about further FL study. A comparison between the groups on a range of learner-internal variables revealed that those who had decided to abandon further foreign language instruction suffered from significantly higher levels of FLCA. The design could not detect the reason why this happened but showed that FLCA could be an obstacle.

In another study, Dewaele (2013b) investigated the relationship between three personality traits (Psychoticism, Extraversion, and Neuroticism), one biographical factor (knowledge of languages) and levels of foreign language classroom anxiety (FLCA; Horwitz, Horwitz, & Cope, 1986) in second (L2), third (L3), and fourth (L4) language with two groups of adult language learners and users respectively. The results revealed a significant link between Neuroticism and FLCA in the foreign languages of both groups. Also, Psychoticism and Extraversion were associated with FLCA in one group, and language knowledge had an impact on FLCA in some of the languages. Finally, and most importantly, the study revealed strong correlations between FLCA factors in L2, L3, and L4, which suggests that levels of FLCA are a stable characteristic of foreign language learning.

A further study which included sociobiographical variables and higher order personality traits and FLCA was carried out by Dewaele and Al Saraj (2015) with 348 Arabic learners of English in the Arab world. Students filled out the FLCAS instrument translated into Arabic. Pearson correlation analyses revealed that FLCA was significantly and negatively correlated with four personality traits: Cultural Empathy, Social Initiative, Openmindedness, and Emotional Stability. The authors concluded that students who were

more extravert and more emotionally stable, suffered less FLCA; furthermore, students with an open attitude toward cultural differences and able to empathize with different cultural behaviours, tended to suffer less FLCA.

Furthermore, regarding some *affective factors* that influence foreign language class anxiety, several studies have investigated the different patterns of positive and negative emotions among FL learners. Thus, Dewaele and MacIntyre (2014) concluded in their study that students reported to be more consistent in Foreign Language Enjoyment (FLE) than FLCA, and those students who knew more than one language also reported less FLCA and scored significantly higher on FLE. Another study by Dewaele, MacIntyre, Boudreau, and Dewaele (2016) focused on the gender differences in FLE and FLCA, among 1736 learners (1287 females, 449 males) from around the world. The study revealed that female participants experienced more foreign language enjoyment in the FL class, as they felt they were learning interesting things and were prouder than male peers of their FL performance. However, the study also showed that females experienced significantly more FLCA than males, as they worried significantly more than male peers about their mistakes and were less confident in using the FL. The authors of this study concluded that ultimately these emotions could benefit the acquisition and use of the FL. Thus, the fact that female FL learners show higher scores for FLE and FLCA shows that these learners pay more attention to their FL learning process, maybe because they might have more fun learning the FL (Dewaele et al., 2016) than male learners.

In conclusion, associating anxiety and enjoyment in the learning process, could benefit the learners' proficiency "with enjoyment encouraging playful exploration and anxiety generating focus on the need to take specific action" (Dewaele et al., 2016). Thus, FLE not only benefits the learners' performance, but also creates a good environment for the learning to take place, hence influencing the learners' attitudes toward the FL, the FL teacher techniques, and the use of the FL in the class (Dewaele, Witney, Saito, & Dewaele, 2017).

2.6.3.1.5. Studies regarding FLA and Learning Strategies and Language Skills

Several studies have also examined the interaction between *language learning anxiety* and *learning strategies*. Wu (2010) examined the participants' perceptions when learning English, using the FLCAS and COLTAS (Communicative Language Teaching

Attitude Scale instruments). The results indicated that most of the participants expressed a positive attitude towards the Communicative Language Teaching approach. However, students showed high levels of anxiety in the language classroom setting.

Following this field of work, Kao and Craigie (2013) examined which strategies could predict anxiety for 120 Taiwanese students learning English as a FL, using the FLCAS and the FLACS (Foreign Language Anxiety Coping Scale). The results revealed that students used positive thinking, as the most important strategy, to cope with anxiety and that resignation contributed more to higher levels of foreign language learning anxiety than other strategies.

Regarding *language anxiety skills*, several studies have focused on the investigation of specific or general language skills and foreign language anxiety.

Cheng (2002) analysed factors affecting FL writing anxiety with 165 Taiwanese EFL students. The results showed that students' self-perception writing in the L2, was the most powerful predictor of L2 writing anxiety followed by L2 writing achievement.

Mills, Pajares, and Herron (2013) examined the role of anxiety related to self-efficacy, reading proficiency, and listening proficiency in French using Bandura's social cognitive model (see Bandura, 2001). Results indicated that French reading self-efficacy significantly predicted variances in French reading proficiency, opposite to French reading anxiety. In the case of French listening proficiency, listening anxiety made a significant negative prediction for listening proficiency. However, listening self-efficacy was associated with listening proficiency, only in the case of males.

Elkhafaiti (2005) focused on the effects of FL classroom anxiety and FL listening anxiety of a sample of 453 US university students of Arabic, who were following the final course grades. The results confirmed a strong Pearson correlation between FLCAS and FL listening anxiety. A significant correlation was also found in the relationships between listening anxiety and listening comprehension grades, and also between general FL anxiety and final course grades. This study was in line with other previous studies in the same area (e.g. Aida 1994; Horwitz, Horwitz, & Cope, 1986; Saito, Garza, & Horwitz 1999)

A more complete study in regard to language learning skills and language anxiety was carried out by Pae (2012), who evidenced that all four skill-based L2 anxieties were statistically distinguishable from each other, making an independent contribution to general classroom anxiety.

A study by Zhao, Guo, and Dynia (2013) on the foreign language (FL) reading anxiety of English-speaking university students learning Chinese revealed that FL reading anxiety was associated with course level and experience in China. Furthermore, FL reading anxiety was negatively correlated with FL reading performance among elementary (level 1) and intermediate Level, but not elementary level 2 students. Findings suggest that reading anxiety was a key problem for English natives learning Chinese as a foreign language.

A replication of the study developed by Phillips (1992) was conducted by Hewitt and Stephenson (2012). They examined the students' language anxiety when performing oral examination. Both studies used Pearson correlations and partial correlation between oral exam grades and FLCAS and between 8 oral performance criteria and the FLCAS. Also, individual interviews were held with some selected anxious students. Hewitt and Stephenson confirmed Phillip's study, as both investigations showed a statistically modest negative correlation between language anxiety and oral accomplishment. However some differences to the previous study were mentioned: 1) higher negative correlation between language anxiety and oral accomplishment; 2) some evidence of facilitating anxiety in moderately anxious students regarding two oral performance criteria was found; 3) the more anxious the Spanish students were, the more English they uttered, although of poorer quality.

2.6.3.1.6. Studies regarding FLA and Individual Differences

Finally, research on foreign language anxiety and *individual differences* has shed some light on how anxiety is experienced depending on the idiosyncrasy of each learner. A study conducted by Arnaiz and Guillén (2012) on the individual differences in the foreign language anxiety (FLA) studied the answers given by 216 students doing the FLCAS. The study revealed that: 1) participants showed an average level of anxiety; 2) age had a significant negative correlation with anxiety; and 3) lower grade students tended, in general, to show more anxiety levels and be more anxious in general.

An investigation developed by Sheen (2008) examined two main aspects related with anxiety: 1) classroom language anxiety affecting learners' ability to use English articles when corrected with recasts; 2) whether language anxiety influences the learners' capability of reformulating input following recast. The results showed that the low-anxiety recast group outperformed the high-anxiety recast group and the low-anxiety control

group. Moreover the less anxious learners who benefited from recasts were more able to modify their output. This means that recasts were mostly effective for low-anxiety learners who produced high levels of modified output. According to Sheen (2008) the findings of this study suggest that language anxiety has an influence not only on whether recasts produce modified output, but also whether they promote learning.

Marcos-Llinás and Garau (2009) found that their American advanced learners of Spanish showed higher levels of FLCA than beginners and intermediate learners. However, this did not mean lower course marks. Thus they stated that to some extent a certain level of FLCA may not be as negative and debilitating as it was traditionally believed and, what is more, it may contribute to keeping the learner's motivation high.

A recent study was carried out with 98 Turkish students, who were studying language and literature (Elaldi, 2016). These students were examined from preparatory class to fourth grade. The results showed that students had moderate anxiety levels in both preparatory class and in fourth grade. However, students had slightly higher anxiety levels in fourth grade than in preparatory class. Thus, it can be concluded from this study, that higher levels of proficiency showed more language learning anxiety.

Finally, Dewaele, Petrides, and Furnham (2008) investigated the individual differences in FLA in the various languages of adult multilinguals. The results showed that students who started learning FL at a younger age suffered less foreign language anxiety. Besides, students who had learned only through the classroom instruction suffered from higher levels of FLA than those who had also used their language outside the classroom. Finally, other factors such as knowing more languages, higher use of the L2, stronger socialization in the language, and a higher level of self-perceived proficiency were also linked to lower levels of FLA (Dewaele et al., 2008).

2.6.4. Self-concept

“You yourself, as much as anybody in the entire universe deserve your love and affection”. (Buddha)

A person's self-concept consists of the beliefs one has about oneself, one's self-perception, or, as, Hamlyn (1983) expresses it, “the picture of oneself” (p. 241). Thus, self-concept is not so much related to the facts about oneself but rather to what one believes to be true about oneself.

From a psychological point of view, self-concept is “a self-description judgement that includes an evaluation of competence and the feelings of self-worth associated with the judgement situation in a specific domain” (Pajares & Schunk, 2005, p. 105).

It should be pointed out that there is a difference between *self-concept*, *self-esteem*, and *self-efficacy*. As Valentine and DuBois (2005) stress “theoretically *self-concept*, *self-esteem*, and *self-efficacy* beliefs share a common emphasis on an individual’s beliefs about his or her attributes and abilities as a person” (p. 55).

Self-esteem is a general construct which refers to an individual’s evaluative system (Mercer, 2011). As Harter (1999) explains self-esteem is focused “on the overall evaluation of one’s worth or value as a person” (p. 5). Thus it could be understood as an emotional self-concept.

In contrast, *self-efficacy* is more related to very specific tasks within a domain. It is based on cognitive aspects and its focus is placed on the learners’ expectancy beliefs about their own perception capability to perform a particular task in a specific context (Bandura, 1997). Pajares and Miller (1994) define self-efficacy as “a context-specific assessment of competence to perform a specific task, a judgement of one’s capabilities to execute specific behaviours in specific situations” distinguishing it from self-concept “self-concept is not measured at that level of specificity and includes beliefs of self-worth associated with one’s perceived competence”(p.194). Thus, *self-concept* is more concerned with the individual’s self-perceptions and self-evaluations in a specific domain. Therefore, it differs both from the self-efficacy, which is more context-specific, and self-esteem, which is more domain-specific as it includes the cognitive scope.

Learner’s SLA self-concept can be defined as an individual’s self-description of competence and evaluative feelings about themselves in the second language (Mercer, 2011). In the field of SLA, self-concept has been conceptualised as one of the most important factors within motivational affective variables (Malo, Bataller, Casas, Gras, & González, 2011). Furthermore, many studies have focused their research on the psychological aspect of the self (Baumeister, Campbell, Krueger & Vohs, 2003; Gergen, 1984; Palacios & Zabala, 2007; Stevens, 1996).

2.6.4.1. Academic Self-Concepts (ASCs)

A key area of research within self-concept has been Academic self-concepts (ASCs), which comprise the mental representations of one's abilities in academic domains (Pinxten et al., 2015).

Modern models of ASCs (e.g., Marsh/ Shavelson Model of Marsh, 1990a; nested Marsh/Shavelson Model of Brunner et al., 2010) make a distinction between *general ASC* and *domain specific ASC*. *General ASCs* are related to an individual's evaluation of his/her academic abilities across subjects ("I am good at most school subjects"); *domain-specific ASCs* reflect an individual's impression of his/her abilities in a specific academic domain, such as sciences ("I am good at sciences").

ASCs have been highly correlated with academic self-efficacy (Bong & Skaalvik, 2003; Ferla, Valcke, & Cai, 2009). ASCs are more related to a social comparison among classmates, whereas self-efficacy focuses on one's individual success to achieve the task (Seaton, Marsh, & Craven, 2010).

It has been studied that ASCs positively predict the student's achievement (e.g., Guay, Marsh, & Boivin, 2003; Marsh & O'Mara, 2008; Pinxten, et al., 2014), the academic adjustment (e.g., Wouters, Germeijs, Colpin, & Verschueren, 2011), or the academic interest (Marsh, Trautwein, Lüdtke, Köller, & Baumert, 2005). Thus, according to Pinxten et al. (2015), objectively equal accomplishments may be perceived differently among students if they are compared, either with successful peers, resulting in negative ASCs, or with lower achieving peers- resulting in positive ASCs.

2.6.4.2. Models of Self-Concept

Most previous research on academic self-concepts has focused on the mutual relations between academic self-concepts and academic achievements (e.g., Huang, 2011). Several theories have been developed over the years in an attempt to clarify the role of self-concept in second language learning and development.

- **The Big-fish-little pond Model**

The *big-fish-little-pond Model* (BFLP Model) developed by Marsh (1984), mainly, focuses on social and external comparisons with reference to group effects on ASC. The model assumes that the relationship between comparing one's academic

performance with that of one's immediate peers is a vital factor of ASC, and thus, it is heavily based on social comparison theory (Festinger, 1954). This Model describes individual differences in equally achieving students' academic self-concept, according to the achievement level of their reference group (Wouters, Colpin, Damme, Laet, & Verschueren, 2013).

Empirical studies have confirmed the central idea of the BFLP Model, which supports that class achievement is negatively correlated to students' ASCs (e.g., Köller, Zeinz, & Trautwein, 2008; Marsh & Hau, 2003; Marsh, Köller, & Baumert, 2001; Marsh, Kong, & Hau, 2000; Marsh, Trautwein, Lüdtke, Baumert, & Köller, 2007; Preckel & Brüll, 2010; Preckel, Zeidner, Goetz, & Schleyer, 2008; Seaton, Marsh, & Craven, 2009; Thijs, Verkuyten, & Helmond, 2010; Wouters, Colpin, Van Damme, De Laet, & Verschueren, 2013). Despite the research supporting this model, there are some gaps in BFLP research: a) most of the studies conducted tested the model principles with a single academic domain, thus, internal comparison processes were generally ignored; b) in general, BFLP studies have focused on secondary school samples, without considering that as students grow up they become more susceptible to social comparison in self-evaluation (Dijkstra, Kuyper, van der Werf, Buunk, & van der Zee, 2008).

▪ **The Reciprocal Effects Model (REM)**

The Reciprocal Effects Model (Marsh, 1990a, 1990b, 1993; Marsh, Byrne, & Yeung, 1999; Marsh & Craven, 1997) examines the reciprocal and mutual effects between academic self-concepts and academic achievements within a single academic domain, and it is conceived as a dynamic and reciprocal construct. The model suggests that higher achievements promote self-concepts and higher self-concepts foster achievement (self-enhancement, for an overview see Marsh & Craven, 2006; Marsh & Martin, 2011; see also Guay, Marsh, & Boivin, 2003). Thus, the REM theorizes that people, who perceive themselves as being more effective, more confident, and more competent, succeed better than people with less positive self-perceptions ("I believe; therefore "I am").

▪ **The Internal/ External Model (I/E Model)**

The *Internal/External Model* (Marsh, 1986, 1990b, 1993; Marsh, Byrne, & Shavelson, 1988; Marsh & Yeung, 1998, 2001) was initially developed to explain the reason why maths self-concept and verbal self-concept are nearly uncorrelated, despite the

fact that achievement in the same areas are strongly correlated (typically 0.5 to 0.8, depending on how achievement is measured; for further discussion, see Marsh, 1986, 2007). The I/E model posits paradoxical relations between achievement and self-concept in mathematical and verbal domains, in which achievement in each domain has a positive effect on self-concept in the matching domain (e.g., mathematics achievement on mathematics self-concept) but a negative (contrastive) effect on self-concept in the non-matching domain (e.g., mathematics achievement on verbal self-concept). The I/E model posits that academic self-concept (ASC), regarding a specific school subject, consists of two frames of reference: a) an external (social comparison) reference, in which students contrast their perceived performances in a particular school subject with the perceived performances of their peers in the same school subject, and b) an internal (dimensional or ipsative comparison) reference in which students contrast their own performances in one particular school subject against their performances in different school subjects. Several studies have supported the predictions of the I/E Model (Marsh & Hau, 2004; Möller, Pohlmann, Köller, & Marsh, 2009).

The two models described above (REm and I/E Models) were typically studied separately until Möller, Retelsdorf, Köller, & Marsh (2011) integrated both models in the *Reciprocal Internal/External frame of reference Model* (RI/E Model) in which they examine both the reciprocal effects and the contrasting effects between academic self-concepts and achievements in different academic domains. Thus, the RI/E Model provides an overall view of the development of students' cognitive and motivational profiles (Niepel, Brunner, & Preckel, 2014).

- **Dimensional Comparison Theory (DCT)**

Further research lead to the *Dimensional Comparison Theory* (DCT) developed by Möller and Marsh (2013), which was an extension of the Internal/External Model. According to DCT, academic self-concepts (ASCs) are constructed by comparing different school subjects, including social and temporal comparisons (Marsh et al., 2015; Möller & Marsch, 2013). DCT contributes to expanding the theoretical framework including a wider variety of domains, and establishing closer relationships among the different school subjects. Thus, similar subjects (e.g., native and foreign language, or maths and physics) may be regarded as complementary, rather than contrasting subjects. Consequently, an achievement in one domain may positively contribute to the self-concept in a

complementary, near domain (Marsh et al., 2015). The critical distinction between the I/E model and the DCT Model, is that the former only focuses on mathematical and verbal domains, whereas the DCT model expands its scope in order to include a wide variety of academic domains (Marsh et al., 2015).

According to Mercer (2011) there are other dimensions that have been associated with self-concept, such as identity (Clément, Noels, & Deneault, 2001), acculturation processes (Noels, & Clément, 1996), motivation- Ideal L2 Self (Dörnyei, 2005), attitudes (Rubinfeld, Clément, Lussier, Lebrun, & Auger, 2006) and Willingness to Communicate (WTC) (MacIntyre, Baker, Clément, & Conrod, 2001).

2.6.4.3. Research on Self-concept and SLA

Academic self-concept is a considerable construct in the domain of second language acquisition, as it predicts students' achievement. Academic self-concept has several beneficial effects on different educational outcomes. For example it positively predicts students achievement (Guay, Marsh, & Boivin, 2003; Marsh & O'Mara, 2008; Pinxten, Marsh, De Fraine, Van Den Noortgate, & Van Damme, 2014), academic adjustment (e.g., Wouters, Germeijs, Colpin, & Verschueren, 2011) or interest (Marsh, Trautwein, Lüdtke, Köller, & Baumert, 2005).

Guay, Marsh, and Boivin (2003) examined the relationship among academic self-concept, autonomous academic motivation, and academic achievement. The results concluded that autonomous academic motivation mediates the academic self-concept and academic achievement relation.

Pinxten et al. (2015) consider both internal and external comparisons as crucial antecedents: students build their own academic self-concept to a considerable extent by (externally) comparing themselves with others and by (internally) comparing their own performance in different academic domains. Based on previous research in secondary education (using I/E Model and the BFLP Model), the main goal of their study was to test a model integrating both comparison processes in elementary education using a large sample of Grade 4 students (N = 4,436) nested in 241 classes. Including the proposed internal and external reference effects in one integrated model, the study provided evidence for the presence of both comparison effects on two academic self-concept domains (i.e., math and verbal self-concept). Specifically, students' achievement in one domain was positively related to self-concept in that domain and negatively related to self-concept in

the other domain. Furthermore, class-average achievement was negatively related to academic self-concept within each domain and positively across domains. In conclusion, this study stresses the need for further integration of the major models in academic self-concept formation in a unifying theoretical framework.

A study carried out by Retelsdorf, Köller, and Möller (2014) tested the effects between reading self-concept and reading achievement among secondary school children. Results confirmed that self-concept predicts achievement in the early years of secondary school, concluding that the reading habit should be implemented in the first years of secondary school.

Wouters, Colpin, Damme, Laet, and Verschueren (2013) investigated what matters the most for students' academic self-concept. The researchers took a sample of 2.987 students and it was comprised of three dimensions of academic self-concept: global academic, maths, and language self-concept. Results showed that friend-average achievement was less significant than class-average achievement, suggesting that when students evaluated their own academic capacities, they usually relied on the most informative comparison source, in detriment to the local comparison source.

A recent study developed by Niepel, Brunner, and Preckel (2014) examined two domains across four measurement occasions in two independent student samples that were in Grades 5-8/ 5-7. Results showed positive reciprocal effects of academic self-concepts and achievements within a domain, positive reciprocal effects between achievements across domains, negative effects of achievements on subsequent cross-domain self-concepts, negative effects of academic self-concepts on subsequent cross-domain achievements, and some support for negative effects of academic self-concepts on subsequent cross-domain self-concepts. The study was based on the RI/E model, which predicts positive and negative longitudinal effects between academic self-concepts and achievements within and across two academic domains (e.g., the mathematics and verbal domains).

Regarding the relationship between self-concept and foreign language learning, little research has been conducted. A study carried out by Yeung and Wong (2004) on the study of verbal self-concepts for primary school teachers in Hong Kong who spoke English, Cantonese, and Mandarin, suggested that self-concept was differently identified for each language. Thus, confirming the multifaceted nature of self-concept.

Another study on the relation between self-concept and foreign language learning was conducted by Lau, Yeung, Jin, and Low (1999). In their work with university-level students, the authors showed that the four skills (reading, writing, listening, and speaking) could be represented by a single global L2 learning self-concept construct. The authors conclude that, “the inter-correlations between the four factors are strong enough to be accounted for by a single global higher-order factor”, suggesting that foreign language domain was separate to other subject domains. However, this study showed some limitations as it did not fully account for subcomponents within self-concept (Mercer, 2011), and for other aspects apart from the four traditional skills.

Mercer (2006) developed a study about learners’ emotional experience in the foreign language classroom; the study revealed that students carrying a diary for their emotional experience helped them to be aware of their own beliefs and emotions. In another study, Mercer (2009) investigated the same concept but focusing on self-concepts and self-beliefs of learners regarding their language learning process.

A recent study carried out by Ritzau (2015) collected data from Swiss university students of Danish as a foreign language, showing how identity/self-positioning already takes place at beginner foreign language learners.

A study by Niehaus and Adelson (2013), who examined the measurement and interpretation of self-concept among three groups of children English language learners (ELLs) (comparing native English-speaking children, Spanish-speaking ELLs, and ELLs from Asian language backgrounds), showed that there were differences in academic self-concept and social-emotional self-concept among the groups.

Liu (2010) carried out a study with first-year university students who were receiving English instruction at the University of Taiwan. There was a significant positive correlation between academic self-concept and level of English. Thus, the higher the level of student, the higher self-concept the student had.

In contrast to previous research, a study carried out by Arnaiz and Guillem (2012) examined individual differences in the self-concept of 216 participants in a Spanish university context. Participants completed the Self-concept Scale Form 5-AF5 (García & Musitu, 1999). This instrument included the academic, social and emotional dimension. Besides, gender, age, mark and language level was identified. In terms of differences between the self-concept with different levels of English, it was concluded that students with a higher level had lower academic and global self-concept.

In summary, given the limited number of studies specifically examining L2 self-concept and the different methodologies used in each study, it is necessary to carry out studies comparing self-concepts with an extensive range of skills in adult learners at different levels of execution with the language, in order to learn more about the characteristics of self-concept within the FLL domain.

2.6.5. Attribution variables in SLA

Knowledge may give weight, but accomplishments give luster, and many more people see than weigh. (Lord Chesterfield, Letters, May, 8, 1750.

Attribution theory (Heider, 1958; Kelley, 1971; Weiner, 1979) has greatly influenced research and practice in several contexts such as educational, clinical, and occupational.

Attribution theory describes that, what a person perceives to be the causes for their past failures or successes will have an important impact on their expectations, and hence, on their achievements. Attribution theories are concerned with how individuals interpret events and how this relates to their thinking and behaviour. Thus, people make attributions to different causes for those areas in their lives, where they perceive themselves as having succeeded or failed. These perceived causes may be classified into three causal dimensions: *locus of control*, *stability*, and *controllability*.

Attribution theory originated from the field of social psychology, which describes the means by which people explain the causes of events, their own behaviour and other people's behaviour. Social psychology considers that attributions have two main concepts, the first refers to explaining behaviour (i.e., answers to why questions), and the second refers to inferences or ascriptions (e.g., inferring traits from behaviour, ascribing a certain feeling to a person) (Malle, 2011). When the behaviour is explained as attribution, it is related to its cause; in contrast, when there is an inference or ascription, a quality is assigned to the agent with regard to an observed behaviour (Malle, 2011). Thus, the way in which people perceive or think about the events, has a much more important effect upon their behaviour than what it actually happens. This perception is related to the causes of success and failure of the event.

The main attribution theories are the following:

- Heider's Theory (1958)
- Correspondent Inference Theory (Jones & Davis, 1965)
- Co-Variation Model (Kelley, 1967)
- Attribution Theory (Weiner, 1986)
 - Dual Process Models (current)

In the following section, each of these theories will be analysed:

- **Heider's Theory of Attribution- the cause of action**

In order to understand attribution as it is conceived nowadays, one must go back to Heider's *Object and Person Perception* theory (first described in Heider, 1920, his dissertation). Despite the fact that this theory is no longer of use in the scientific community, it definitely set the basis for the person perception theory. Heider stated that things shape media and not vice versa, so the perceptual apparatus must reconstruct things from their effects on the media, and ultimately on the sensorial area. This reconstructive process was termed as *attribution*, which does not focus on the features of the media, but rather on the qualities of things, as these qualities shape the media surrounding them. Thus, "when we look at a house we say: "I see a house", not "I see sunlight", even though the sunlight is the necessary medium by which we are able to see the house" (Malle & Ickes, 2000, p. 2).

Heider's seminal work was ultimately developed into the personal and social perception view. He was concerned with social interactions and he wondered himself how people perceive each other in interaction and especially how they make sense of each other's behaviour. Then, he proposed that a process of attribution is also involved in the person perception's theory, although it is a more complex process, due to the various observational data available and the different causes (e.g., beliefs, desires, emotions, traits) to which this data can be attributed. Heider (1958) stated that people continually make causal analyses about others' behaviour, where the behaviour is attributed either to dispositions, also called *invariances* (internal factors or causes such as one's personality) or to situations, also called *variances* (external factors or causes, such as one's environment).

According to Malle (2011), Heider was concerned with an action's "*causal locus*", focusing his work mainly on the fact that a person is more likely to judge a behaviour's cause as internal (e.g. a disposition or a characteristic of a person) or external

(i.e. an environmental factor) of another person. The main tenet of his theoretical framework concerns the idea that one perceives behaviour as being caused, and that the causal locus can be either in the perceiver or in the environment (Hastorf, Schneider, & Polefka, 1970)

According to Weiner (1985), Heider (1958) was considered the first contributor to the attributional approach in psychology. The most fundamental causal distinction made by Heider was stated as follows: “In common-sense psychology (as in scientific psychology) the result of an action is felt to depend on two sets of conditions, namely, factors within the person (*personal causality*) and factors within the environment (*impersonal causality*)” (p.82).

▪ **Jones and Davis’s Dispositional Inference Theory**

Jones and Davis’s (1965) theory focused on people’s attention to intentional behaviour (as opposed to accidental or unthinking behaviour). They were the first researchers to introduce a theory of dispositional inference. This theory is based on “the conditions under which a perceiver infers a stable disposition (personality trait or attitude) from an agent’s behaviour” (Malle, 2011, p. 76). In other words, the inference theory describes the conditions under which one makes dispositional attributes to the behaviour one perceives as intentional.

According to Eysenck (2004) in *Correspondent Inference Theory*, we use information about another’s person’s behaviour and its effects, in order to draw a correspondent inference, in which the behaviour is attributed to a disposition or personality characteristic. Therefore, the question is: How does one do this? Firstly, one draws correspondence inference if the behaviour is intentional rather than unintentional. Then, one usually decides that there is a correspondence when the effects of the behaviour are socially undesirable. Thus Jones and Davis (1965) state that one tends to infer a correspondent behaviour between motive and behaviour, for example when one observes a correspondence between someone acting in a friendly way and being a friendly person. In contrast, if a person acts rude in a social situation, one may conclude that the person is rude or unpleasant. However, some authors see some limitations in the *Correspondent Inference Theory*. For example, Crisp and Turner (2010) argue that the model has two major limitations; the first one is that “the model is limited to single instances of behaviour” and the second is that “it focuses on internal attributions” (p. 47).

▪ **Kelley's Co-Variation Model**

Kelley's (1967) Co-variation Model (also known as the "Kelley's cube") entails multiple behaviours, which details processes that result in external and internal attributions. Kelley states that causality is attributed adopting the co-variation principle (Crisp & Turner, 2010). The co-variation principle states that for something to be attributed as the cause of a particular behaviour, the cause must be present at the time the behaviour appears or absent when the behaviour is absent (e.g., it must co-vary)

He poses the question of: "How do individuals establish the validity of their own or of another person's impression of an object?" Kelly suggests that perceivers examine three different kinds of information in their efforts to establish validity (Crisp & Turner, 2010):

- *Consensus information*: the extent to which the target person and other people react the same way in a specific situation.
- *Distinctiveness information*: the extent to which the target reacts the same way on different occasions.
- *Consistency information*: the extent to which the target person reacts in the same way in different social contexts.

Kelley's (1972) data analysis identified social norms and past personal history based on causal beliefs due to their roles in covariation analyses. He also examined causal construction, or "rules relating causes to effects" (Weiner, 2010). Kelley (1967) highlighted the difference between, for example, necessary and sufficient causality as an important factor of causality. Besides causal understanding was not perceived in all situations, but mostly triggered when, unexpectedly, a goal had not been achieved (see Gendolla & Koller, 2001).

▪ **Weiner's Theory of Attribution - the outcome of action**

As we have seen, a prolific number of sub-theories, hypotheses, effects, and principles related to attribution theories have followed Heider's formulations. One of the main theories was the one formulated by Weiner (1979). His theory related people's past experiences with their future achievement efforts, because it included the concept of *causal attributions* as the mediating link. His work was concerned with the outcome attribution (Weiner, 1986; Weiner, Heckhausen, Meyer, and Cook, 1972).

Weiner (1986, 2000) developed one of the most influential theoretical frameworks in social psychology. Attribution Theory assumes that people try to determine the reasons of people's behaviours, that is to say, people interpret the causes of an event or behaviour. A three stage process underlies attribution: (Thang, Gobel, Nor, & Suppiah, 2011):

- Behaviour must be observed/ perceived.
- Behaviour must be determined to be intentional.
- Behaviour may be attributed to either internal or external causes.

In the field of language learning, Weiner (1974, 1986) stressed the traditional attributions (*ability, effort, task difficulty, and luck*) as the most important achievement attributions. He also analysed the emotions and evaluations people have of others who succeed or fail. In addition, an outcome might also be attributed to a number of other factors including other people such as the teacher or other students, mood, fatigue, or illness, personality, and physical appearance (Weiner, 1986).

Weiner classified these attributions into the three causal dimensions mentioned above:

- *Locus of control* (two poles: internal vs. external). This means that an outcome can be described as either internal or external.
- *Stability* (does it cause changes over time or not?). This is a complementary to externality vs. internality; and it means that people who fail because of lack of effort (unstable internal) are evaluated more negatively than those who fail because of inability (stable internal).
- *Controllability* (causes one can control such as skills vs. causes one cannot control such as luck, other's actions, etc). It accounts for social perceivers' responses to such outcomes (Weiner, 1995). For example, people attribute more negative outcomes derived from controllable causes (failure in class because of lack of effort) than outcomes derived from uncontrollable causes (e.g. failure in class because of lack of understanding).

Weiner (1992; 2010) suggests that people's subjective reasons to attribute their past successes and failures "considerably shape their motivational disposition underlying future action" (Dörnyei & Ryan, 2015, p. 79). This means that if a person assigns past failure in a particular task to low ability on his/her part, that person may not want to try the activity again, however if the person believes that the problem lays in their lack of effort or lack of proper learning strategies employed, then that person is more likely to try the activity again.

Weiner (1986) further postulated that people attribute their successes and failures, as well as those of other individuals, according to the different combinations of the dimensions mentioned above; each of these dimensions influences individuals' expectancies for success or failure, and each has important affective consequences. Most attempts to test attribution theory have dealt with four types of causal explanations for success and failure: a) ability, b) effort, c) luck, and d) task ease or difficulty (Weiner et al., 1971).

As can be observed in Table 1 *ability* is an internal and stable factor and the learner does not have a direct control over it; *effort* is regarded as an internal and unstable factor and the learner has a lot of control over it; *Task difficulty or ease* are external and stable elements and it is beyond the control of the learner; while *luck* is considered as an external and unstable element over which the learner has little control (see Table 1).

Table 1 Dimensional Classification Scheme for Causal Attributions

Attribution	Dimension		
	Locus	Stability	Controllability
Ability	Internal	Stable	Uncontrollable
Effort	Internal	Unstable	Controllable
Strategy	Internal	Unstable	Controllable
Interest	Internal	Unstable	Controllable
Task difficulty	External	Stable	Uncontrollable
Luck	External	Unstable	Uncontrollable
Family influence	External	Stable	Uncontrollable
Teacher influence	External	Stable	Uncontrollable

Based on Weiner (1979); Elig and Frieze (1979), and Russel (1982)

In general, Weiner (2000) claims that a person is more likely to take credit for success than attributing failure to the self (he terms this as *hedonic bias*). However there are other causal antecedents that may influence the student's outcome. For example, if a person has always failed in the past, the current failure is more likely attributed to the self,

rather than to the task. In the same way, if the person fails and the others succeed, he/she would attribute this failure to the self, instead of the task.

In summary, the previous theories above detailed, attempt to explain why some attributions facilitate success or failure more than others. Weiner (1979, 1986) has proposed that first, internal attributions produce greater changes in esteem-related affect than external attributions; second, stable attributions are more concerned with expectancy for success or failure, and controllable attributions are more closely connected with persistence than uncontrollable attributions.

▪ **Dual Process Models of Attribution- A socio-psychological view**

Despite the fact that the first generation of attribution models describe the process by which inferences are made (Jones & Davis 1965; Kelley, 1965, Weiner, 1985), Dual-Process Models describe the sequence and operating characteristics of the mental processes that produce those inferences. These models have contributed to complete attribution theory, as they explain previous findings and predict new events in the field of attributions.

In social psychology, attribution is used to describe the process by which people estimate the causes of other people's behaviours. Attribution theories suggest that for people to understand someone's behaviour they need to know about the situation and the reaction towards that situation (Lieberman, Gaunt, Gilbert, & Trope, 2002).

However, Ichheiser (1949) found that this statement was not always true and argued that people display a "tendency to interpret and evaluate the behaviour of other people in terms of specific personality characteristics rather than in terms of the specific social situations in which those people are placed" (p. 47). People may not be aware of the different reasons why behaviour is ejected. "The persisting pattern which permeates everyday life of interpreting individual behaviour in light of persona factors (traits) rather than in the light of situational factors, must be considered one of the fundamental sources of misunderstanding personality in our time" (Ichheiser, 1943, p. 52). Heider (1958) agreed when he stated that people ignore situational factors because "behaviour in particular has such salient properties, that it tends to engulf the total field" (p. 54).

Dual Process Models of Attributions Theories divide the mental processes underlying social judgements and behaviour into two general categories depending on whether they operate automatically or in a controlled way (Gawronski & Greighton, 2013). In social cognition, *automatic processes* meet four conditions: 1) they are elicited

unintentionally; 2) they require little amounts of cognitive resources; 3) they cannot be stopped voluntarily; 4) they occur outside of conscious awareness. In contrast, *controlled processes* have the following conditions: 1) they are initiated intentionally; 2) they require considerable amounts of cognitive resources; 3) they can be stopped voluntarily; and 4) they operate within conscious awareness (for a more detailed analysis see Moors & De Houwer, 2006).

Early Dual Process Theories tend to be domain specific as they are focused on particular phenomena. Two of the most prominent dual process theories are the *Elaboration Likelihood Model* (ELM) (Petty & Cacioppo, 1986) and the *Heuristic Systematic Model* (HSM) (Chaiken, 1987) of persuasion. These models are concerned with the conditions under which different aspects of a persuasive message influence the effectiveness of persuasive appeals.

Fazio's (1990) *Motivation and Opportunity as Determinants model* (MODE), specifies two distinct processes by which attitudes can guide behaviour depending on the person's motivation and opportunity to engage deliberate processing (for recent reviews Fazio, 2007; Olson & Fazio, 2009). One main component of this theory is the definition of *attitude*, which is the mental association between an object and a person's summary evaluation of that object. A spontaneous association highlights a mechanism by which attitudes can guide behaviour with no conscious reflection developed by the individual. In contrast, an individual's deliberation about the costs and benefits of pursuing an action requires the individual to be motivated in order to engage in the needed cognitive effort and the opportunity to do so. The MODE model can be applied to the relation between explicit and implicit measures of attitudes (see Fazio & Olson, 2003; Olson & Fazio, 2009).

The *Dual Attitude Model* (DAM) developed by Wilson, Lindsey, & Schooler, (2000) explains that people may simultaneously hold two attitudes toward the same object, which are described as *implicit attitude* and *explicit attitude*. Dual attitudes can emerge from simultaneous acquisition of implicit and explicit attitudes or from the acquisition of an implicit attitude after an explicit attitude has been formed. An important implication of this model is that implicit attitudes are more difficult to change than explicit attitudes (see Gawronski & Strack, 2004; Gregg, Seibt, & Banaji, 2006). There is large evidence that attitudes assessed with implicit measures can sometimes change rather quickly, with little counter-attitudinal/inconsistent information (e.g. Gawronski & LeBel, 2008; Olson &

Fazio, 2006). In addition, attitudes assessed with implicit measures have been shown to be highly context dependent, which implies that the same object may elicit different evaluative responses depending on the context in which it is encountered. (for a review, see Gawronski & Sritharan, 2010).

In reference to learning a foreign language, students are challenged to integrate and assimilate new cultural conventions (Williams & Burden, 1997). For this reason, attribution theory is very relevant for the L2 research area. However, despite the theoretical significance of attributions in L2 affective/motivational variables, more in depth research is needed.

According to Dörnyei (2015), attribution and language learning are also interrelated, as failure is a common experience among language learners, and therefore, the way individuals perceive their outcomes (i.e., failures) has a strong impact on their future performance. Also, language aptitude is a term that students ascribe to their negative perception of language performance, “I don’t have a knack for language learning” (Hashemi and Zabihi, 2011).

Thus, investigating causal attributions in second language learning implies a complex task, because it is difficult to measure the subjective characteristic of attribution in statistical analysis, as this may not accurately describe the difficulty of attribution process (Dörnyei, 2015).

2.6.5.1. Research on attributional factors in SLA

Most attempts to test attribution theory have dealt with four types of causal explanations for success or failure: a) ability, b) effort, c) luck, and d) task ease or difficulty. (e.g., Bruning, Schraw, & Ronning, 1999; Dörnyei & Murphey, 2003; Erler & Macaro, 2011; Gobel & Mori, 2007; Gobel, Mori, Thang, Kan, & Lee, 2011; Hsieh & Schallert, 2008; Peacock, 2009; Ushioda, 2001; Weiner et al., 1971; Williams & Burden, 1999; Williams, Burden, & Al-Baharna, 2001; Williams, Burden, Poulet, & Maun, 2004).

In addition, an outcome can also be attributed to a series of other factors including other people, such as teachers or other students, mood, fatigue or illness, personality, and physical appearance (Weiner, 1986).

In the field of education, some studies have researched students’ attributions regarding test performance, or past and future task performance. Most of the studies

focused on the school milieu in general, analysing attributions and performance across academic subjects as well as other school activities.

For example, Vispoel and Austin (1995) observed the successes and failures of students of junior high schools in the areas of English, Maths, Music and Physical Education. The authors found strong connections between causal beliefs and classroom achievement.

Several studies on the effect of attribution variables in learning tasks have highlighted not only the importance of attributions of ability, effort, luck, and task, but they also have shown how these various attributions can be interpreted in terms of the dimensions of locus, stability, and control dimensions (see Table 1). Meyer and Koelbl (1982) suggested a strong relationship between student test performance and attributions which are similar in structure to Weiner's model. Another study carried out by Soric and Palekic (2009) found strong correlations between learning strategies and the causal dimension of controllability when explaining academic achievement.

Gobel and Mori (2007) and Mori, Gobel, Thepsiri, & Pojanapunya (2010) used quantitative approach to investigate a large number of participants and statistical procedures. The results of the study showed that both Japanese and Thai students attributed success to external factors and failure to internal factors. However, this finding is not in line with Weiner's theory. The research was conducted in Asian settings, which had hardly been explored up to this point, and it suggests that the consistency may be related to some similarities found among students such as: high respect for teachers and self-critical tendency, which are underlying features of cultural background.

In regard to foreign language learning, a study carried out by Tse (2000) on students' perceptions of their foreign language (FL) learning classroom experiences, used a the FL autobiography as a data collection, in order to explore the perceptions of a group of adult FL learners towards aspects related to classroom setting and instruction. Qualitative analysis of students' reports revealed 3 main categories of data: classroom interactions, perceived levels of success, and attributions of success and failure. In general, students considered that their instruction did not pay much attention to oral communication. They also reported low estimations of their level of proficiency, and they tended to attribute their failures to their own lack of effort in the FL classroom. Students attributed successful outcomes to: teacher or classroom environment; family or community assistance; and a personal determination to learn. Furthermore, these students perceived

failure outcomes to: themselves for not being sufficiently motivated; ineffective pedagogy; and unrealistic expectations depending on the teaching syllabus.

Ushioda (1996, 1998, and 2001) demonstrated the importance of attribution processes related to language learning motivation. The studies conducted several interviews with Irish learners of French; the results indicated that positive motivational thinking involved two attributional patterns: a) attributing positive L2 outcomes to personal ability or other internal factors (e.g. effort, perfectionist approach), and b) attributing negative L2 outcomes or lack of success to temporary (i.e. unstable) shortcomings that might be overcome (e.g. lack of effort, lack of opportunity to spend time in the L2 environment).

Qualitative research by Williams and Burden (1999), and Williams, Burden, and Al-Baharna, (2001) highlighted the importance of attributions in shaping the learner's motivation. The researchers found that the range of attributional categories that the pupils cited was partly a function of their cultural background. For example, the research carried out by Williams, Burden, and Al-Baharna (2001) with Arab students confirmed that the notion of "luck" was never mentioned, and ability was cited very rarely either by students or teachers. Furthermore, the participants of the study mentioned a wide range of attributional factors related to the classroom environment, interest, circumstances, strategy use, and exposure to the language, as well as support from others.

Another study by Thang, Gobel, Nor, and Suppiah (2011) focused on the relationship between performance attributions and different university settings in the Malaysian ESL context. The study concluded that students in all the groups tended to have stronger attribution ratings for successes than for failures; also external factors, such as "getting a good grade" or "teacher influence", were the most endorsed attributes for success across all six universities in Malaysia (this last factor is in line with the Asian cultural trend, which implies showing high respect to teachers and attributing success to the teacher task. Self-critical tendency was also evident in the study). Most of the students from the six universities attributed their failures to two main internal attributes, namely preparation and ability.

Another study was carried out by Williams, Burden, Poulet, and Maun (2004) on foreign language learning among 285 adolescent students in the UK. The study identified 21 attributional categories with the most important reasons for doing a task well, which included effort, strategy, ability, teacher, interest, task, and peers. Results showed that most

of the attributions for both success and failure were considered internal. They also found differences in the attribution for success and failure based on gender, year groups, and language studied.

Lim (2007) studied the relation between attributions and anxiety, in an attempt to investigate learners' perceptions about controllability and task values regarding language learning. The data of 226 teaching assistants revealed that first, learners who believed that effort was the most important factor when determining communication competence and outcomes on TOEFL exam, experienced a high level of foreign language use anxiety (FLA). Second, as the perceived levels of importance of language learning increased levels of foreign language use anxiety also heightened. However, interest and utility were negatively related to foreign language anxiety. Particularly, when the perceptions of controllability were measured in terms of the foreign language learning environment, the data revealed that learners who attributed their success internally (i.e., ability and effort) had higher levels of foreign language anxiety than those who attributed success externally (i.e., task difficulty and luck). That is, when learners felt they had more control over the success of foreign language learning, due to their effort or ability, they were more likely to have high levels of foreign language anxiety.

Finally, Hsieh and Kang (2010) studied the relationship between attribution and self-efficacy with a sample of 192 ninth-grade English learners in Korean EFL context. Students were asked to provide attribution and self-efficacy ratings upon receiving test grades. The results indicated that different levels of self-efficacy endorsed attributions differently for successful and unsuccessful outcomes. It also showed that learners with higher levels of self-efficacy attributed their test results to more internal and personal control factor, such as ability and effort, in contrast to those who reported lower self-efficacy levels. The study reveals that successful English language learners tend to ascribe their success to internal and personal factors more than unsuccessful learners, contrary to the findings by William and Burden's study (1999), in which British students learning French attributed success to external factors.

2.7. (Second) Language Learning Strategies

“The language we use influences the way we think” (Steven Pinker)

2.7.1. Introduction

This section is aimed at explaining the role of learning strategies in SLA, in an attempt to understand all the factors that intervene in second language learning and development.

Language learning strategies are considered a help for students’ learning development, as it facilitates, enhances or promotes cognitive processes of learning and understanding. A growing interest has been raised in successful and unsuccessful learner characteristics, leading to investigations that have examined language learner strategies.

The following section is divided into three main parts, the first part is devoted to the theoretical framework of language learning strategies, the second part deals with the main contributions done in this field, and finally, the last section collects a series of investigations done in language learning strategies, mainly focusing on specific instruments to measure these learning strategies.

2.7.2. Defining the concept: Language Learning Strategies

“L2 learning strategies are the goal-oriented actions or steps (e.g. plan, evaluate, analyse) that learners take, with some degree of consciousness, to enhance their L2 learning” (Oxford, 2008, p. 41).

The etymology of the word strategy comes from the ancient Greek word *strategia*, which means steps or actions taken for the purpose of winning a war. Currently the word *strategia* describes the concepts of planning, elaborating and executing a systematic way of doing something.

The main problem when studying the strategy dimension is, as the literature reveals, that there are many different definitions for the term itself. For example, Oxford (1990) defines strategies as “planning, competition, conscious manipulation, and movement toward a goal” (p. 8). Other authors (Mayer, 1988) refer to strategies as “behaviours of a learner that are intended to influence how the learner processes information” (p. 11). Some authors have described strategies as facilitating tools in the

language learning process (Oxford, 1990; Vandergrift, 1998) rather than as part of a whole process.

According to Oxford (1990), *learning strategies* are the means used by learners to enhance their learning outcome. Strategies are essential for language learning as they promote the learner's autonomy and increase self-directed involvement, which are needed for the learner's language improvement and proficiency. Oxford (2003) claims that there are no good or bad strategies, as they highly depend on the context in which they are used. However, she remarks that positive strategies are those that relate well to the L2 task, fit the learner's style, and are employed effectively. Strategies that fulfil these conditions "make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (Oxford, 1990, p. 8). According to Cohen (1998) learning strategies are "learning processes which are consciously selected by the learner" (p.4).

Wenden (1987) understood strategy theory as part of a broad area of research on mental processes and structures within the field of cognitive science. Other researchers have defined strategy in terms of categories, for example Phakiti (2003) suggests that motivation and goals define the strategies used by the learner.

Finally, Weinstein, Husman, and Dierking (2000) replicated Oxford's definition about learning strategies, stating that "learning strategies include any thoughts, behaviours, beliefs, or emotions that facilitate the acquisition, understanding, or later transfer of new knowledge and skills" (p. 727).

2.7.3. Contributions to Language Learning Strategies

Until the mid- 1970s, applied linguistics focused on classroom-based language teaching methodology, giving little attention to the learner's individual factors, such as motivation, learning styles, and language learning strategies. However from the mid-1970s the emphasis shifted from methodological teaching approaches to a more learner centred approach, enhancing aspects such as the learner's learning process, storage, retrieval and L2 use (White, 2008).

This shift led to investigate the learner's cognitive processes further, when using language strategies to improve their L2. Several lists and groups of strategies have been developed, however the two most influential ones have been O'Malley and Chamot's (1990) distinction between metacognitive, cognitive, and socio-affective strategies, and Oxford's (1990) Strategy Inventory for Language Learning (SILL), also described in

chapter three, which consists of direct strategies (memory, cognitive and compensation strategies) and indirect strategies (metacognitive, affective and social). Both strategy systems are highly compatible (for a detailed comparison, see Hsiao & Oxford, 2002).

First of all, O'Malley and Chamot's (1990) construct gathers four main groups of strategies (Dörnyei, 2005):

1. Cognitive strategies include the use and transformation of learning materials and the input received (e.g., repetition, summarising, using images).
2. Metacognitive strategies are aimed at analysing, monitoring, evaluating, planning, and organising one's own learning process.
3. Social strategies involve interpersonal behaviours in order to improve L2 communication and practice among learners (e.g., initiating interaction with native speakers, cooperating with peers).
4. Affective strategies are used by students to control their emotional/affective moods and experiences. These strategies intervene during language.

O'Malley and Chamot (1990) highlight the importance of metacognitive strategies for the development of effective target language skills, orienting their research towards the use of strategies in speaking, listening, reading and writing (Broady & Dwyer, 2008). Metacognitive strategies are considered as higher order executive skills responsible for planning, monitoring and evaluating the outcome of a learner activity (Broady & Dwyer, 2008).

Secondly, Oxford's (1990) classification of strategies is one of the most popular as it includes a whole system of language learning strategies. Thus, language learning strategies are divided into two major categories: direct and indirect. These two classes are divided into a total of six groups (cognitive, memory, and compensation under direct strategies; and metacognitive, affective, and social under the indirect strategies).

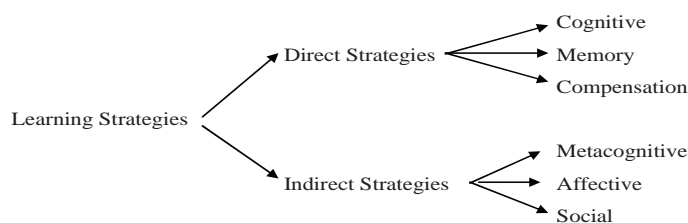


Figure 8. Language Learning Strategies Extracted from Oxford (1990)

Direct strategies require mental processing of the target language. However, each direct strategy develops this process differently:

- *Cognitive strategies*, such as practicing or analysing, enable the learners to produce and understand the new language by different means: through reasoning, analysis, note-taking, synthesising, outlining, reorganising information to develop stronger schemas, etc. These strategies are vital for second language learning, and despite the variety of strategies in this section, all share a common feature, which is to manipulate and transform the target language. Developmental psychologists have examined that there is no difference between older and younger children in possessing cognitive strategies, but older children “become more flexible and efficient in how they invest their resources” (Flavell, Miller, & Miller, 1993, p. 254).
- *Memory strategies*, such as grouping or using imagery, have highly specific functions, such as helping students store and retrieve new information. Memory-related strategies have been shown to relate to L2 proficiency in a course devoted to memorising large numbers of Kanji characters (Kato, 1996) and in L2 courses designed for native-English speaking learners of foreign languages (Oxford & Ehrman, 1995). However, memory-related strategies do not always positively relate to L2 proficiency. In fact, the use of memory strategies in a test-taking situation had a significantly negative relationship with the learner’s test performance in grammar and vocabulary (Purpura, 1997). The probable reason for this is that memory strategies are often used for memorising vocabulary and structures at initial stages of language learning, but learners need such strategies much less when their range of vocabulary and structures has increased.
- *Compensation strategies*, such as guessing or using synonyms, allow learners to use the language despite of their often large gaps in knowledge. Cohen (1998) claimed that compensation strategies used for speaking and writing (often known as a form of communication strategies) are not to be considered language learning strategies, as their main role is language use. However, Little (1999) and Oxford (1990) stated that any kind of compensation strategy, even if it is only addressed for language use, could help the language learning process. Oxford and Ehrman (1995) showed that compensatory strategies are significantly related to L2

proficiency in a study carried out with native English-speaking learners of foreign languages.

Indirect strategies are called “indirect” as they do not directly involve the target language.

- *Metacognitive strategies* allow learners to control their cognition, which means that the learner is able to coordinate his/her own learning process by using study habits such as centering, arranging, planning, and evaluating. Purpura (1999) found that metacognitive strategies had "a significant, positive, direct effect on cognitive strategy use, providing clear evidence that metacognitive strategy use has an executive function over cognitive strategy use in task completion" (p.61). Research with EFL learners in several countries (e.g., in South Africa, Dreyer & Oxford, 1996; and in Turkey, Oxford, Judd, & Giesen, 1998) showed evidence that metacognitive strategies are often strong predictors of L2 proficiency.
- *Affective strategies* help to regulate emotions, motivations, and attitudes. Affective strategies, such as identifying one’s mood and anxiety level, talking about feelings, rewarding oneself for good performance, and using deep breathing or positive self talk, have been proved to be significantly related to L2 proficiency. For example several studies (Dreyer & Oxford, 1996) among South African EFL learners or (Oxford & Ehrman, 1995) among native English speakers learning foreign languages have confirmed that positive affective strategies can improve L2 learning. However, in other studies, such as that of Mullins (1992) with EFL learners in Thailand, affective strategies showed a negative link with some measures of L2 proficiency. One reason might be that as some students progress towards proficiency, they no longer need affective strategies as much as before. Perhaps because learners’ use of cognitive, metacognitive, and social strategies is related to greater L2 proficiency and self-efficacy, over time there might be less need for affective strategies, as learners may progress to higher proficiency.
- *Social strategies* help students to learn through interaction with others. Indirect strategies are useful in virtually all language learning situations and are applicable to all four language skills: listening, reading, speaking and writing. Social strategies (e.g., asking questions to get verification, asking for clarification of a confusing point, asking for help in doing a language task, talking with a native-

speaking conversation partner, and exploring cultural and social norms) help the learner work with others and understand the target culture as well as the language. Social strategies were significantly associated with L2 proficiency in studies by the South African EFL study by Dreyer and Oxford (1996) and in the investigation of native-English-speaking foreign language learners by Oxford and Ehrman (1995). Self report surveys, observations, interviews, learner journals, dialogue journals, think-aloud techniques, and other measures have been used in order to assess L2 learners' strategy use. Each of these techniques has advantages and disadvantages, as analysed by Oxford (1990) and Cohen and Scott (1996). The most widely used survey, the Strategy Inventory for Language Learning (an appendix in Oxford, 1990), has been translated into more than 20 languages and is used in dozens of published studies around the world.

There have also been some criticisms surrounding learning strategy research, as many authors believe that the studies conducted lack exactitude in relation to the methodology used to elicit measure and classify strategies. Some authors doubted the qualitative methods for eliciting learner strategies, as they might not represent the internal reality of students (Seliger, 1983). Other researchers support the idea that some of the questionnaires used to elicit learners' strategies are not transferable across sociocultural domains (Dörnyei, 2005).

Besides, Dörnyei (2005) puts into question the difference between the process of learning and the learning strategy use. Thus, Dörnyei (2005) cites Riding and Rayner (1998) proposal on learner strategy. They argued that strategic learning takes place when learners struggle to select and develop learning procedures that allow them to be more effective. Winne (2001) replicated this idea with the notions of *tactics* and *strategies*, the former being "a particular form of schema that is represented as a rule in IF-THEN form, sometimes called a condition-action rule" (p. 159) and the latter, as a broader plan to approach a high-level goal.

Other authors have criticised the relation between learner strategy and language learning success (Gillette 1994; Rees-Miller, 1993). On the one hand, Gillette's study of the three effective and three ineffective learners raised the question about whether "positive learning strategies" (p. 211) constitute a full explanation for L2 achievement independent of the motivation and personal background. On the other hand, Rees-Miller (1993), questioned the notion of strategy itself, supporting that: "Even the cognitive learning

strategies, such as seeking meaning, using deduction, inferencing, or monitoring, are defined so broadly that it is questionable whether they can be specified in terms of observable, specific, universal behaviours that could be taught to or assessed in students. (p. 681)”.

The lack of consensus in defining and developing the term strategy first named by Wenden (1991), has been echoed by other researchers (Dörnyei, 2005; Ellis, 1994; McDonough, 1995). Strategy researchers have addressed this criticism (Macaro, 2006) investigating the way language learning strategies are conceptualised, defined, and approached.

Macaro (2006) developed a framework to respond to some unquestioned matters related to the notion of strategies, describing them as containing four main features: a) location of strategies (working memory), b) dimension of strategies (clusters), c) goal specification (motivation), and d) situation-specific and transferability.

The *location of strategies* is related to the relationship established between learner strategies and subconscious brain activity. According to Macaro (2006) learner strategies occur only in the working memory. Thus, the learner’s strategies are conditioned by a number of processing resources, which are controlled by the central executive (Baddeley, 1997). Then, without the learner’s strategies, the working memory is unable to perceive, process, and encode functions that it is required to do.

The dimension of strategies is measured in terms of cognitive behaviour, thus the *dimension of a strategy* is described in “terms of thinking rather than doing” (Macaro, 2006, p. 327). Describing the mental action of a strategy allows understanding its main goal, therefore strategies such as memorising or rehearsing act in conjunction with other strategies. Hence, the use of strategies has been proved to be efficient if the strategies are used in a cluster, which means, using strategies in combination among them in order to develop efficient learning. Effective learners use strategies in clusters according to a specific context and task (Macaro, 2001, 2003). Many strategy research has recognised the clustering effect of strategies, for example, in L2 to L1 dictionary tasks (Neubach & Cohen, 1988), in listening tasks (Laviosa, 2000), and in reading tasks (Graham, 1997). Thus, effective language learning and automatism is dependent on the correct choice and evaluation from a variety of strategies (Macaro, 2001).

The third feature related to strategy use is the *goal-oriented focus* (Macaro, 2006). This construct has been evidenced by other researchers (Dörnyei, 2001b; Weiner, 1992, for

a review). Dörnyei (2000) also stated that when goals are set, intention is created, thus leading to action execution. Many researchers have claimed the importance of self-guides with appropriate behavioural strategies in order to facilitate goal attainment (Dörnyei, 2009b; Oyserman, 2008; Oyserman, Bybee, & Terry, 2006).

Finally, the last feature corresponds to *situation-specific and transferability* to other tasks or situations (Macaro, 2006). The learner needs to be able to implement a set of strategies or a strategy at a specific situation. Therefore, a strategy is a vital tool for connecting metacognitive awareness and achievement. The fact that it is transferable implies that strategies can be applied to many learning situations (the economy principle; see Ellis, 1985; Kellerman & Bialstok, 1997).

Macaro (2006) concludes that the process of learning an L2 implies the “use of long-term memory, via strategic behaviour in working memory, through the development of declarative and procedural knowledge” (p. 332). Performance of the L2 is possible because of the use of combined strategies that interact in the learning process, contributing to developing skills. The way strategies combine and interact affects the progress differently. According to Macaro (2006), strategies are materials without which L2 learning is impossible. The framework (Macaro, 2006) proposes that repeated activation of language processes in working memory results in structural changes that take place in long term memory both in vocabulary and morphosyntax. Consequently, the automatising of these processes leads to skill improvement.

In the past ten years some specific taxonomies have arisen for specific language skills such as in the case of the listening skill, the Oral Communication Strategy Inventory (OCSI) (Vandergrift, Goh, Mareschal, & Hassantafaghodtari, 2005; Nakatani, 2006), and in the case of the reading skill, the Survey of Reading Strategy (SORS) (Sheorey & Mokhtari, 2001). These instruments are described in chapter number three.

2.7.4. Research Studies of language learning strategies

Scholars believe that strategy use correlates with various aspects of language learning success. Some studies show correlations between generally high strategy use and learning success, (see Oxford & Burry-Stock, 1995, for a review) or between generally high strategy use and motivation (Nunan, 1997; Oxford & Nyikos, 1989).

2.7.4.1. Language Learning Strategy Use

Some studies show a connection between success and a preference for certain kinds of strategies that mark good language learners (Naiman, Frohlich, Stern, & Todesco, 1996). For example, Peacock and Ho (2003) revealed that among 50 strategies examined, only 27 were positively associated with L2 proficiency; 59% of these strategies were cognitive and metacognitive. Similar results were reported by Hu, Gu, Zhang, and Bai (2009). In general, evidence suggests that, metacognitive strategies are linked with several L2 outcomes including overall proficiency (Nisbet, Tindall, & Arroyo, 2005; Takeuchi, 1993), reading (Ardasheva & Tretter, 2013; Peacock & Ho, 2003; Schoonen, Hulstijn, & Bossers, 1998), and vocabulary knowledge (Takeuchi, 1993).

Many studies found that successful readers deployed some strategies that implied meaning instead of surface text-based strategies. It has also been proved that there is a link between success and the use of a combination of strategies (Macaro, 2001; Vandergrift, 1998). Learners also use the learning strategies differently depending on their gender, for example there are some studies that claim that females seem to use more strategies than males (Macaro, 2000; Oxford, 1989), or they use strategies differently (Bacon, 1992; Gu, 2002). Experienced L2 learners may use different sets of strategies differently to those of inexperienced L2 learners (De Larios, Murphy, & Manchon, 1999; van Hell & Mahn, 1997). Individuals may restrict themselves to an ineffective subset of strategies (Kember & Gow, 1994; Porte, 1997), may be unable to deploy a number of strategies (Block, 1986; Lee & Schallert, 1997) or may use strategies inappropriately without knowing that they are doing so (Christianson, 1997; Porte, 1995).

Bown (2006) carried out a study on the contribution of affective strategies to the learning process within an instructed programme with Russian university students. The author uses Richards and Renandya's (2002) definition of affective strategies which "serve to regulate emotions, attitude and motivation" (p. 121), including, for example, positive self-talk. Bown (2006) focused on how students use affective strategies to cope with emotional states that they may experience during the programme. The study reveals great information on how learners regulate affect in self-instruction, and the way learners manage with negative emotions. All students suffered isolation and de-motivation during the programme. However, those who reported use of strategies to cope with negative feelings, were the most successful students in the group; this group used self-

encouragement and other strategies to regulate and adjust all negative feelings within the language learning process. Bown (2006) provides insight into the way affective strategies contributed to the development of an affective interface between learners and self-instruction context. Thus, he concluded that they provided encouragement and reduced anxiety.

The dichotomy between good and bad learners was studied by Wong and Nunan (2011), who investigated the learning styles and strategies of effective and ineffective language learners. The sample comprised 110 undergraduate university students in Hong Kong, who had to complete an online questionnaire regarding their preferences as well as patterns of language practice and use. Results showed that there were key differences in learning strategy preferences, learning styles and patterns of language use among both groups.

Previously tested instruments have also been used, as in Wharton's (2000) research. Wharton (2000) used Oxford's Strategy Inventory for Language Learning (SILL) in order to examine the self-reported language learning strategy use of 678 university students, who were learning Japanese and French as a foreign language in Singapore. Results showed that higher proficient students used more learning strategies, the most important being: motivation, language studied, and self-rated proficiency.

A study carried out by Ansarin, Zohrabi, and Zeynali (2012) aimed to determine the relationship between language learning strategies and vocabulary size in Iranian EFL learners in three proficiency levels (elementary, intermediate, and advanced). Thus, 150 students completed the Oxford University and Cambridge University placement test, the Strategies Inventory Language Learning (SILL) instrument, and a Vocabulary Based Test. The results indicated that metacognitive strategies were mostly used among the three levels. Also advanced proficient learners use more language learning strategies than the other levels, whilst advanced learners also proved to have a wider vocabulary in relation to elementary and intermediate levels.

Other studies have considered strategy use in combination with other affective variables. For example, Cabansag (2013) investigated university students' propensity towards strategy use in English language learning. He considered three main aspects of attitude: emotion, cognitive, and behavioural factor. The sample of 114 college students, who belonged to four different fields of study (AB English, AB Mass Communications,

BSE English and Bachelor of Science in Business Administration, BSBA) completed the Strategy Inventory of Language Learning (SILL) and an attitude questionnaire. Results showed that students showed the same tendency when choosing the strategy to cope with English language learning. Furthermore, there was a medium positive correlation between attitude and English language learning strategies among respondents. Finally, the best predictor of English language learning was the cognitive aspect.

2.7.4.2. Speaking and Listening Communication Strategy Use

Macaro, Graham and Vanderplank (2007) identified in their research the strategies that play an important role in the listening process: 1) making predictions about the content of the passage (e.g., Goh, 1998); 2) selectively paying attention to certain aspects of the passage, such as particular words or phrases (O'Malley et al., 1989); 3) monitoring and evaluating comprehension (e.g., Goh, 2002; Vandergrift, 2003); 4) using a variety of clues (linguistic, contextual, and background knowledge) in order to infer the meaning of unknown words (e.g., Goh, 2002).

A study carried out by Mansoor and Ebrahim (2014) investigated the impact of metacognitive instruction on EFL learners' metacognitive awareness and their listening performance on a sample of 30 intermediate EFL listeners. After a ten-week intervention program in metacognition, pretest and posttest scores revealed that metacognitive instruction helped the learners' metacognitive awareness and in result, students improved their learning comprehension ability.

Another study carried out by Hasan (2000) regarding students' difficulties at listening tasks revealed that students' problems with the listening was related with perception features such as speed or unclear message. These difficulties were faced with topdown strategies in order to compensate their bottom-up weaknesses.

2.7.4.3. Reading Strategy Use

Munsakorn (2012) compared English learning experience with reading strategy use. The results revealed that students with English learning experience of less than 8 years, 8-12 years, and more than 12 years did not significantly differ in their strategy use.

Ghonsooly and Barghchi (2011) explored the relationship between reading anxiety and learners' use of reading strategies. The findings show that anxious and non-anxious readers use different higher-level strategies; the non-anxious readers were concerned with processing and decipherment of meaning, whereas the anxious readers were worried about identifying problems and overcoming them. Another study in the same field of work was carried out by Lien (2011), who investigated EFL learners' reading strategy use in relation to reading anxiety. The findings indicate a negative correlation between reading anxiety and reading strategies. It was also found that EFL learners with low anxiety levels tended to use general reading strategies, such as guessing, while EFL learners with high anxiety levels employed basic support mechanisms, such as translation, to help themselves understand texts.

A statistical modelling study (Ardasheva, 2016) explored the relationships between language learning strategies and reading and mathematics achievement of English learners (ELs). The study comprised a sample of 805 Grade 3-8 students. Results identified three positive contributors to EL outcomes: metacognitive strategies, motivation, and native language literacy; and two intervening effects: age, length of residence (LOR). Cognitive strategy use declined as age increased; and, memory, social, affective, and compensation strategies declined as a function of LOR.

Poole (2005) used the Survey of Reading Strategy instrument (SORS) to explore the reading strategies of 248 university ESL students from the Midwest and South of the United States. The results showed that students used more the problem-solving strategies than the global and support strategies. Gorsuch and Taguchi (2008) found that Vietnamese college EFL students mostly used bottom-up, top-down, and cognitive strategies to assist comprehension in repeated reading sessions. Karbalaei (2010) compared reading strategy use in Iranian EFL and Indian ESL college students. The study revealed that Indian ESL students used mostly global and support strategies, as well as metacognitive reading strategies, while Iranian EFL students used mostly problem-solving reading strategies. Phakiti (2003) studied Thai university EFL students, concluding that those who frequently use metacognitive strategies had significantly better reading test performance. Mokhtari and Sheorey (2008) later explained that skilled readers of FL and SL were characterized as globally aware. They were able to think about the reading process; to draw on planning, monitoring, goal-setting and assessment strategies; and to foster global skills as well as reading comprehension. High English proficiency students seem to use more and a greater

variety of strategies in the reading of English texts. Kummin and Rahman (2010) reported that ESL University students from Kebangsaan, Malaysia, who were proficient in English, often, used a variety of strategies, but those who were less proficient had little knowledge of metacognition. They were not able to use appropriate strategies to evaluate their own reading comprehension or performance.

Regarding gender distinction, a study by Poole (2009) examined the differences in strategy use between males and females with low intermediate Colombian university students who completed the Survey of Reading Strategies (SORS). Results showed that, in general, females used more strategies than males.

Boonkongsan (2014) went further and examined the effects of gender, reading anxiety and language learning experiences on the use of reading strategies by undergraduate students of science. A sample of 1,140 students completed the Survey of Reading Strategies (SORS) and the *Foreign Language Reading Anxiety Scale* (FLRAS). The results revealed that students used problem solving strategies the most, followed by then global and support strategies. In addition, there was a difference in the use of reading strategies, reading anxiety, and prior language experience between males and females.

In summary, the common element of most of these investigations is that learning strategies are linked to other affective variables, such as motivation, attitude, attributions or anxiety. Thus, language learning process should be investigated as a whole multifaceted field, where several variables meet at the same time, and are intertwined, creating a specific response to the learning situation, which, in turn, produces a specific outcome.

CHAPTER THREE

3. METHODOLOGY

- 3.1. Introduction
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3. METHODOLOGY

The true method of knowledge is experiment. (W. Blake)

3.1. Introduction

This research has been carried out in two different language centres of Escuela Oficial de Idiomas (forward EOI). An EOI is a state-run educational centre for adult learners specialized in second language teaching such as English, French, Italian, Valenciano, Spanish for foreign learners, Russian, German, Chinese, etc. The EOIs that have participated in this study are:

- The EOI Quart de Poblet, which is located in Quart de Poblet, Valencia. It is a school centre with 5.113 students in total. There are students 2.675 that study English, 873 that study French, 576 that study German, 383 that study Italian, 78 that study Valenciano, and 15 students that study Spanish as a second language. The EOI Quart de Poblet provides teaching in other towns around Valencia as it has four small school centers in: Torrent, Manises, Paiporta, and Aldaya-Xirivella.
- EOI Lliria is located in Lliria, a town 30 km from Valencia. This language centre has 1.792 students; 1.186 study English, 342 study French, and there are 264 that study German as a second language. The EOI Lliria also provides teaching to some of the towns surrounding the area, as it has other school centres in La Pobra de Vallbona and in Bétera.

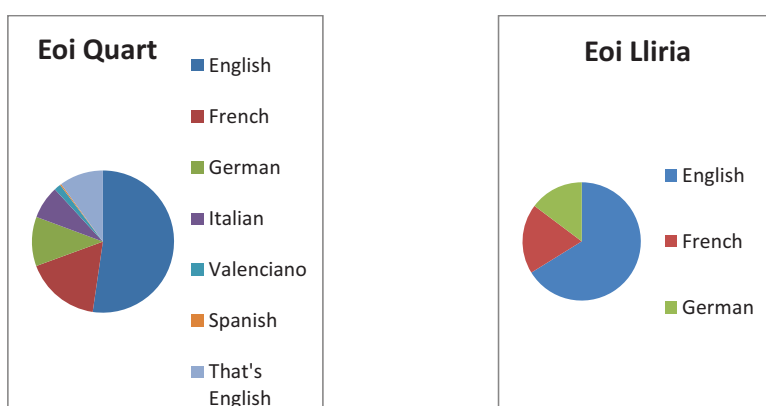


Figure 9 Number of Students per language at each EOI

On the one hand, as shown in Figure 9, the EOI Quart has a total of 5.113 students, from which 32% of them are studying a course of English, 17.07% are studying French, 11.27% are studying German, 7.49% are studying an Italian, 1.53% are studying Valenciano, 0.29 are foreign students who are studying Spanish as a second language, and finally there is a 10.03% of students who are following a online course in English.

On the other hand, the EOI in Llíria has a total of 1.792 students, from which 66.18% are studying a course in English, 19.08% are studying a course in French, and 14.73% are studying a course in German.

The EOI provides students with valid certificates once the levels have been passed. The EOI centres issue certificates according to the Common European Framework of Reference (CEFR) guidelines. The Council of Europe's Common European Framework of Reference for Languages (CEFR) is a set of descriptions regarding the abilities that students can achieve in a foreign language. Thus, the descriptors used in the CEFR can be applied to any language. These descriptors can be used to set clear targets for achievements within language learning, to help define language proficiency levels and to interpret language qualifications. It has become accepted as a way of benchmarking language ability, not only within Europe but worldwide, and plays a central role in language and education policy. It has growing relevance for language testers and examination boards, helping to define language proficiency levels and interpret language qualifications.

The CEFR defines language ability on a scale of levels from A1 for beginners up to C2 for those who have mastered a language. This makes it easy for anyone involved in language teaching and testing (learners, teachers, teacher trainers, etc.) to see the level of different qualifications. It also means that employers and educational institutions can easily compare qualifications and see how they relate to exams in their own country.

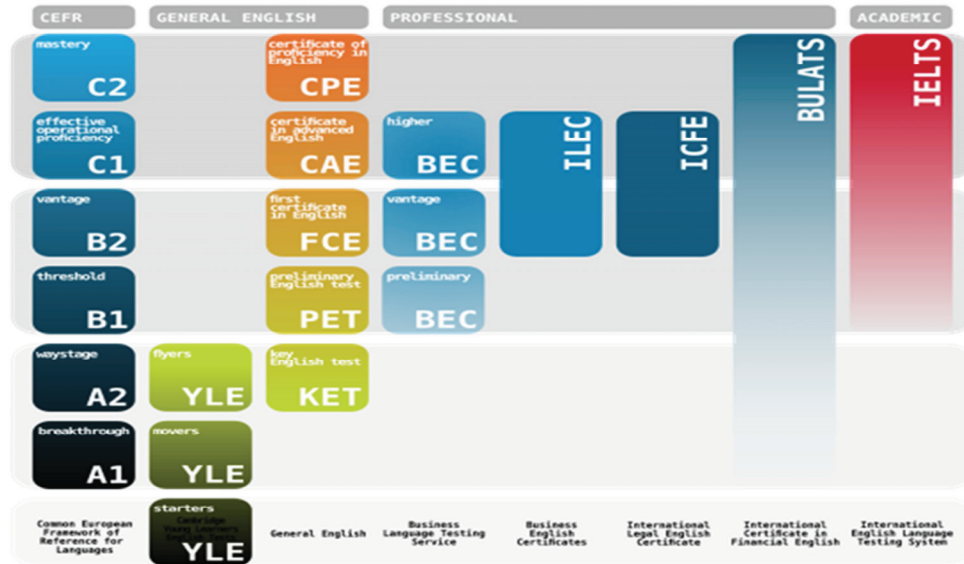


Figure 10 English CEFR and ESOL Examinations correspondence
Source taken from: www.polyglotnerd.com.

Figure 10 shows the CEFR and ESOL examinations levels. As can be observed the CEFR provides certificates from A1 breakthrough to C2 mastery. General English certificates include exams for young learners of English (YLE), which is a series of fun, motivating English language tests for children in primary and lower-secondary education. KET to CPE exams are issued by Cambridge English Language Assessment.

The exams are recognized around the world by thousands of employers, universities and government ministries as proof of ability to use English. Cambridge also developed the IELTS (International English Language Testing System) exam in conjunction with the British Council and IELTS Australia, which is designed to assess the language ability of candidates who need to study or work where English is used as the language of communication. IELTS is required in order to be accepted at a university in the UK and other countries. Finally, Cambridge ESOL has a range of business English examinations including BULATS (Business Language Testing Service) and BEC (Business English Certificate).

3.2. Participants

For the purpose of this research, more than four hundred students selected from four different levels (A1-B2 levels) following the Common European Framework of Reference (CEFR), have participated in the study. Despite the fact that the students who have participated in the study were in a regular course level at the EOI centre. The students have submitted a placement test by the Oxford University Press and University Local Examination Syndicate (2001), in order to test their level according to an international valid instrument.

We took a sample of 100 participants per level (A1-B2). All participants were native Spanish speakers, except for one person who was from Romania; however this student has lived in Spain since she was 1 year old. The data collection started in April 2013, but has been extended to 2014 and until October 2015 in order to obtain the 400 samples.

Considering the total amount of participants in the study, there are 35, 4% males and 64.6% females for the four levels. The following Figure shows the students' level and gender.

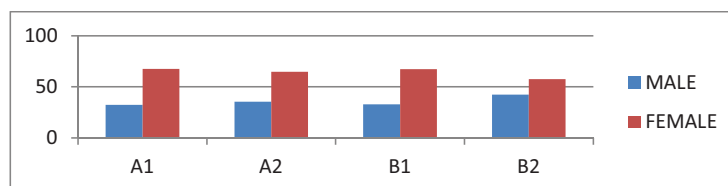


Figure 11 Participants per gender

Students also completed a background questionnaire describing several aspects of their language learning background history and language development. This background questionnaire provides relevant personal and academic information related to their English language learning academic courses and other qualitative questions such as dedication to learning the L2, other languages learnt, etc. The data extracted from this questionnaire is explained below:

Students' age at EOI centres range from 19-60 years at A1 level, 16-65 years at A2 level, 17-62 years at B1 level, and 23-66 at B2 level. The varying ages found at these

centres is due to the fact that it is a non-compulsory educational centre. However the fact of having such a wide spectrum of ages among the groups makes the study more faithful as it reflects the real situation of society within the country. Therefore, this means that the study offers a high ecological validity of the sample taken, as the findings of this study can be attributed to real-life settings.

The following Table shows the average age per level and the average age of first exposure (AoE) to English as a second language.

Table 2.- Chronological Average Age of Learning English

	A1		A2		B1		B2	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Chrono average age	38	10.09	37.36	10.58	35.84	9.72	36.89	8.49
AoE	21.2	15.96	17.92	13.77	13.80	10.77	12.97	9.74

According to Birdsong (2006), AoE is the age at which learners start to be immersed in the L2 context through a formal school environment, either visiting the L2 country, having extended contact with natives. As we can see from the Table 2, some differences can be found in the starting age of exposure, as the mean value is lower at higher levels than at lower levels. One of the reasons might be that some students at lower levels studied at school French as a second language instead of English. Therefore, these students are called “real beginners” and start their learning at the first course level (A1).

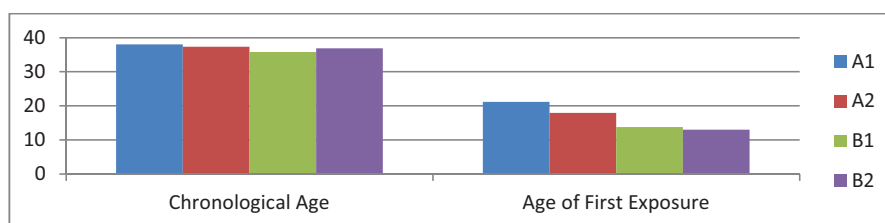


Figure 12 Chronological age and Age of First Exposure per Level of English

The background questionnaire also asked for students' dedication to English language learning per week, and the duration of which students have been studying English since they first started.

Table 3.- Frequency of Students' learning habits

	A1		A2		B1		B2	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Hours/week	3.02	2.28	3.76	3.38	3	2.41	3.14	1.92
Time length	5.16	4.88	6.70	5.27	11.32	5.76	12.58	5.81

Table 3 shows that students at lower levels (A1, A2) devote, on average, more hours per week to studying English than higher levels, although the difference is small. On the other hand, and for obvious reasons, students at higher levels (B1, B2) have been studying English for a longer period. Figure 13 shows, in a more visual way, the means for hours per week, and time studying English as a foreign language.

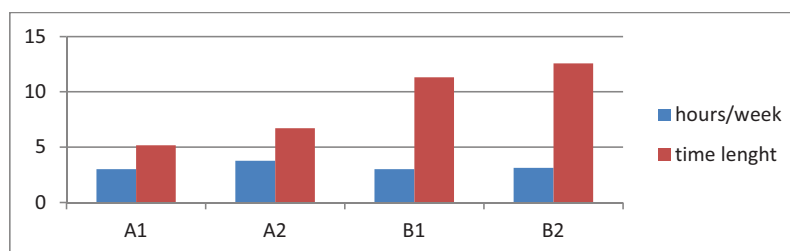


Figure 13 Frequency of Students' learning habits

The background questionnaire provides information related to students' learning or knowledge of any other language apart from Spanish or English. The language that is mostly studied in the Valencian Community is Valenciano, because it is a compulsory official language that it is taught at primary and secondary school. Therefore, most of our students indicated that they speak or know Valenciano, followed by French, as up until the 1990s, it used to be the second language that students learnt at school. Figure 13 shows the languages that are mostly known by students at EOI.

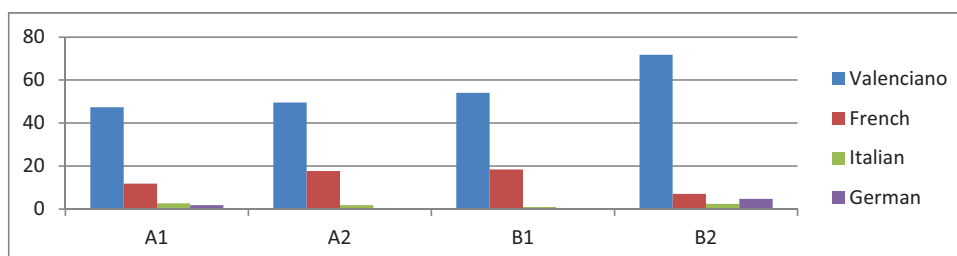


Figure 14 Students' Language Learning Preferences

As can be observed in Figure 14, Valenciano is mostly spoken by all students because both schools are in villages where Valenciano is more often spoken than Castellano. We can appreciate that levels A2 and B1 know or are more interested in learning French apart from English than A1 or B2. This could be due to the fact that at intermediate levels it is easier to learn more than one language as students see that they are improving language learning abilities faster; however as the learning of English becomes more complicated at higher levels, students abandon learning more than one language at the same time.

3.2.1. Student's Reading Habits Description

Reading is an art which provides a human being with a basis to understand life as well as the elements integrated in one's personal view of reality. Clark and Rumbold (2006) observed that, in addition to personal and mental developments, reading is critical to ensure one's access to social, economic and civic life. Palani (2012) states that effective reading is crucial to effective learning and it influences the total educational process, he believes that comprehension skills, developed at reading stages, help the learner to understand the meaning of words both in isolation and in context.

In this research we have conducted a small questionnaire regarding student's reading habits, in order to obtain a general picture of students' preferences reading materials and frequency. The variables measured have been the following: books, magazines, comics, webs/blogs/forums, scientific books/articles, and others. Students could answer more than one of the options given; this means that the total per category exceeds 100% in some cases.

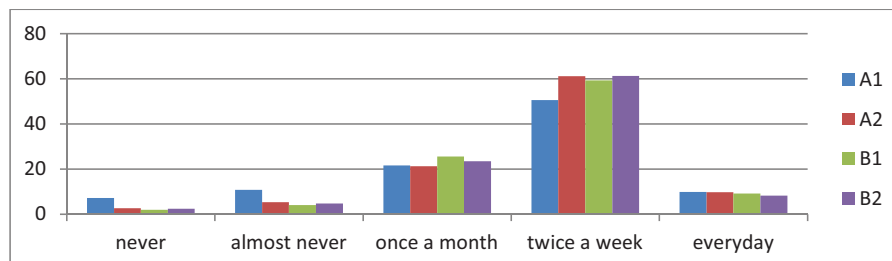


Figure 15 Students' Reading Frequency Habits

Figure 15 shows students' reading frequency per level. Accordingly, the highest students' tendency for reading activity is twice a week. The levels that show a higher frequency are B2 and A2. Students at these levels are exposed to extensive reading text materials, apart from the two compulsory graded books they have to read at the EOI during the course. At these level, students have to pass a general exam which is external to EOI exams; this exam is called Certificate Exam and it provides students with a certification of the corresponding level, from A1 to C1 following the CEFR premises.

Figure 15 shows that A1 level students read the most, in comparison with the rest of the levels. This could be due to the fact that, at this initial stage of learning, students are more encouraged to practise the foreign language, because of its attractive newness, its complexity, or because these students have not undergone so many frustrating experiences with the language yet, in comparison with the rest of the levels.

Table 4.- Students reading sources preferences

	A1	A2	B1	B2
Source a:				
Books	65.8%	84.1%	86.7%	82.4%
Magazines	36.9%	41.6%	29.6%	48.2%
Newspapers	45.9%	47.8%	40.8%	58.8%
Comics	2.7%	8.8%	8.2%	14.1%
Webs/ Forums	64.0%	82.3%	79.6%	87.1%
Scientific art.	31.5%	36.3%	39.8%	43.5%
Others	18.9%	23.0%	17.3%	21.2%

a Categories are not mutually exclusive and may have a cumulative total of more than 100%

Further information refers to students' reading preferences depending on their level. As can be observed in Table 4, students at higher levels tend to be more interested in

reading books, newspapers and all kinds of digital material than students at lower levels. It is obvious that students at B1 and B2 levels are more exposed to longer texts due to their text books, articles and other reading materials that the teacher provides during the year. Figure 16 shows that, in general, books are students' most favoured reading material; reading books is a mandatory activity during the academic year, as students are obliged to read at least 2 books to pass the academic course.

The reference teachers' guide provides students graded reader books adapted from classic or contemporary novels, which should always contain a Cd-Rom audio, so that students can listen to the story either before, during or after the reading task. Several activities are associated with this task, as for example a speaking test about the book, multiple-choice test activity, or reading circles which promotes collaborative reading among students.

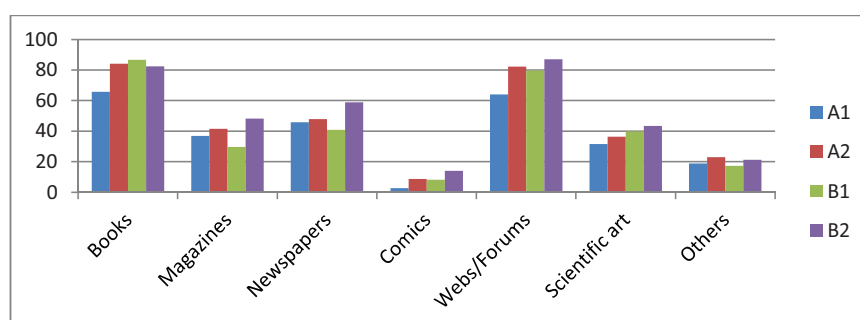


Figure 16 Students' Reading Preferences

a Categories are not mutually exclusive and may have a cumulative total of more than 100%

As observed in Figure 16, apart from books, webs/forums materials are quite successful among students' reading preferences. During the last two decades, literacy has become more technologically orientated, due to the overload of information contained in websites and other technological devices that allow students to get quick information about what happens around the world. It is also an infinite tool in order to improve their reading comprehension in the foreign language. In the last decades we have experienced the exponential growth of information and entertainment being created in a digital format. Students feel attracted by the rapidness of getting information through the internet, and the reading procedure in these cases is more focused on skimming and browsing than a profound reading process. Some researchers argue that the growth of electronic media may

have negative implications, as people might be less engaged in extensive reading and they also may lack the ability to read deeply and to sustain a prolonged reading attention (Liu, 2005).

3.3. Description of the Instruments

In this study several instruments have been used. These instruments are described in more detail below:

Affective and motivational instruments (see 3.3.1)

- Foreign Language Class Anxiety Scale (FLCAS) (Horwitz et. al., 1986) (Spanish version by Rodriguez & Abreu 2003) (Stephenson. W. J, 2006).
- Motivation questionnaire (Kormos, Kiddle and Csizer, 2011).
- Questionnaire for Successful and Unsuccessful Learning Experience (based on Vispoel & Austin, 1995).
- Self-concept instrument (AF-5 García & Musitu, 1999) TEA Ediciones.

Language Learning Strategy instruments (see 3.3.2)

- Oral Communication Strategy Inventory (OCSI, Nakatani, 2006) adapted version from “*Developing an oral communication strategy inventory*”, Nakatani, Y. (2006).
- Survey of Reading Strategy (SORS, Mokhtari & Sheorey, 2002).
- Strategy Inventory for Language Learning (SILL version 7.0), (Oxford 1990).
- Quick Placement Test (Oxford University Press & University of Cambridge Local Examinations Syndicate 2001).
- Background Questionnaire (based on The Background Questionnaire, Original Spanish version, (Stephenson & Hewitt, 2006) and L2 Language History Questionnaire version 2 (Li, Sepanski, & Zhao, 2006).

3.3.1 Affective and motivational instruments

3.3.1.1 The Foreign Language Classroom Anxiety Scale, FLCAS (based on Horwitz et al., 1986)

This instrument, developed by Horwitz, Horwitz, and Cope (1986) evaluates the students' specific anxiety reaction towards the learning of a foreign language. Horwitz states "countless language learners and teachers across the world identify with the experience of foreign language anxiety; the potential of anxiety to interfere with learning, and performance is one of the most accepted phenomena in psychology and education" (Horwitz, 2000, p. 256). According to Horwitz et al. (1986) FLA is "a distinct complex of self-perceptions, beliefs, feelings, and behaviours related to classroom learning arising from the uniqueness of the language learning process" (Horwitz, Horwitz & Cope, 1986, p. 128).

It is important to highlight that in April 2013 Dr. Horwitz, gave me her kind consent, via email, to use the FLCAS in this doctoral thesis investigation and report results after data had been collected. The items of this instrument are based on "student self-reports, clinical experience, and a review of related instruments..." (Horwitz, 1986, p. 560). The FLCAS items were formulated taking into account the following criteria:

- a) Experiences and comments made by students feeling anxiety in the class. The students took part in a "Support Group for Foreign Language Learning' at the University of Texas, Austin, describing their problems when learning English in the classroom.
- b) Reports given by counsellors/tutors at the Learning Skills Centre at the same University, who were interviewed about their experiences with anxious language learners.
- c) Horwitz's personal experience as a language teacher with students, who felt anxiety during the language learning process.
- d) Surveys of other instruments used in the evaluation of anxiety. These were Measures of anxiety (Sarason, 1978), speech anxiety (Paul, 1966), and communication apprehension (McCroskey, 1970), (Horwitz, 1986, p. 560); five items from the French Class Anxiety Scale (Gardner, Clement, Smythe, &

Smythe, 1979), which were “made generic and added to the item pool” (Horwitz, 1986, p. 560).

The FLCAS has 33 items addressing conceptually and clinically important aspects of anxiety. The respondents express their agreement or disagreement with statements about their experience when learning a foreign language in the classroom.

The FLCAS has been scored on a 5-point Likert Scale, ranging from “*strongly agree*” to “*strongly disagree*”. Strongly agree (SA) = 5 ; Agree (A)=4; Neither agree nor disagree (N)=3; Disagree (D) = 2; Strongly disagree (SD)= 1. The scale is rated by adding the points given to all questions, except for the following items that are computed with inverted scoring; items: 2, 5, 8, 11, 14, 18, 22, 28 y 32. These items have and inverted scoring, which means that 5 = 1, 4 = 2, 3 = 3, 2 = 4, and 1=5. Possible scores range from 33 to 165. According to Horwitz (1986), this scale has been found to have an internal consistency, as measured by Cronbach’s alpha coefficient, of .93, and test-retest reliability over eight weeks of $r = .83$, $p = .001$ (p. 560).

For the purpose of this research, which has been carried out with native Spanish students, a Spanish version of the FLCAS was used. The referent questionnaire taken into consideration for this investigation was a verified Spanish-language FLCAS elaborated by Rodriguez and Abreu in their investigation (2003). However, the final version was taken by the Thesis of Stephenson (2006) as it was closer to Spanish interpretation meaning. The translation was totally faithful with the original version by Horwitz et al. (1986).

The version by Stephenson (2006) was tested during the realisation of the author’s research, showing an internal consistency of .93 using Cronbach’s alpha coefficient. This is identical to the internal reliability alpha coefficient found in the original English version of the FLCAS by Horwitz et al. (1986, p. 129). The FLCAS has been shown to have a high internal reliability when administered in several studies (Aida, 1994; Horwitz, 1986; Rodríguez & Abreu, 2003).

3.3.1.2. Motivation questionnaire about Second Language Acquisition (based on Kormos, Kiddle & Csizer, 2011)

This questionnaire has been kindly provided by the author J. Kormos, which was originally developed in collaboration with researchers, who have investigated the role of Ideal L2 self in language-learning motivation (see e.g. Ryan 2009, Taguchi, Magid, & Papi, 2009). It shared a sufficient number of items to allow for the comparability of findings across language learning settings. The items of the questionnaire were adapted from several sources: including a previous motivation questionnaire used by Dornyei, Csizer, and Németh (2006) and a questionnaire by Ryan (2005). These previously used questionnaires also included items originally developed by Gardner (1985) and Clement and Kruidenier (1983). The questionnaire consisted of 40 Likert-scale items and a 10 item section containing multiple choice and short answer questions that provided background information about the participants. The questionnaire was originally elaborated in English and translated into Spanish for the procedure. Back-translation was used with two pairs of bilingual translators.

The instrument measures 13 latent constructs and consists of 66 five-point Likert scale-type items questionnaire. This instrument includes the most important factors in L2 learning motivation (Kormos & Kiddle, 2013):

- Ideal L2 self: contains five items: 14, 37, 50, 59, and 63, which assesses students' views of themselves as successful L2 speakers (e.g: *Puedo imaginarme leyendo libros y artículos en inglés*).
- Intrinsic motivation: contains five items: 8, 12, 26, 33, and 57. This construct evaluates students' own engagement in the learning process because they find it interesting and enjoyable (e.g: *Me pongo contento/a cuando veo que progreso en inglés*).
- Instrumental motivation: contains five items: 4, 11, 27, 47, and 60, which evaluate students' utilitarian goals and values of speaking another language (e.g: *Estudio inglés porque me gustaría pasar algún tiempo en el extranjero*).
- Self-efficacy: contains seven items: 5, 10, 21, 28, 32, 56, and 62. This construct evaluates students' beliefs and views of their own capability to perform a given learning task, thus it is future-oriented (e.g: *Estoy seguro/a que podré usar el inglés exitosamente en mi trabajo futuro*).

- Peer pressure: contains four items: 3, 17, 23, and 48, which evaluate the influence that other students and friends have on the student learning attitude (e.g: *La gente a mi alrededor tiende a pensar que es algo bueno saber idiomas extranjeros*).
- Parental encouragement: contains five items: 25, 35, 43, 45, and 55, which assess the influence that the family environment has on the students' learning progress and attitude (e.g: *Mis familiares realmente me estimulan para que estudie inglés*). It is important to highlight that for the purpose of this study and as it is addressed to adults, the word "padres" (parents) in the Spanish version that the author sent has been reformulated by the word "familiares" (relatives) as it is a closer concept to adults' reality.
- Anxiety: contains seven items: 7, 22, 24, 34, 42, 44, and 54. This construct estimates students' anxiety feeling during the learning process (e.g: *A pesar de que esté bien preparado/a para mi clase, me siento ansioso/a*).
- Technology based approaches: contain three items: 2, 6, and 18. This construct evaluates learners' capacity to use technologies in the language learning environment (e.g: *A menudo uso Internet para practicar inglés*).
- Resource based approaches: contain three items: 9, 15, and 61. This construct determines learners' general capacity to exercise control over learning resources (e.g: *Si hay algo que no entiendo en la clase de inglés, hago el esfuerzo de averiguar más sobre ello*).
- Satiation control: contains three items: 20, 66, and 21. This construct evaluates students' ability to overcome boredom and make language learning tasks interesting. (e.g: *Tengo mis propias técnicas especiales para superar el aburrimiento cuando estoy aprendiendo inglés*).
- Self-regulation: contains five items: 1, 19, 53, 38, and 65. This construct appraises students' ability to actively seek opportunities for learning and using the L2 (e.g: *Planifico mi preparación y mis repasos antes de las pruebas de inglés*).
- Motivational intensity: contains five items 16, 29, 53, 38, and 65. This construct assesses students' self-reported efforts and persistency in learning English (e.g: *Honestamente puedo decir que realmente estoy haciendo todo lo posible para aprender inglés*).
- International orientation: contains six items: 30, 40, 49, 51, 52, and 64. This is an instrumental construct which evaluates students' intention to use English as a lingua franca and communicate with other people in the world (e.g: *Estudiar*

inglés me ayudará a entender a la gente de todas partes del mundo. (No sólo países de habla inglesa).

3.3.1.3. Questionnaire for Successful and Unsuccessful Attributions Learning Experience (based on Vispoel & Austin, 1995)

3.3.1.3.1. The original questionnaire by Vispoel and Austin

In order to investigate students' attribution tendencies, two versions of the questionnaire, based on previous research, have been used (Vispoel & Austin, 1995). The questionnaire, originally elaborated by Vispoel and Austin, contained a total of 105 items with 96 items assessing either successful or failure attributions. These questionnaires were addressed to secondary students and dealt with four subjects: Maths, English, General Music, and Physical Education. Students were given the instruction to recall past experiences in junior high school classes of the subjects aforementioned. Students had to remember a time in which they did particularly WELL or POORLY an activity that was important for them. The activities were listed below the instructions, however if the activity was not mentioned then the student could describe it. Then, they identified a given successful or failing experience, students read the instructions related to the reasons why they did the activity they had circled WELL or POORLY, these instructions were followed by twenty-four 6 Likert-scale items (1= strongly disagree, 6= strongly agree) that comprised 3-item attribution subscales measuring ability, effort, strategy, interest, task difficulty, luck, family influence, and teacher influence. A separate factor analysis of responses to the 24 items was conducted for success and failure attributions in each subject area to assess the convergent/ discriminated validity of the subscales. In every analysis, an 8-factor solution was obtained, reflecting a clearly distinguishable factor for each 3-item subscale (i.e., each item had a high loading on its targeted factor and low loadings on other factors in the rotated factor pattern matrix). Alpha coefficients for the 64 attribution subscales (8 attributions, 4 subject areas and 2 outcomes) ranged from .79 to .96 with a median of .89. Course grade and demographic items appeared on the last two pages of both test forms.

3.3.1.3.2. The questionnaire ASQ & AFQ. Attribution to Success and Failure Questionnaires

The questionnaire used in this study is based on Vispoel & Austin (1995). Two versions of the questionnaire have been used in the study. One version asked about a successful experience, Attribution Success Questionnaire (ASQ), and another version asked about an unsuccessful experience, Attribution Failure Questionnaire (AFQ). Both versions of the questionnaire consist of two parts.

In the first part, students were asked to choose an activity from a list of twenty-five activities at which they have been either particularly successful or poorly in the previous semester. The purpose of this section is to help students to focus on a particular activity rather than thinking of learning English in general when identifying attributions for success and failure. This part contains questions of language ability related to the four main skills such as reading, writing, speaking, and listening. There are seven questions and an open question related to the reading skill; there are four questions and an open question related to the listening skill; there are five questions and an open question related to the speaking skill; and finally, there are five questions and an open question related to the writing skill.

In the second part, students are asked to attribute the activity they have previously chosen as well or poorly on a 6-point Likert-scale, (1= strongly disagree; 6= strongly agree). The attributions included the following items:

- a) Ability [mis habilidades en ingles son elevadas/bajas]
- b) Effort [lo intento con mucho esfuerzo/no lo intento]
- c) Strategy [he usado/no he usado los métodos de estudio y practicas apropiados]
- d) Interest [he tenido/no he tenido interés en la actividad]
- e) Luck [he tenido buena/mala suerte]
- f) Teacher influence [las instrucciones del profesor son/no son apropiadas]
- g) Task difficulty [la tarea fue fácil/difícil]
- h) Class atmosphere [me ha gustado/no me ha gustado el ambiente de clase]
- i) Interest in grades [he tenido/no he tenido interés en sacar buena nota]
- j) Preparation [estaba/ no estaba bien preparado/a]
- k) Enjoyment [me gusta/no me gusta el inglés]

1) Class level [el nivel de la clase es/no es apropiado]

The version used in this study has been translated by the author of this study following the International Test Commission Guidelines for Translating and Adapting Tests (2010).

Table 5.- Dimensional Classification Scheme for Causal Attributions

Attribution	Dimension		
	Locus	Stability	Controllability
Ability	Internal	Stable	Uncontrollable
Effort	Internal	Unstable	Controllable
Strategy	Internal	Unstable	Controllable
Interest	Internal	Unstable	Controllable
Task difficulty	External	Stable	Uncontrollable
Luck	External	Unstable	Uncontrollable
Family influence	External	Stable	Uncontrollable
Teacher influence	External	Stable	Uncontrollable

From Vispoel & Austin (1995) based on Weiner (1979)

3.3.1.4 Self-concept Questionnaire (AF-5 García y Musitu, 1999) TEA Ediciones

AF5, Five Factor Self-concept Questionnaire (García & Musitu, 1999), was originally validated in Spain on a large sample of almost 6,500 participants aged between 10 and 62 years old. The AF5 originally consists of five subscales (academic, social, emotional, family, and physical self-concept) of six items each (a total of 30 items, with response choices ranging from 1 to 99). The five-dimensional structure of the questionnaire was defined theoretically based on the hierarchical and multidimensional theoretical model of self-concept proposed by Shavelson and colleagues (Byrne & Shavelson, 1996; Shavelson, Hubner, & Stanton 1976). García and Musitu (1999) proposed a hierarchical organisation of self-concept based on a general dimension, whereby self-concept represents different qualities that may be differentially related to distinct areas of human behaviour.

The five dimensions evaluated in the AF-5 questionnaire include: a) *academic/work self-concept*, which refers to the perception the subject has of the quality of his/her performance as a student or worker; b) *social self-concept*, which reflects the perception the subject has of his/her performance in social relationships;

c) *emotional self-concept*, which analyzes the perception that a person has of his/her emotional state and his/her responses to specific situations. This variable refers to both the students' perception of his/her emotional state, and the students' perception of specific classroom contexts with other people, such as teacher, director, etc; d) *family self-concept*, which relates to the perception that the subject has of his/her involvement, participation and integration in the family setting, and finally e) *physical self-concept*, which consists of the subject's perception of his/her physical appearance and shape.

For the purpose of this study, we have only used two of the five dimensions, which are the *academic/work* and *emotional self-concept*, as this study focuses on the emotional variables that affect students' language learning and development.

3.3.2 Language Learning Strategy instruments

3.3.2.1. Oral Communication Strategy Inventory –OCSI (based on Nakatani, 2006)

The Oral Communication Strategy Inventory (OCSI) is an adapted version from the “*Developing an oral communication strategy inventory*”, designed by Nakatani (2006). This questionnaire has two parts the first one examines strategies for coping with speaking problems related to strategic behaviour during communicative tasks; the second part examines strategies for coping with listening problems related to strategic behaviour at comprehension during interaction. The questionnaire consists of 32 items for coping with speaking problems (0.86 Cronbach's alpha) and 26 items for coping with listening problems (0.97 Cronbach's alpha) during communicative tasks. For this research we have used a Spanish version of the questionnaire already used by González (2007).

The OCSI was developed over a period of four months in three universities in Japan. During the first stage of the pilot study, an open-ended questionnaire was administered to a total of 80 students in first-semester of EFL lessons. Students were asked to complete statements such as “*When I am listening to other people speaking English, I try to...*” and “*What helps me most when I communicate with others is....*” They wrote answers in Japanese. These items were designed to elicit a variety of strategies for oral communication.

The summary of responses to this open-ended questionnaire served as the basis for 70 testing items for the second phase of the pilot study. This pilot test questionnaire consisted of 40 items regarding strategies coping with speaking and listening problems, which were experienced during communicative tasks. The items were developed into a Likert-type questionnaire that asked students to report the frequency with which they used certain strategies in oral communication. Participants were expected to respond on the 5-point Likert scale ranging from 1= never or almost never to 5= always or always true of me.

The second stage of the pilot study, using the 70 items, was conducted with 400 university students, who were different from the 80 students in the first part of the pilot study. In order to determine the number of strategic variables, the researcher performed an initial exploratory factor analysis for strategies coping with speaking and listening problems. Items that had a low loading on all factors (less than 0.4) were removed to facilitate interpretation of each factor. On the basis of reliability analyses, items were removed from scales when their corrected item-scale total correlation was so low that elimination of the item made the Cronbach's alpha rise. As a result, eight items from the speaking part and four items from the listening part were omitted.

Therefore the final version of the questionnaire consisted of 32 items for coping with speaking problems and 26 items for coping with listening problems during communicative tasks. The description of the questionnaire is detailed below:

Strategies for coping with speaking problems during communicative tasks

As mentioned before, the reliability of the 32 items addressing strategies for coping with speaking problems was 0.86 Cronbach's alpha, which indicates a highly acceptable internal consistency. The mean of the 32 items was 3.22, and the standard deviation was 0.97. The strategies are the following:

- Social affective variables are concerned with students' affective factors in social contexts. These students control their own anxiety and try to enjoy the process of interaction in order to communicate smoothly (items 28, 27). They are willing to encourage themselves to use English and to take risks by making mistakes (items 29, 26). Furthermore, they use strategies socially related in order to give a good impression and avoid silence during interaction (items 25, 23). The taxonomy is

consistent with O'Malley and Chamot's (1990) identification of social/affective strategies in their study, as students of a foreign language tend to have little experience when speaking English in authentic interactional contexts and managing their feelings during oral communication is a critical issue.

- Fluency-oriented strategies are related to fluency of communication. Students use these strategies, which allow them to be aware of the rhythm, intonation, pronunciation, and clarity of their speech in order to understand better the message (items 11, 12, 13, and 14). They also take into account their speaking context and take their time to send a comprehensive message to their interlocutors (items 9, 10).
- Negotiation for meaning while speaking English are variables related to students' attempts to negotiate with their interlocutors; students tend to conduct modified interaction in order to maintain their interaction and avoid a communication breakdown (item 22). They sometimes repeat their speech and give examples of terms until the meaning is understood by their interlocutor. They also consider the reaction of their interlocutor to check complete interactional understanding (item 19).
- Accuracy-oriented strategies are related to students' desire to speak accurately. Students pay attention to their speech form and seek grammatical accuracy by self-correcting when they notice their mistakes (items 7, 17, 18). Their aim is to similarly speak as a native speaker, despite the fact this is a difficult goal (item 30).
- Message reduction and alteration strategies are used by learners to avoid communication breakdown by simplifying their message (items 3, 4, 5).
- Non-verbal strategies while speaking describe students' attempts to get the meaning across by using eye contact (item 15) or facial expressions (item 16) in order to give clues and help the listener guess the meaning.
- Message abandonment strategies are used by students in an attempt to face difficulties getting their message across. Thus, they tend to abandon communication, leaving the message unfinished, or seeking help from others to continue conversation (items 24, 31, 32, 6). These strategies are common among low-proficiency level speakers of a foreign language, because they lack strategic competence and have fewer resources to continue the conversation.

- Attempt to think in English strategies are used by students when they try to think in English during actual communication or they think in the L1 and try to translate into the L2 (items 1, 2). For example, item 2 refers to students showing a tendency to think in English, and show negative attitude towards thinking in their native language and then constructing the sentence in English. However, item 1 refers to students' thinking in their native language and then translating the message into the L2.

Strategies for coping with Listening Problems during communicative tasks

The reliability, as measured by Cronbach's alpha, of the listening part of the questionnaire was 0.85, which indicates a highly acceptable internal consistency. The mean of the 26 items was 3.59, and the standard deviation was 0.96.

- Negotiation for meaning while listening strategies are used by students to modify interaction in order to maintain their conversational goal, when they have problems with the listening. Students repeat what the speaker said or make clarification requests in order to understand the speaker's intentions (items 21, 22). Besides, they demand the speaker's help in order to prevent misunderstandings (items 19, 20, 23).
- Fluency-maintaining strategies are used by students to pay attention to the fluency of the conversation. They focus on the speaker's rhythm, intonation, and pronunciation to capture his or her intentions (items 13, 16). They send continuation signals to show their understanding in order to avoid conversational gaps (item 14). They also ask the speaker for examples and use circumlocutions when necessary (items 10, 15).
- Scanning strategies are used by students to obtain some clues about the speaker's intentions. Thus, they tend to focus on the most important parts of the speech such as subject or verb in the sentence, the interrogative, the first or last part of the speaker's utterance, where important information is usually contained (items 5, 25, 26). It is a fact, that it is impossible for a foreign language learner to understand every bit of information contained in an L2 message. Therefore, students need to use strategies to capture the whole meaning of the message (item 12).

- *Getting the gist strategies* are strategies used by students to obtain the most important piece of information of a speaker's utterance. These learners pay attention to general information rather than to specific information (items 6, 8). Furthermore, they also consider the context and the speaker's previous speech in order to guess general meaning (items 7, 9). These strategies may help the learners to get the meaning across as it is very difficult for them to get every single detail of the conversation.
- *Nonverbal while listening strategies* are used by students to understand the message using eye contact, facial expressions, and gestures are considered by the listener to enhance comprehension (items 17, 18).
- *Less active listener strategies*. The use of these strategies implies a negative attitude towards active listening. Students try to translate into their native language little by little and depend heavily on familiar words (items 11, 24). They do not think in English or take risks by guessing the meaning from context. The more they use these strategies, the less likely they are to improve their listening comprehension ability during real context interaction.
- *Word-oriented strategies*. Students use these strategies, showing their dependence on words to comprehend the speaker's intention. Some strategies are related to specific techniques for guessing the meaning of utterances by picking up individual words (items 3, 4). There is also, an interesting strategy used by EFL students, (item 1) which occurs when students pay attention to interrogative sentences because they have to clearly understand the speaker's intentions in order to respond to the question. In general, if a student focuses too much on a specific word, it could reduce student's general comprehension of the message, which might negatively affect their understanding.

3.3.2.2. Survey of Reading Strategy Instrument (SORS, based on Mokhtari and Sheorey, 2002)

This questionnaire assesses students' metacognitive awareness of reading strategies while reading academic materials in English. According to Mokhtari and Sheorey (2002), the SORS is a 30-item self-report tool, which is designed to capture the nature and frequency of strategies that English language learners use while reading academic materials. For the purpose of this study we have used a Spanish adaptation of

Ramírez and Pereira (2006), which has an Alfa Cronbach reliability of 0.79 for the global strategies, 0.71 for the support strategies, and 0.62 for the problem solving strategies. The instrument used in this study contains 24 items and includes three strategy scales: global (8 items), problem solving (7 items) and support reading strategies (9 items)

The Survey of Reading Strategies instrument is based on the Metacognitive-Awareness-of-Reading-Strategies Inventory (MARSIS) originally developed by Mokhtari and Richard (2002), which is a tool for measuring native English speaking student's awareness and perceived use of reading strategies while reading academic or school-related materials. SORS like MARSIS is intended to measure the type and frequency of reading strategies that adolescent and adult ESL students perceive while reading academic materials in English (such as textbooks, journal articles, class notes, etc.). The original version of SORS (Mokhtari & Sheorey, 2002) consists of 30 items, each of which uses a 5-point Likert scale ranging from 1 ("I never or almost never do this") to 5 ("I always or almost always do this"). Mokhtari & Sheorey (2002) indicate that the SORS is scored on a five-point Likert scale in which scores of 2.4 or below show low strategy use, 2.5 to 3.4 signifies moderate strategy use, and 3.5 or above demonstrates high strategy use.

Students are asked to read each statement and circle the number that applies to them, indicating the frequency with which they use the reading strategy implied in the statement. The SORS measures three broad categories of reading strategies: global reading, cognitive, and support strategies. Each category is described as follows:

- *Global reading strategies* are intentionally used by students in order to manage and monitor their reading, such as having a purpose in mind, organising the text to measure its length or using typographical aids, tables and figures (13 items).
- *Problem Solving Strategies* are used by students while working with the text in order to understand it correctly, such as adjusting one's speed to the reading regarding its difficulty, guessing the meaning of unknown words, and rereading the text to improve comprehension (8 items).
- *Support Reading Strategies* are basic support techniques the reader uses to understand the text, such as using the dictionary, taking notes, underlining, or highlighting textual information (9 items).

3.3.2.3. Strategy Inventory for Language Learning. (Based on Oxford, 1990; SILL version 7.0)

The Strategy Inventory for Language Learning (SILL) instrument was designed by Oxford (1990) to assess language strategy use. Oxford and Burry-Stock (1995) state that the SILL was originally designed to assess the language learning strategies used by English-speaking foreign language learners at a language institute in California. In 1990, an amended 50 item version specifically for ESL/EFL situations was developed and published. This version has been used worldwide for major studies, dissertations and theses, as much for its ease of use and data analysis properties as it is for its having been extensively checked for reliability and validity (Oxford & Burry-Stock, 1995).

In the procedure of this questionnaire, for the purpose of this study, the participant has to evaluate each item (strategy) and rate them on a five-level Likert scale, which consists of:

1. Never true of me (Nunca)
2. Usually not true of me (Rara vez)
3. Somewhat true of me (de vez en cuando)
4. Usually true of me (A menudo)
5. Always true of me (Casi siempre)

This questionnaire has been used in more than 40 studies with more than 8.000 EFL learners; the Cronbach's alpha internal consistency is 0.98 for native language administration. For the purpose of this study a Spanish version of the original questionnaire has been used (APRENDE-LE), which has already been used by other authors (Roncel, 2008). The instrument was adapted from the original to identify the strategies used by English learners of Spanish as a foreign language. We have compared the content of both questionnaires to check the faithful translation of the Spanish version following the International Test Commission Guidelines for Translating and Adapting Tests (2010).

The original version of the instrument by Oxford (1990) contained two main strategy categories: direct and indirect strategies. Direct Strategies involve the target language. The three groups of direct strategies developed in the instrument are: memory, cognitive, and compensation. On the other hand, indirect strategies are divided into metacognitive, affective, and social strategies. They are called "indirect" because they

manage and control language learning without directly involving the target language. The SILL is organised into six strategy groups, which are categorised according to Oxford's (1990) original identification and classification system as following:

Direct Strategies:

- *Part A: Memory strategies* (remembering) – (items 1-9), which include strategies such as grouping, imagery, structured reviewing. These strategies are related to meaning. For the purpose of learning a new language, the arrangement and associations must be personally meaningful to the learner, and the material to be reviewed must have significance. These strategies enable learners to store verbal material and then retrieve it when needed for communication. Memory strategies are more effective when the learner uses at the same time metacognitive strategies like paying attention, and affective strategies like controlling anxiety, for example. Memory strategies are very useful for arranging meaning and making associations. Due to the fact that learning vocabulary is really an unmanageable task, these strategies help the learner to cope with vocabulary storage problems. Memory strategies fall into four sets: Creating mental linkages, applying images and sounds, reviewing well, and employing actions.
 - Creating Mental Linkages: this set includes strategies related to grouping, associating, and using context. Grouping strategies help the learner to classify the language material into meaningful language units or categories, so that the material is easier to remember. Associating strategies help the learner to relate meaningfully new and old information that creates associations in memory. Finally, using context implies the ability of students to place new words in a specific meaningful context.
 - Applying Images and sounds: there are four strategies included in this set: using imagery, using keywords, semantic mapping, and representing sounds in memory. These strategies are used to enlarge memory by means of using visual images or sounds.
 - Reviewing well: this category includes one strategy related to structured reviewing, which means that the learner can use this strategy once new items of information have been acquired, however the learner needs to review them in order to remember them.

- Employing action: this category contains two strategies related to more kinesthetic or tactile modes of learning are included in this set. Using physical response or sensation and using mechanical techniques.
- *Part B: Cognitive strategies* (mental processes) – (items 10-23). This is the largest strategy group with the greatest variety, including practice-related strategies and deep processing, by which learners analyse new information and monitor comprehension (Nolen, 1998). These cognitive strategies have a common function which is to manipulate or transform the target language by the learner. There are four sets of cognitive strategies: practising, receiving and sending messages, analysing and reasoning, and creating structure for input and output.
 - Practising: stands out for strategies dealing with repetition, practising sounds and writing, recognising patterns and using formulas, recombining to create new phrases, and practising the language in realistic settings. These strategies are really important for the learner to improve the target language through practising.
 - Receiving and sending messages: include two strategies, which are related to quickly getting the gist of the message and using resources for receiving and sending messages.
 - Analysing and reasoning: five strategies are included in this set, which are used by learners in order to understand the meaning of a new expression or to create new expressions, either by using reasoning deductively, analysing the expressions by breaking the bits of information into pieces to understand the whole message, analysing by comparing elements (sounds, vocabulary, grammar), translating using the L1 to understand L2 or vice versa, and finally, transferring knowledge of words or structures from one language to another in order to understand or produce new expressions in the L2 language.
 - Creating structure for input and output: the structures covered here help the learner to create structures in order to understand and produce the L2 language, such as taking notes, summarising or highlighting are tools which the learner can use to understand information in the L2 language.

- Part C: Compensation strategies (compensating) – (items 24-29). Students use these strategies in order to either comprehend or produce the L2 language despite their linguistic limitations in the L2. Compensation strategies are aimed at compensating an inadequate repertoire of grammar and, especially of vocabulary, with strategies such as guessing meaning from context and using gesture or synonyms to convey meaning when language is limited. There are ten compensation strategies clustered in two categories: guessing intelligently in listening and reading, and overcoming limitations in speaking and writing.
 - o Guessing strategies, also called “inferring”, include a set of linguistic and non-linguistic features to infer meaning despite lack of complete understanding. Students guess meaning based on their own experience, thus, they interpret the data by the context and their own life experience. Linguistic and non-linguistic strategies are covered by these strategies, the former to overcome lack of complete knowledge or comprehension by using L1 grammar or vocabulary knowledge, and the latter to guess the meaning in the L2 by the context, situation, personal relationships, or topic.
 - o Overcoming limitations in speaking and writing allow students to produce spoken or written expressions in the new language without complete knowledge of the L2. There are eight strategies such as: switching to the L1, getting help by hesitating or asking directly, using mime or gesture, avoiding communication partially or totally, avoiding certain topics, specific expressions, or abandoning communication in mid-utterance, selecting the topic, adjusting or approximating the message by omitting some items of information, simplifying ideas, etc, coining words, and using circumlocutions or synonyms.

Indirect Strategies

- Part D: Metacognitive strategies (organising) – (items 30-38). Metacognitive strategies allow learners to have a control on their cognition, that is to say, to coordinate the learning process by using several functions such as focusing, planning, arranging, and evaluating. These strategies are actions which go beyond the purely cognitive devices, and which provide a way for learners to monitor their own learning process. Metacognitive strategies include three groups:

- Focusing your learning. This is a set of three strategies (overviewing and linking already known material, paying attention, and delaying speech production to focus on listening) that help learners to focus their attention on certain language tasks, activities, skills, or materials, and also serve for students to be aware of their own language learning process.
 - Arranging and planning your learning: contains six strategies, which help learners to organize and plan their learning, in order to obtain the best benefit of their language learning process. These strategies deal with many areas such as: discovering language learning processes, organising the schedule, setting goals and objectives, considering task purposes, planning for tasks, and seeking chances to practise language in different settings.
 - Evaluating your learning includes two related strategies, both helping learners and checking their language performance; the first strategy involves noticing and learning from errors (self-monitoring) and the second is related to self-evaluating one's own progress in the L2.
- *Part E: Affective strategies* (managing feelings) – (items 39-44). Affective strategies are related to emotions, motivation, and attitudes towards the language learning. These strategies, which are anxiety reduction, self-encouragement, and reward, help language learners to gain control over some affective aspects such as emotions, attitudes, motivations, and values. According to Brown (1984) “the affective domain is impossible to describe within definable limits”, it spreads widely covering areas like self-esteem, attitudes, motivation, anxiety, culture shock, inhibition, risk taking, and tolerance for ambiguity. Oxford (1990, p. 76) states that “the affective side of the learner is probably one of the very biggest influences on language learning success or failure”. Affective variables play one of the most important roles in language learning success or failure. Successful learners may be those who can control their emotional states and attitudes towards a linguistic learning experience. In contrast, negative feelings can impair language learning progress. Attitudes and motivation are combined in order to influence language learning performance, including both global language proficiency and proficiency in specific skills, such as listening and reading comprehension or oral production. The strategies included in this part are following:

- Lowering your anxiety: which contains three anxiety-reducing strategies, by means of progressive relaxation, deep breathing or meditation; using music, and laughter.
 - Encouraging yourself: learners always forget that this is a useful strategy they should promote on their own, instead of expecting reward from others, such as relatives or teachers. The most effective encouragement comes from inside the learner, thus making positive statements, taking risks wisely, or rewarding yourself, are strategies which will give students the confidence needed to approach language learning challenges.
 - Taking your emotional temperature: the four strategies included in this category, help learners to assess their feelings, motivations, and attitudes, and, in some cases, the use of these strategies help learners to associate their emotional mood with language tasks. When learners know about their feelings, they are more able to control their affective side, which, in turn, will benefit their language learning progress.
- *Part F: Social strategies* (learning with others) – (items 45-50). As language is a social act, these strategies, which are asking questions, cooperating with peers, becoming culturally aware, are helpful for students to get the meaning across and communicate efficiently.
- Asking questions include: asking for clarification, when something is not understood, and asking for verification, when the learner checks information, or asks for correction in a conversation.
 - Cooperating with others are strategies used by learners to interact with others in order to improve language skills. Cooperative strategies are basic for language learning, as they not only increase the learner's language performance, but also improve one's own value and social acceptance.

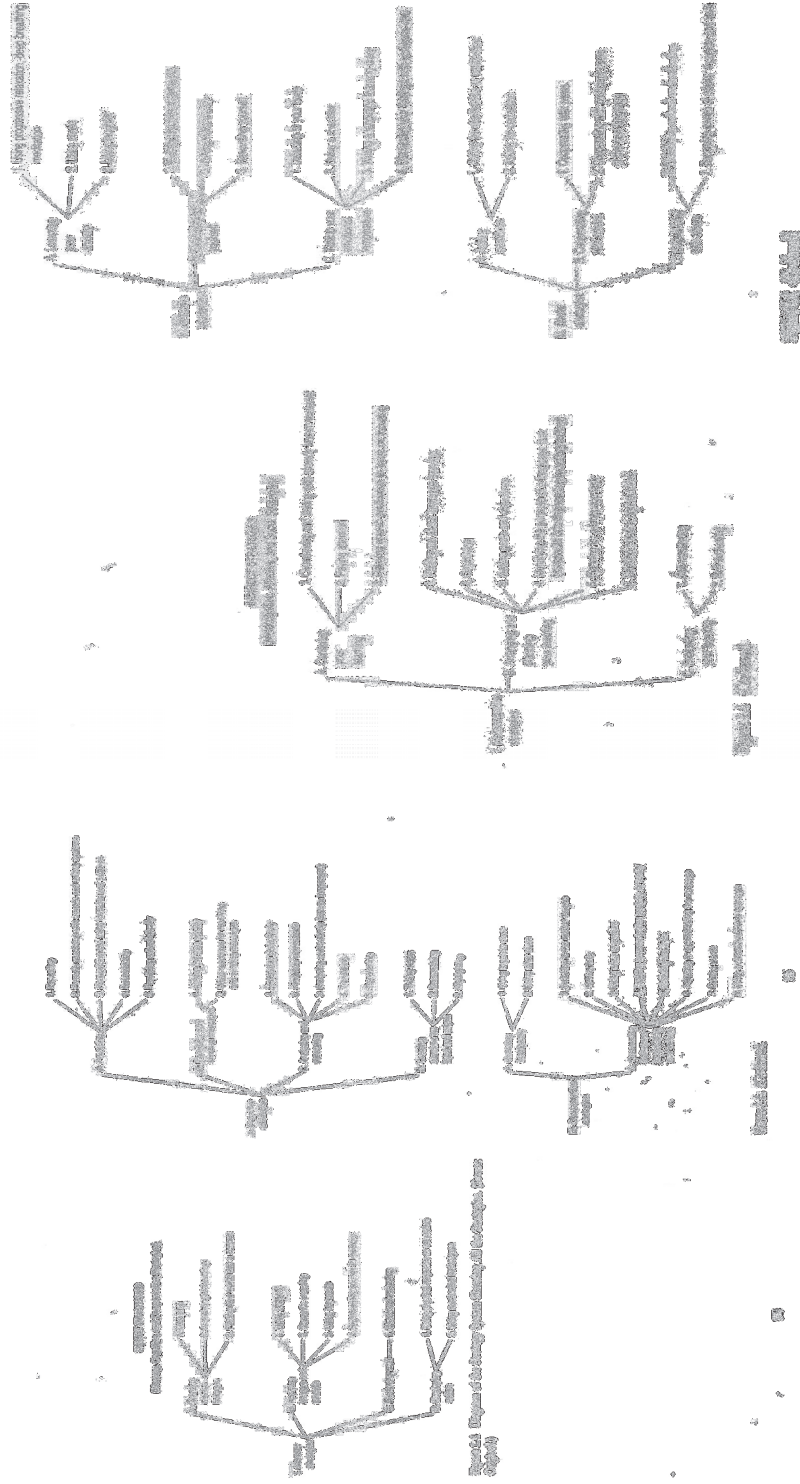


Figure 17 Direct and Indirect Strategies
Source: *Language Learning Strategies, What every teacher should know. Oxford (1990)*

3.3.3. The Background Questionnaire (based on Stephenson 2006; Li, Sepanski, & Zhap, 2006)

In order to obtain demographic, academic, and other relevant information about the participants, a background questionnaire has been conducted based on two previous studies: the Background Questionnaire by (Stephenson & Hewitt, 2006) and the L2 Language History Questionnaire version 2 (Li, Sepanski, & Zhao, 2006). The questionnaire includes a set of items addressed to have acquaintance of the learners' background language knowledge. It gives detailed information about the current situation of the student and also previous academic training.

The main aspects that this questionnaire covers are the following areas:

- Items 1-3 refer to demographic data such as sex, age, and nationality, family and social background.
- Items 4-16 are related with academic records and English-learning history, such as length of time spent learning English at present and previously.
- Items 17-25 cover students' perceptions about themselves as language learners, their self-assessed level of English, and their attitudes and reasons for learning English, perceived difficulty of the subject, and finally, their values and expectancies towards the English class and teacher.
- Item 26 covers questions about their reading habits both within the classroom setting and outside, as it is of much importance in the language learning process.

Most of the variables included in this questionnaire have been examined in previous studies regarding language learning (Pappamihel 2005; Stephenson, 2006; Li, Sepanski, & Zhao, 2006).

3.3.4. The Quick Placement Test (Oxford University Press & University of Cambridge Local Examinations Syndicate, 2001)

The Quick Placement Test (QPT) was developed by Oxford University Press & the University of Cambridge Local Examinations Syndicate (2001). It is described in the user manual as a "flexible test of English Proficiency" (p 2), and therefore it is incorporated in this study to test the students' level of English. The questionnaire is available in two versions: the paper and pen test, and the computer-based version; both

versions include test reading, vocabulary, and grammar. The version used in this study is the *paper and pen* (P&P) version. The paper and pen version of the test consists of two photocopiable answer booklets (QPT versions 1 and 2), each with its corresponding photocopiable answer sheet. Versions 1 and 2 share the same format consisting of two parts.

Part 1 consists of 40 items, which contain questions 1 to 5 that are discrete reading comprehension multiple-choice items, each with three distractors; questions 6-10 are blanks in a cloze passage, with multiple-choice items, each item has four distractors; questions 11-20 correspond to two cloze reading passages, each with five multiple choice questions (four distractors); questions 21-40 consist of blanks in discrete sentences, each of which has four distractors.

In Part 2, questions 41-50 are two cloze passages, each with five items (four distractors), and finally questions 51-50 are discrete sentences with four distractors each one, in a multiple-choice format. Students' scores are calculated easily with a transparent key which is given to students at the end of the test.

The length of the questionnaire is 30-45 minutes. The QPT has undergone several modifications since the beginning of the 1990's. Before being published, the present PQT "was validated in 20 countries by more than 5.000 students" (p 14).

Table 6.- Chart of Equivalent Language Levels, ALTE levels and Council of Europe Levels

ALTE level	ALTE level description	Council of Europe Level	Cambridge examinations
0	Beginner (Breakthrough)	A1	
1	Elementary (Way-stage)	A2	KET
2	Lower Intermediate (Threshold)	B1	PET BEC Preliminary CELS Preliminary
3	Upper Intermediate (Independent User)	B2	FCE CELS Vantage
4	Advanced (Competent User)	C1	CAE BEC Higher CELS Higher
5	Very Advanced (Good User)	C2	CPE

Adapted from Quick Placement Test manual (2001, p.9)

Table 6 has been adapted from the Chart of Equivalent Levels provided by the Quick Placement Test manual (p.9) shows the equivalence between ALTE levels, the Council of Europe levels, and Cambridge examinations certificates. Scores correspond to the five Association of Language Testers of Europe (ALTE) bands (1, 2, 3, 4, and 5), which in turn have its correspondence with the five Council of Europe levels (A1, A2, B1, B2, C1, and C2) which has become established all over Europe as the most widely recognized frame of reference in the field of language learning, and the University ESOL Examinations (formerly UCLES).

Table 7.- Results of the Quick placement test: scores and levels of English

ALTE level	Paper and Pen Test Score		CEFR level
	Part 1 score out of 40	Part 1&2 score out of 60	
0 Beginner	0-15	0-17	A1
1 Elementary	16-23	18-29	A2
2 Lower-Intermediate	24-30	30-39	B1
3 Upper-Interm	31-40	40-47	B2
4 Advanced		48-54	C1
5 Very Advanced		55-60	C2

As shown in Table 7 the QPT results are based on the ALTE levels, which indicate that the test taker can achieve from breakthrough level to level 5, which is the highest level that can be achieved (CEFR C2). The test results can be analyzed by the supervisor and student. The test results can be made available to the test taker by the supervisor immediately after the test has been completed or the supervisor can restrict test results so that they are only made available to the supervisor.

It is recommended in the PQT manual that only Part 1 (items 1-40) be used if students are between ALTE 0 and 3 levels inclusive, this corresponds to A1 to B2 levels (CEFR). As may be seen in Table 7, the 40-item test and the 60-item test are slightly different from each other, in order to compensate for the fact that even lower-level candidates might guess correctly “at least 2 of the extra items in Part 2” (p.8). The error margin for the 60-item test is given in the QPT manual as ± 4 points , meaning that 68% of the time (or about 7 times out of 10) a student’s score will be within plus or minus [...] 4 points of their “true score” (Oxford University Press & the University of Cambridge Local Examinations Syndicate, 2001, p.9).

The Quick Placement Test was piloted during mid-2013, 2014 and early 2015 together with the set of questionnaires related to affective variables, at the different EOIs who have participated in this study during ordinary class. Despite the fact that students at EOI are placed in different levels, according to the Council of Europe, for the purpose of the study the QPT has been conducted in order to have students' level standard.

3.3.5. The questionnaire Pack

The questionnaire was completed by students in two or three weeks' time, the questionnaire pack was anonymous, students gave a code based on their last 4 digits of their Identification Card (DNI) and their date of birth. Participants supplied their current level at the EOI and the date at the front cover of the questionnaire pack; subsequently they took the pack home and completed it at their own pace, and gave it back within 2 or 3 weeks. This questionnaire pack was then matched to its correspondent QPT according to the code given by each student, which was the same in both copies. Even though the questionnaire was anonymous I assured students full confidentiality in their responses.

3.4. Procedure

Both the QPT and the pack of questionnaires were administered during the period of April and May 2013, 2014 and early 2015 in order to complete the 100 samples per level (A1-B2) that was aimed for this study. As some samples have been collected during several years, different courses and levels were taken into consideration for the purpose of this study. Samples with A1 and B2 levels were more difficult to collect. Consequently in the case of B2 it was impossible to collect 100 samples.

The administration of the questionnaires took place during students' classes. Thus, I went to every class in both language centres in order to explain the procedure of the questionnaire pack. Firstly, students were told that they were going to take part in a study concerning the way students learn a language, but little information was provided so as students could not interfere in the results of the study. Then, students took the Quick Placement Test during class time, in order to obtain students' correct level (A1, A2, B1, and B2). Once students knew their level, they were given a pack of questionnaires to take home and complete it in two weeks time. Then, students would return the questionnaires

back for subsequent analysis. Finally, the questionnaires were matched with their correspondent Quick Placement Test result following the codes (DNI and date of birth) assigned to each student. The DNI is the Documento Nacional de Identidad in Spain, which corresponds to a National Identification Document or Passport in English.

The next step was to introduce all the data collected in a statistical programme called SPSS, in order to analyse the relations between the affective motivational variables and the language learning instruments for each level (A1-B2). Chapter four is devoted to analyse the statistical results extracted from the data gathered.

CHAPTER FOUR

4. RESULTS

- 4.1. Introduction
- 4.2. Research questions and objectives
- 4.3. Organisation of the Data
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4. RESULTS

“I pass with relief from the tossing sea of Cause and Theory to the firm ground of Result and Fact.” Winston S. Churchill

4.1. Introduction

In previous chapters we have reviewed the main language learning theories, the affective motivational variables that take part during language learning process, and the research done so far in the different fields within second language learning. The present chapter analyses the results obtained in regard to students' affective variables and language learning strategies during the process of second language learning at an adult stage.

Current trends in second language learning are shifting into a more complex, multifaceted, and situational research (see Verspoor, de Bot, & Lowie, 2011). One of the most outstanding theories, as described in previous chapters, is the Dynamic Systems Theory (DST) which advocates developing more empirical studies, based on situational contexts. This theory considers that several variables may interplay, at the same time, in the language learning process. Thus, Gregersen, MacIntyre and Meza (2014) state: “language learning is an emotionally and psychologically dynamic process that is influenced by a myriad of ever-changing variables and emotional “vibes” that produce moment-by-moment fluctuations in learners' adaptation” (p. 574).

Despite the fact that this study does not follow the dynamic systems theory, due to the large sample that has been considered, it attempts to combine several affective and learning strategies in four different levels of proficiency, in order to give a more holistic view of the process that adults follow when they learn a second language. Thus, the following results try to evaluate the way in which different variables affect students' second language learning process and outcomes, instead of studying these variables isolated one from another.

4.2. Research questions and objectives:

The main objective of this research is to analyse the different emotional affective factors that could influence adults' second language learning. Thus, the objective is to link and associate different affective variables in order to understand the complex process that entails learning a second language at an adult stage within a classroom situation.

The specific objectives are following:

1. To analyse students' language learning strategies, oral communication strategies, and reading comprehension strategies when learning an L2 in the different levels (A1-B2).
2. To study the differences among affective variables in the different levels (A1-B2)
3. To analyse the influence of the different affective variables on language learning strategies. Regarding this third objective a structural equation modelling (SEM) has been carried out, in order to investigate the influence of affective motivational variables among themselves and on the language learning strategies during L2 process at an adult stage.

4.3. Organisation of the Data

To perform the hypothesis above described the following statistical analyses have been performed.

Several statistical analyses are presented in the study (mean and standard deviation of the variables) in an attempt to examine whether there is or not a consistent relation between the instruments and the levels of English. Firstly, analyses of means and standard deviations of each of the variables per levels of English have been carried out. Secondly, ANOVAs between the groups, using the Bonferroni correction in the interpretation of the significant differences were computed. Scheffe post hoc analyses have been calculated in order to analyse the differences between the groups. Furthermore, different statistical analyses have been developed regarding the affective-motivational variables from different instruments (FLCAS, Self-Concept, Motivation, and Attribution) and the levels of English (A1-B2). Besides, correlation analyses have been conducted between the affective variable instruments and the language learning instruments. Finally, a structural equation model has been designed in order to observe the influence of affective motivational variables on language learning strategies.

4.4. Statistical Analysis

4.4.1. Relation between the Strategy Inventory for Language Learning (SILL) and the levels of English (A1-B2)

Firstly, a descriptive analysis of mean and standard deviation is presented in order to know the general tendency of students' Strategy Inventory for Language Learning (SILL) per level.

Table 8.- Mean and SD of SILL and Levels of English (A1-B2)

SILL Strategies	A1 (n=111)		A2 (n=113)		B1 (n=98)		B2 (n=85)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
SILL Memory	3.08	.606	3.10	.538	2.84	.506	2.94	.490
SILL Cognitive	2.85	.579	3.19	.502	3.20	.490	3.40	.506
SILL Compensatory	2.85	.549	3.15	.591	3.21	.550	3.46	.485
SILL Metacognitive	3.25	.633	3.44	.593	3.40	.599	3.50	.554
SILL Affective	3.00	.607	3.13	.475	3.03	.525	3.05	.568
SILL Social	3.36	.643	3.64	.610	3.62	.537	3.75	.585

As explained in chapter three, the Strategy Inventory for Language Learning (Oxford, 1990) assesses the use of language learning strategies among English language learners. The instrument includes two main categories: *direct strategies* (memory, cognitive, and compensation) are addressed to evaluate mental processing; and *indirect strategies* (metacognitive, affective, and social strategies) are addressed to manage language learning, using other resources apart from the language itself.

Firstly, a descriptive analysis of mean and standard deviation is presented in order to know the general tendency of students Strategy Inventory Language Learning instrument per level.

As can be observed in Table 8, students at **A1 level** score the lowest means for the *cognitive* (M=2.85±SD=.579), *compensatory* (M=2.85±SD=.549), *metacognitive* (M=3.25±SD=.633) and *social strategies* (M=3.36±SD=.643). In contrast, students at **B2 level** score the highest means for *cognitive* (M=3.40±SD=.506), *compensatory* (M=3.46±SD=.485), *metacognitive* (M=3.50±SD=.554) and *social strategies* (M=3.75±SD=.585).

Secondly, the relation between the Strategy Inventory for Language Learning (SILL) and the levels of English (A1-B2) is presented, using the Bonferroni correction in the interpretation of significance (*Bonferroni adjustment significance: $0.05/n^{\circ}$ variables ($6=0.008$)*).

With reference to the memory strategies, the ANOVAs show differences between the groups, $F_{(3, 403)}= 5.201, p<.002$. Scheffe post hoc test shows that students at A1 level ($M=3.08\pm SD=.606$) and A2 level ($M= 3.10\pm SD=.538$) use more *memory strategies* than students at higher levels such as B1 ($M=2.84\pm SD=.506$) and B2 ($M=2.94\pm SD=.049$) levels. Students at A1 and A2 levels may use memory strategies such as creating mental linkages (e.g. item 4: *Asocio una palabra nueva en inglés a una situación o imagen mental donde se use dicha palabra*), grouping, applying images and sounds, reviewing constantly new bits of information (e.g.item 3: *Relaciono las palabras nuevas en inglés con el lugar en el que aparecen en el libro o en otros materiales de ingles*), and employing tactile or visual techniques to help them remember the units in the L2 (e.g.item 6: *Utilizo láminas o fichas para recordar nuevas palabras en inglés*).

With reference to the cognitive strategies, the ANOVAs results show differences between A1 and the rest of the groups, $F_{(3, 403)}= 18.760, p<.000$. As showed in the Scheffe post hoc test, students at the lowest level A1 ($M=2.85\pm SD=.579$) have fewer cognitive strategies than the rest of the three other levels: A2 ($M=3.19\pm SD=.502$), B1 ($M=3.20\pm SD= .490$), and B2 ($M=3.40\pm SD=.506$). This indicates that students at beginner levels are less capable of developing deep-complex cognitive processing in the L2, as they have had limited exposure to the target language. Thus, students at A1 level are less skilled to manipulate or transform the target language in order to get better comprehension (e.g., item 13: *Utilizo palabras que conozco en inglés en contextos diferentes*). Besides, these students (A1 level) have not developed strategies for coping with repetition (e.g., item 12: *Practico los sonidos en ingles*), practicing (e.g., item 14: *Empiezo conversaciones en ingles*), analysing new information (e.g., item 23: *Hago resúmenes de las informaciones (contenidos) que escucho o leo en ingles*), or creating structures, in order to understand and produce L2 properly.

With regard to the compensation strategies, the ANOVAs show differences between the groups, $F_{(3, 403)}= 20.513, p<.000$. As seen in the Scheffe post hoc test, students at A1 levels ($M=2.85\pm SD=.549$) have fewer compensation strategies to overcome limitations both in the speaking and writing production in comparison with the rest of the levels A2

($M=3.15 \pm SD=.591$), B1 ($M=3.21 \pm SD=.550$) and B2 ($M=3.46 \pm SD=.485$) (e.g., item 27: *Leo sin buscar el significado de cada palabra nueva que aparece*; item 26: *Me invento palabras nuevas si no sé la palabra correcta en inglés*). This means that students at the lowest level do not possess strategies such as guessing or inferring meaning from sentences. Moreover, students at this level (A1) are not prepared to develop other strategies that could help them understand the message (e.g., item 25: *Me ayudo de los gestos cuando no me sale una palabra en inglés*). In summary, students at lower levels handle communication more unsuccessfully, as they are not capable of using strategies such as adjusting or approximating the message by omitting some items of information, or simplifying ideas (e.g., item 29: *Uso sinónimos o perífrasis cuando no se cómo expresar mis ideas en inglés*).

Finally, for the *social strategies*, the ANOVAs show significant differences among the groups, $F_{(3, 403)} = 7.943$, $p < .000$. Thus, Scheffe post hoc test shows that students use more social strategies at higher levels. Thus, students at B2 ($M=3.75 \pm SD=.585$) level display significantly more social abilities than B1 ($3.62 \pm SD=.537$), A2 ($M=3.64 \pm SD=.610$), and A1 ($M=3.36 \pm SD=.643$) level students. These social strategies allow students to ask questions either for clarification or checking information during conversation (e.g., item 47: *Practico el inglés con otros estudiantes*; item 46: *Pido que me corrijan cuando hablo*). These students also use cooperative strategies to get the meaning across and improve their language skills (e.g., item 45: *Si no entiendo algo en inglés, pido a la otra persona que repita o hable más lento*).

No significant results have been found for the *metacognitive* and the *affective strategy variables* after ANOVA and Scheffe post hoc test have been completed.

In summary, as observed from the data, A1 level students have significantly fewer strategies related to *cognitive processes*, *compensation strategies*, *metacognitive strategies* and fewer *social strategies*. These students lack cognitive strategies as they have not been sufficiently exposed to the target language. Thus, it is difficult for them to develop higher linguistic complex units, and they are not efficient enough in order to compensate the lack of cognitive development in the L2. However, A1 and A2 level students use significantly more *memory* strategies than B1 and B2 level students. This may be due to the fact that students at beginner levels try to compensate the lack of other higher complex cognitive and metacognitive strategies, by memorising bits of information. Finally, B2 level students

have more metacognitive strategies, which allow them to focus on listening during interaction, planning and arranging their own learning process, and paying more attention to associating new and old material.

The mean values of the variables where significant differences have been found are reflected in Figure 18.

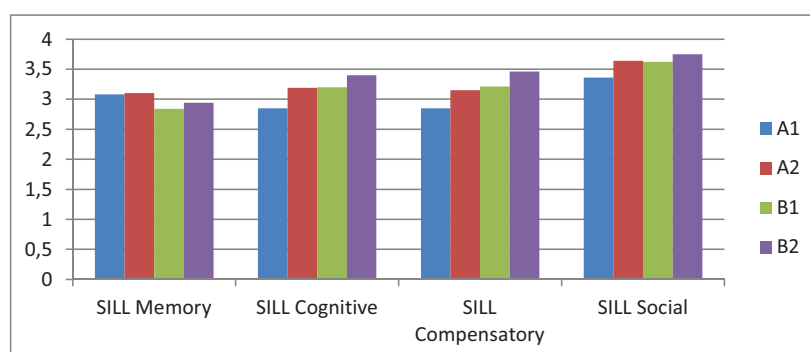


Figure 18. Means of SILL's subscales in each of the four levels of English (A1-B2)

4.4.2. Relation between the Oral Communication Strategy Inventory (OCSI) and Levels of English

A descriptive analysis of mean and standard deviation is presented in order to know the general tendency of students' Oral Communication Strategy Inventory per level. Each of the levels (A1-B2) is scored to all the strategies contained in the instrument (OCSI). The Oral Communication Strategy Inventory (Nakatani, 2006) has two parts the first part examines strategies for coping with speaking problems related to strategic behaviour during communicative tasks. The second part examines strategies for coping with listening problems related to strategic behaviour at comprehension during interaction.

Table 9.- Mean and SD between OCSI and Levels of English (A1-B2)

OCSI	A1 (n=111)		A2 (n=113)		B1 (n=98)		B2 (n=85)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Sp. Socio-affective	3.17	.685	3.38	.523	3.44	.566	3.63	.589
Sp. Fluency	3.17	.728	3.27	.619	3.27	.676	3.62	.599
Sp. Meaning negotiation	3.58	.738	3.65	.628	3.79	.620	3.95	.634
Sp. Accuracy	3.29	.662	3.43	.671	3.33	.670	3.53	.436
Sp. Message Reduction	3.88	.746	3.72	.607	3.70	.551	3.76	.524
Sp. Non verbal	3.75	.836	3.64	.827	3.80	.848	3.89	.814
Sp. Abandon Message	3.33	.692	2.90	.612	2.71	.624	2.59	.706
Sp. Think English	3.40	.707	3.20	.766	2.93	.853	2.79	.802
List. Meaning negotiation	3.85	.895	3.71	.760	3.61	.780	3.63	.725
List. Fluency	2.99	.757	3.19	.584	3.30	.553	3.49	.528
List. Scanning	3.44	.641	3.52	.550	3.42	.550	3.48	.630
List. Global Understand	2.70	.793	3.94	.705	3.18	.734	3.31	.615
List. Non-Verbal	3.84	.907	3.63	.771	3.58	.887	3.77	.769
List. Less active listener	3.40	.707	2.81	.837	2.61	.814	2.40	.718
List. Word-oriented	3.72	.564	3.77	.509	3.58	.704	3.56	.638

Firstly, a descriptive analysis of mean and standard deviation is presented in order to know the general tendency of students' Oral Communication Strategy Inventory per level.

Regarding the *strategies for coping with speaking problems during communication tasks* are the following:

As can be observed in the Table 9, A1 level students show the lowest mean values for the *socio-affective variables* ($M=3.17\pm SD=.685$), *fluency communication* ($M=3.17\pm SD=.728$), and *negotiating meaning with interlocutors* strategies ($M=3.29\pm SD=.662$). This indicates that students at A1 level display fewer strategies to communicate smoothly, negotiate meaning, and continue the flow of conversation. On the contrary, students at A1 level show higher mean values for strategies related to *message reduction* ($M=3.88\pm SD=.746$), *abandon message* ($M=3.33\pm SD=.692$) and *think English* ($M=3.40\pm SD=.707$), which indicates that these students lack fluency in communication, and as a result, leave the message unfinished or interrupt communication.

Students at B2 level show the highest mean values for the *socio-affective strategies* ($M=3.63\pm SD=.589$), *fluency speaking* ($M=3.62\pm SD=.599$), and *meaning*

negotiation ($M=3.95\pm SD=.634$). Thus, students at B2 level possess several strategies to communicate with others, understand the meaning of their interlocutors and manage fluently in the conversation.

With reference to the *strategies for coping with listening problems during communicative tasks*, Table 9 shows differences among A1, A2 and B2 levels.

Students at A1 level show higher mean values for the *negotiation of meaning* ($M=3.85\pm SD=.895$), *the nonverbal strategies* ($M=3.84\pm SD=.907$), and *the less active listener strategies* ($M=3.40\pm SD=.707$). Students at A1 level show low mean values for the *fluency-maintaining strategies* ($M=2.99\pm SD=.757$) and the *global understanding meaning* ($M=2.70\pm SD=.793$). This indicates that students at A1 level make an effort to understand the message, but they tend to fail global understanding and leave the conversation unfinished. Students at A2 level show higher mean values for the *scanning strategies* ($M=3.52\pm SD=.550$), *global understanding* ($M=3.94\pm SD=.705$), and *word-oriented strategies* ($M=3.77\pm SD=.50$). At this level, students manage strategies that allow them to scan, get the gist of the speaker, and try to understand words that are important in the message. Students at B2 level display more strategies to *maintain fluency* ($M=3.49\pm SD=.528$) during conversation. They show lower mean values for the *less active listener strategies* ($M=2.40\pm SD=.718$) and the *word-oriented strategies* ($M=3.56\pm SD=.638$). This indicates that these students have a proficient level to maintain communication.

Secondly, the relation between the Oral Communication Strategy Inventory for *Strategies for coping with speaking problems during communicative tasks* and the levels of English (A1-B2) is analysed, using the Bonferroni correction in the interpretation of significance (*Bonferroni adjustment significance: 0.003*).

Regarding the *speaking socio-affective strategies*, the ANOVAs show differences among the groups, $F_{(3, 403)}= 10.113, p < .000$. Scheffe post hoc test shows that students at lower levels A1 ($M=3.17\pm SD=.685$) and A2 ($M=3.38\pm SD=.523$) have fewer strategies in order to control their own anxiety and enjoy interaction with other peers (e.g., item 28: *Intento relajarme cuando siento ansiedad*). Students at these levels (A1 and A2) have less control over their social behaviour, which leads them to have more silent linguistic blocks during interaction and a more negative general impression of the message they want to communicate (e.g., item 27: *Intento disfrutar de la conversación*).

In regard to the speaking fluency-oriented strategies, the ANOVAs also show differences among the groups, $F_{(3, 403)}= 8.080, p < .000$. Scheffe post hoc test reveals that students at B2 level ($M=3.62 \pm SD=.599$) have significantly more strategies to communicate smoothly (e.g., item 10: *Me tomo mi tiempo en expresar lo que quiero decir*). Thus, B2 level students pay more attention to several communicative aspects such as rhythm, intonation, pronunciation, and clarity of the speech (e.g., item 13: *Presto atención a mi ritmo y entonación*; item 14: *Presto atención a la fluidez de la conversación*), in comparison with the rest of the levels A1 ($M=3.17 \pm SD=.728$), A2 ($M=3.27 \pm SD=.619$), and B1 ($M=3.27 \pm SD=.676$). Furthermore, students at B2 level consider and observe their speaking context and take their time, during conversation, in order to send the appropriate message to their interlocutors (e.g., item 9: *Cambio la manera de expresar algo según el contexto*).

As for the negotiation for meaning strategies is concerned, the ANOVAs show differences among the groups, $F_{(3, 403)}= 5.729, p < .001$. Scheffe test shows that there are differences between B2 level students and the rest of the levels. Specifically, students of B2 level ($M=3.92 \pm SD=.634$) display more abilities to negotiate the meaning with their interlocutors than the rest of the levels A1 ($M= 3.58 \pm SD=.738$), A2 ($M=3.65 \pm SD=.628$), and B1 ($M=3.79 \pm SD=.620$). Students at higher levels (B2) tend to conduct modified interaction, if necessary, in order to maintain the conversation and avoid communication breakdown (e.g., item 21: *Repito lo que quiero decir hasta que el oyente comprenda*). Finally, these students (B2) are also more aware of the interlocutor's reaction, which allows them to check if they can understand each other (e.g., item 19: *Mientras hablo, presto atención a la reacción del oyente hacia mi mensaje*), and they repeat the message or give examples until the message has been understood (e.g., item 20: *Doy ejemplos si el oyente no comprende lo que estoy diciendo*).

Regarding the message abandonment strategies, the ANOVAs results reveal differences among the groups, $F_{(3, 403)}= 25.010, p < .000$. Scheffe post hoc test shows that students at the lowest level A1 ($M=3.33 \pm SD=.692$) are more prone to fail in communicative situations, as they leave the message unfinished (e.g.; item 6: *Abandono la ejecución de un plan verbal y sólo digo algunas palabras cuando no sé qué decir*; item 24: *Dejo un mensaje inacabado debido a alguna dificultad con la lengua*), or seek help from others to continue conversation (e.g, item 31: *Pido ayuda a otros cuando no puedo*

comunicarme bien), in comparison with A2 ($M=2.90\pm SD=.612$), B1 ($M=2.71\pm SD=.612$), and B2 ($M=2.59\pm SD=.706$) levels.

Regarding the *attempt to think in English strategies*, the ANOVAs present differences among the groups, $F_{(3, 403)}=12.207, p< .000$. Scheffe post hoc test shows that students at lower levels A1 ($M=3.40\pm SD=.707$) and A2 ($M=3.20\pm SD=.766$) use more strategies to think in their L1, in order to construct the sentence in L2 (e.g., item 1: *Primero pienso lo que quiero decir en mi lengua nativa y después construyo la frase en inglés*) in comparison with B1 ($M=2.93\pm SD=.853$) and B2 ($M=2.79\pm SD=.802$) level students. Students at lower levels need to use more strategies to communicate in the L2, whereas students at higher levels (B2) have already integrated this ability, therefore they directly express the message in the L2.

The ANOVAs results and Scheffe post hoc test show no significant differences among the *accuracy-oriented strategies*, *message reduction* and *alteration strategies*, and *non-verbal strategies* while speaking.

Figure 19 reflects the mean values of the variables which show significant differences.

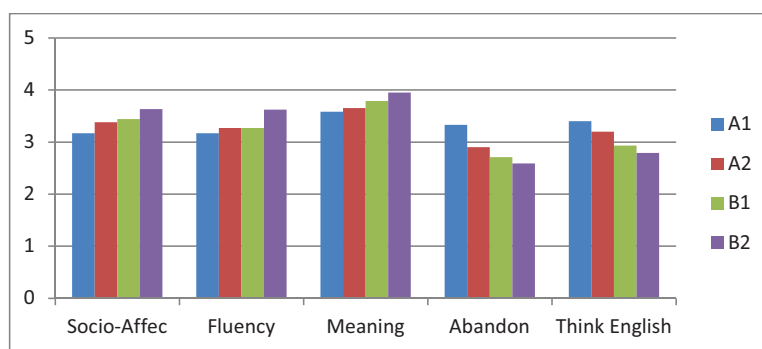


Figure 19. Means of the Strategies for coping with speaking problems during communication tasks in each of the four levels of English (A1-B2)

With reference to the *Strategies for coping with Listening problems during communicative tasks and the levels of English*, the most important differences among the groups are analysed, using the Bonferroni correction in the interpretation of significance (Bonferroni adjustment significance: 0.003).

Regarding the *fluency-maintaining strategies*, the ANOVAs show differences among the groups, $F_{(3, 403)}=11.006, p < .000$. Thus, Scheffe post hoc test shows that students at A1 (M=2.99±SD=.757) and A2 (M=3.19±SD=.584) levels have fewer strategies to keep the conversational flow (e.g., item 10: *Solicito al hablante que me dé un ejemplo cuando no estoy seguro/a de lo que ha dicho*). In contrast, students at higher levels such as B1 (3.30±SD=.533) and B2 (M=3.49±SD=.528) have already developed certain strategies to focus on the speaker's rhythm, intonation, and pronunciation. These strategies allow them to capture the speaker's intention (e.g., item 13: *Presto atención al ritmo y entonación del hablante*; item 16: *Presto atención a la pronunciación del hablante*). Students of B1 and B2 levels also sustain conversation by sending continuation signals, in order to exhibit their understanding and avoid conversational gaps (e.g., item 14: *Muestro constantes signos de comprensión con el objetivo de evitar silencios durante la comunicación*). Finally, students at higher levels (B1 and B2) are capable of using circumlocutions when necessary to check comprehension or ask for examples (e.g., item 15: *Uso circumloquios (rodeos) como reacción a la producción del hablante cuando no comprendo bien su intención*).

With regard to the *global understanding/getting the gist strategies*, the ANOVAs show differences among the groups, $F_{(3, 403)}= 13.559, p < .000$. Scheffe post hoc test shows that students at A1 level (M=2.70±SD=.793) have fewer strategies to understand general information than the rest of the levels: A2 (M=3.94±SD=.705), B1 (M=3.18±SD=.734), and B2 (M=3.31±SD=.615) levels. Thus, students at A1 level have no strategies to paying attention to general information (e.g., item 8: *No me importa si no comprendo cada palabra de la conversación*). These students (A1 level) are also less aware of the context and the speaker's previous message, which hampers their ability to guess the overall meaning (e.g., item 7: *Adivino la intención del hablante en base a lo que ha dicho hasta ahora*).

Regarding the *less active listener strategies*, the ANOVAs show differences among the groups, $F_{(3, 403)}= 31.889, p < .000$. Scheffe post hoc test shows that students at A1 level (M=3.40±SD=.707) try to translate more into their native language (e.g., item 11:

Intento traducir a mi lengua nativa poco a poco para comprender lo que ha dicho el hablante) and they also depend more heavily on familiar words than the rest of the levels such as A2 (M=2.81±SD=.837), B1 (M=2.61±SD=.814), and B2(M=2.40±SD=.718), (e.g., item 14: *Me concentro solamente en expresiones familiares*). This indicates that students at A1 level use these strategies because they fear taking risks of guessing the meaning from the context; consequently, they depend on their own translation to understand the meaning of the message. Therefore, the continuous use of these strategies may have a negative influence on their listening comprehension ability during real context interaction, because they cannot identify the real sounds of the words in a listening, as they identify these words with a different sound.

No significant differences among the groups have been found for the *negotiation for meaning-while- listening strategies, scanning strategies, non-verbal strategies while listening, and word-oriented strategies*.

In summary as observed from the data, the level of language proficiency that students have, determines their abilities to efficiently cope with the difficulties that arise during second language learning. Moreover, as affective factors are present in the language learning process, students try to develop certain strategies that help them to continue improving their L2. Thus, as one can observe from the results above explained, students manage their L2 learning process differently, depending on their level.

Figure 20 reflects the mean values of the variables which show significant differences.

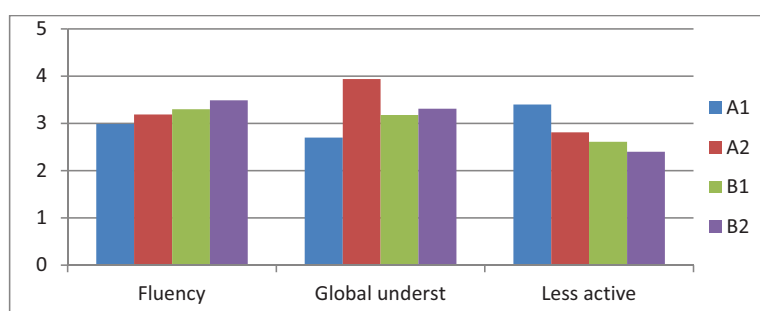


Figure 20. Means of the Strategies for coping with Listening problems during communicative tasks in each of the four levels of English (A1-B2)

4.4.3. Relation between the Survey of Reading Strategy (SORS) and Levels of English (A1-B2)

Firstly, a descriptive analysis of mean and standard deviation is presented in order to know the general tendency of students' Survey of Reading Strategies per level. Each of the levels (A1-B2) was scored to all the strategies contained in the instrument (SORS).

Table 10.- Analysis of Mean and Standard Deviation of SORS and Levels of English (A1-B2)

SORS	A1 (n=110)		A2 (n=113)		B1 (n=97)		B2 (n=85)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Global	3.29	.722	3.35	.620	3.19	.592	3.31	.625
Problem Solving	4.19	.558	4.13	.455	4.01	.492	3.95	.571
Support	3.69	3.21	3.32	.707	3.11	.654	3.18	.747

The results in Table 10 illustrate the mean values of Reading Strategy per level. As previously explained in chapter three, the Survey of Reading Strategy (SORS) is intended to measure the type and frequency of reading strategies that adolescent and adult ESL students perceive they use, while reading academic materials in English (such as textbooks, journal articles, class notes, etc).

As reflected in the Table, students at A2 level ($M=3.35 \pm SD=.620$) show more global *reading strategies* than the rest of the levels A1 ($M=3.29 \pm SD=.722$), B1 ($M=3.19 \pm SD=.592$) and B2 ($M=3.31 \pm SD=.625$). Thus, despite A2 level students are still not independent users of the L2, they try to develop more global reading strategies in order to capture the meaning of the text.

A more remarkable difference is seen in the *problem solving strategies* as students at A1 level ($M=4.19 \pm SD=.558$) show more strategies than other higher levels such as A2 ($M=4.13 \pm SD=.455$), B1 ($M=4.01 \pm SD=.492$) and B2 ($M=3.95 \pm SD=.571$). This indicates that students at A1 level, display more strategies focused on resolving the possible difficulties these students might encounter during the reading activity. Thus, students try to guess unknown words, re-read the text in order to improve comprehension, or adjust one's speed to the reading of the text.

Furthermore, students at A1 level ($M=3.69 \pm SD=3.21$) also show more *support reading strategies*, than the rest of the levels A2 ($M=3.32 \pm SD=.707$), B1

($M=3.11\pm SD=.654$) and B2 level ($M=3.18\pm SD=.747$). This suggests that students at level A1 use strategies, such as using the dictionary, taking notes, or highlighting specific information within the text, in order to understand the text properly.

Secondly, the differences between the levels of English (A1-B2) regarding the Survey of Reading Strategy (SORS) instrument, using the Bonferroni correction in the interpretation of significance (*Bonferroni adjustment significance: 0.01*).

The results from the analysis of variance (ANOVAs) show differences among the groups, $F_{(3, 404)}=4.543$ $p < .004$. Scheffe post hoc analysis shows significant differences between students from A1 and B2 levels. Thus, at A1 level ($M=4.19\pm SD=.558$), students have more strategies to *solve problems* during the reading activity than B2 ($M=3.95\pm SD=.571$) level students. This indicates that despite A1 level students' lack of command with the language they attempt to overcome difficulties, by using strategies in order to understand the whole text. This implies that students at A1 level use techniques such as modifying the speed of reading, which might depend on the difficulty of the text, deducing the meaning of unknown words from the context, and reading some parts of the text several times, in order to gain comprehension and understand the text correctly.

Figure 21 reflects the mean values of the variables which show significant differences

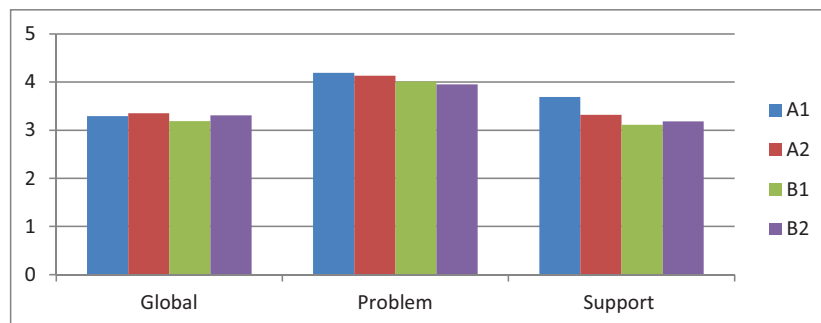


Figure 21. Means of the SORS variables in each of the levels of English (A1-B2)

4.4.4. Relation between the Foreign Language Class Anxiety Scale and the Levels of English (A1-B2)

Firstly, a descriptive analysis of the mean and standard deviation is presented in order to know the general tendency of students' Foreign Language Class Anxiety Scale per level. Each of the levels (A1-B2) is scored to all the strategies contained in the instrument (FLCAS).

Table 11.- Mean and Standard Deviation of FLCAS and Levels of English (A1-B2)

FLCAS	A1 (n=111)		A2 (n=113)		B1 (n=98)		B2 (n=85)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
FLCAS	101.51	20.150	93.12	18.78	93.41	20.27	87.72	21.54

Table 11 shows the mean and standard deviation between the Foreign Language Class Anxiety Scale instrument and the Levels of English (A1-B2). The FLCAS is used to measure students' levels of anxiety when performing an activity related to the L2. (**Take into account that anxiety in this study is always referred to foreign language anxiety*)

Secondly, the ANOVA results indicate differences between the groups, $F_{(3, 403)}=7.950, p < .000$. As can be seen in Figure 22, Scheffe post hoc test clearly shows that students at A1 ($M=101.51 \pm SD=20.150$) level exhibit more anxiety than A2 ($M=93.12 \pm SD=18.72$), B1 ($M=93.41 \pm SD=20.27$), and B2 level students ($M=87.72 \pm SD=21.54$). This indicates that students at beginner levels experience more feelings of second language anxiety when starting to learn a new language than other higher levels.

Figure 22 reflects the mean values of the variables which show significant differences.

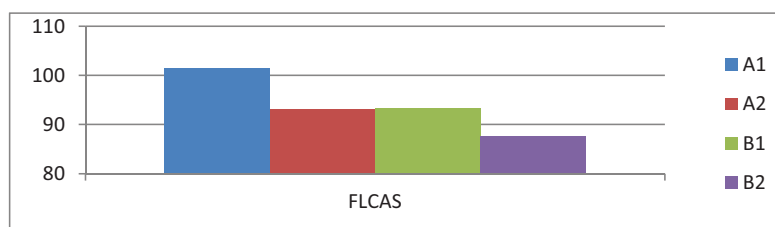


Figure 22 Means of the FLCAS in each of the levels of English (A1-B2)

In the following section, an explanation of the correlation analysis between Foreign Language Class Anxiety Scale and the language learning instruments is shown. The language learning instruments are: the Strategy Inventory for Language Learning (SILL), the Oral Communication Strategy Inventory (OCSI), and the Survey of Reading Strategy (SORS).

4.4.4.1. Correlation analysis between Foreign Language Class Anxiety Scale (FLCAS) and the Strategy Inventory for Language Learning (SILL)

In order to identify whether Foreign Language Class Anxiety Scale (FLCAS) per level of English (A1-B2) and Strategy Inventory for Language Learning (SILL) instrument are related to a statistical significance, linear correlation analysis by means of Pearson statistic analysis has been conducted.

Table 12.- Correlation analysis between FLCAS and SILL per level of English (A1-B2)

FLCAS Anxiety	SILL Memory	SILL Cognitive	SILL Compensatory	SILL Metacognitive	SILL Affective	SILL Social
FLCAS Anxiety A1 (n=111)	-.010	-.240* (sig=0.011)	-.089	-.158	-.334** (sig=0.000)	-.353** (sig=0.000)
FLCAS Anxiety A2 (n=112)	-.187* (sig=0.047)	-.212* (sig=0.024)	-.085	-.113	-.214* (sig=0.023)	-.303** (sig=0.001)
FLCAS Anxiety B1 (n=98)	-.020	-.215* (sig=0.034)	.108	-.143	.069	-.229* (sig=0.024)
FLCAS Anxiety B2 (n=85)	-.039	-.345** (0.001)	.010	-.021	-.059	-.347** (0.001)

** $p < .001$

* $p < .05$

The results in Table 12 show the correlations between the six subscales of the instrument Strategy Inventory for Language Learning (memory, cognitive, compensatory, metacognitive, affective, and social) and the FLCAS per level of English. The SILL is designed to assess the language learning strategies used by English-speaking foreign language learners.

As reflected in the data, there are overall significant negative correlations between the strategies and the Foreign Language Class Anxiety per level. Thus, the

levels of anxiety are negatively correlated with the *cognitive*, the *affective* and the *social* strategies for all levels.

Regarding the A1 level there is significant negative correlation between FLCAS and the *cognitive* ($r=-.240, p<.05$), *affective* ($r= -.334, p<.001$) and *social strategies* ($r=-. 353, p< .001$). A1 level students with high levels of second language anxiety are unable to develop *cognitive strategies*, such as analysing new information, monitoring comprehension, reviewing the information properly, or using gestures or other physical responses to get the meaning across. Also, the effects of high anxiety at A1 level are reflected in the *affective* and *social strategies*. *Affective strategies* are related to anxiety reduction, self-encouragement, and reward. Therefore, students at A1 level have little command of their affective feelings, thus they fail more into anxious states. Furthermore, their self-encouragement and reward is decreased as anxiety is more latent. Finally, *social strategies* are helpful to check information, cooperate with peers, and become culturally aware of the L2. When students have high levels of second language anxiety at A1 level, they lack strategies that help them checking information if necessary, cooperating with other students to communicate, and being aware of the cultural background of the speaker.

No significant correlation has been found for the *memory*, *compensatory*, and *metacognitive strategies* at the A1 level.

With regard to A2 level, there is a significant negative correlation between FLCAS and the *memory strategies* ($r=-.187, p<.05$). This indicates that A2 level students with high second language anxiety are unable to develop strategies related to grouping new concepts, arranging ideas and making associations. Furthermore, negative correlation is also found between FLCAS and *cognitive strategies* ($r= -.212, p<.05$). This confirms, as in A1 level, that students at A2 level, who suffer from second language anxiety, are less able of developing strategies related to reorganising new information, analysing or reasoning. Besides, there is a negative correlation found in the *affective strategies* ($r= -.214, p<.05$). This indicates that A2 level students cannot properly manage their own anxiety, self-motivation and reward during the learning process. Finally, the *social strategies* are also negatively correlated with FLCAS at A2 level ($r= -.303, p<.001$), these strategies help the student to learn through interaction with others. Thus, as levels of anxiety increase, interaction with others is less efficient. No significant correlation has been found in compensatory and metacognitive strategies at A2 level.

With reference to the B1 level, the FLCAS is negatively correlated with the *cognitive strategies* ($r = -.215, p < .05$). Thus, one can observe that anxiety reduces the ability of students to developing efficient reasoning, analysing or developing higher complex executive functions. Negative correlation has also been found between FLCAS and *social strategies* ($r = -.229, p < .05$) at B1 level. Hence, despite the fact that students at B1 level are independent users of the language with the rest of the group and the teacher, anxiety can reduce their abilities to work with others, understand the target language and the cultural background of the L2. No significant correlation has been found in the *memory, compensatory, metacognitive, and affective strategies*.

Finally, as for the B2 level is concerned, Table 12 shows significant negative correlations between FLCAS and *cognitive* ($r = -.345, p < .001$) and the *social strategies* ($r = -.347, p < .001$). Students at B2 level with high levels of anxiety, in spite of their command of English, can suffer a mental block which hampers their ability to develop certain cognitive strategies. Thus, the cognitive resources students usually develop are depleted by increased levels of anxiety. Furthermore, students also feel that their *social strategies* can be reduced, when they are under an anxious or stressful situation in the class, such as facing an exam or evaluation.

In summary, the correlation analysis reveals a common feature between the language learning strategies (SILL) and foreign language anxiety (FLCAS): Students of the four levels (A1-B·2), who suffer from second language learning anxiety, develop fewer *cognitive* and *social strategies*. In the case of *social strategies*, A1 level students are mostly affected by L2 anxiety followed by students at B2 level, whereas. In relation to the *cognitive strategies* students at B2 levels are mostly influenced by L2 anxiety.

4.4.4.2. Correlation analysis between Foreign Language Class Anxiety Scale (FLCAS) and Oral Communication Strategy Inventory (OCSI)

Table 13.- Correlation analysis between FLCAS and OCSI per level of English (A1-B2)

FLACS	SPEAKING										LISTENING				
	Socio-affective	Fluency	M.negot	Accura	Message Red	Non verbal	Ab. Message	Think Eng	M.nego	Fluency	Scan.	Globa	Non-Verbal	L.activ Listen	Word-oriented
A1 (n=111)	-.555** (sig=0.000)	-.441** (sig=0.000)	-.335** (sig=0.000)	-.343** (sig=0.000)	-.039	-.225* (sig=0.017)	.358** (sig=0.000)	.036	-.271** (sig=0.004)	-.347** (sig=0.000)	-.398** (sig=0.000)	-.302** (sig=0.001)	-.335** (sig=0.000)	-.029	-.300** (sig=0.001)
A2 (n=113)	-.481** (sig=0.000)	-.145	-.184	-.066	.120	-.135	.182	.252** (sig=0.007)	-.131	-.175	-.100	-.152	-.010	.322** (sig=0.001)	.110
B1 (n=98)	-.515** (sig=0.000)	-.399** (sig=0.000)	-.116	-.354** (sig=0.000)	.110	-.088	.418** (sig=0.000)	.120	-.066	-.244* (sig=0.016)	-.107	.082	.141	.323** (sig=0.001)	-.031
B2 (n=85)	-.458** (sig=0.000)	-.269* (sig=0.013)	-.062	-.159	.203	-.187	.474** (sig=0.000)	.295** (sig=0.006)	-.157	-.169	-.194	-.204	-.151	.230* (sig=0.034)	.056

*** $p < .001$ * $p < .05$

In order to identify whether Foreign Language Class Anxiety Scale (FLCAS) per level of English (A1-B2) and Oral Communication Strategy Inventory (OCSI) are related to a statistically significance, linear correlation analysis by means of Pearson statistic has been conducted.

The results shown in Table 13 present the correlations between the FLCAS instrument and the eight subscales contained in the strategies for coping with speaking problems during communicative tasks (social-affective, fluency oriented, negotiation for meaning while speaking English, accuracy-oriented, message reduction and alteration, non-verbal strategies, message abandonment, and attempt to think in English strategies), and the seven subscales contained in the strategies for coping with listening problems during communicative tasks (negotiation for meaning while listening, fluency maintaining, scanning, getting the gist, nonverbal strategies while listening, less active listener, and word-oriented strategies) per level of English (A1-B2). The results of this Table will be commented following each level as reference.

Regarding **A1 level students**, the results show significant correlations between FLCAS and the Oral Communication Strategy Inventory instrument, both for the strategies for coping with speaking problems during communicative task and for the strategies for the listening problems during communicative tasks.

In the case of strategies for coping with speaking problems during communicative tasks and FLCAS there is a significant negative correlation in the following subscales:

Students at A1 level with high L2 anxiety have a lack of social-affective strategies ($r=-.555, p<.001$). Thus, they cannot manage their own anxiety regulation and they also have few techniques to enjoy language learning during interaction. Furthermore, they also lack fluency-oriented strategies ($r=-.441, p<.001$), thus they are less aware of certain supra-segmental features of the language, such as the rhythm, intonation, and pronunciation. They also lack negotiation for meaning while speaking strategies ($r=-.335, p<.001$) and accuracy-oriented strategies ($r= -.343, p<.001$), which means that they are unable to negotiate meaning, leading to communication breakdowns, and they lack grammar and vocabulary accuracy. Finally, these students also lack non-verbal strategies while speaking ($r=-.225, p<.05$), which suggests that they do not use body gestures or eye contact to communicate properly.

Besides, there is a positive correlation between FLCAS and the *message abandonment strategies* ($r=.358, p<.001$), which indicates that the more L2 anxiety these students have, the more they tend to leave the message unfinished or seek help from others to continue conversation.

In the case of *strategies for coping with listening problems during communicative tasks* and FLCAS at A1 level, there is significant negative correlation for the following subscales:

Students with high L2 anxiety have fewer *negotiation for meaning while listening strategies* ($r=-.271, p<.01$), which prevents them from modifying interaction, repeating the message or asking for clarification in order to understand the intention of the speaker. Besides they lack *fluency-maintaining strategies* ($r=-.347, p<.001$) as they cannot maintain the conversational goal or focus on the speaker's rhythm, intonation or pronunciation. Also, students have little *scanning strategies* ($r=-.398, p<.001$) because anxiety hampers their ability to understand the global message of the speaker, *global understanding/getting the gist strategies*, ($r= -.302, p<.001$). Finally, students' language anxiety also hampers their ability to develop *non-verbal strategies while listening* ($r=-.335, p<.001$), which are focused on managing body gestures and eye contact, and they are less capable of focusing on individual words, *word-oriented strategies* ($r=-.300, p<.001$).

The results for the **A2 level** show that there are significant correlations for both strategy groups:

Regarding *the strategies for coping with speaking problems during communicative tasks*, there is a significant negative correlation between the *social-affective* and the FLCAS ($r=-.481, p<.001$). This suggests that the more language anxiety the students have, the less able they are to communicate smoothly and maintain social interaction. In contrast, there is a positive correlation between *the think in English strategies* and FLCAS ($r= .252, p<.01$). This reveals that high levels of second language anxiety, may lead students to develop more strategies orientated to either translate the message from L1 to L2, or to try to think in the L1, and consequently adapt their idea in order to convey the message they want to produce.

With regard to the strategies for *coping with listening problems during communicative tasks*, the Table presents significant positive correlation between *the less*

active listener strategies and the FLCAS ($r= .322, p<.001$). This indicates that the more L2 anxiety the learners (A2) have, the more prone they are to have a negative attitude towards active listening. Thus, the student translates into his/her native language and depends heavily on familiar words.

The results for the **B1 level** show that there are significant correlations for both strategy groups:

In the case of strategies for coping with speaking problems during communicative tasks and FLCAS, there is a significant negative correlation for the following subscales: the social-affective strategies ($r= -.515, p<.001$), fluency-oriented strategies ($r=-.399, p<.001$), and accuracy-oriented strategies ($r=-.354, p<.001$). Students at B1 level with high L2 anxiety, feel less confident in order to use the L2 and have less control over the progress of conversation, as they lack grammar or vocabulary accuracy. Conversely, there is a positive correlation between the FLCAS and the message abandonment strategies ($r=.418, p<.001$), which implies that the more L2 anxiety the students have, the more they tend to give up conversation, interrupting the message or looking for others' help.

With respect to the strategies for coping with listening problems during communicative tasks, as shown in the Table, there is a significant negative correlation between the FLCAS and the fluency-maintaining strategies ($r=-.244, p<.05$). This indicates that students lack the ability to focus on supra-segmental parts of the speech such as intonation, rhythm, and pronunciation. On the contrary, there is a significant positive correlation between the less active listener strategies and the FLCAS ($r= .323, p<.001$), which means that the more the students have L2 anxiety, the more they tend to translate the message into their L1 and depend on familiar words.

The results for the **B2 level** show that there are significant correlations for both strategy groups:

In regard with the strategies for coping with speaking problems during communicative tasks and FLCAS, there is a significant negative correlation for the following subscales: social-affective strategies ($r=-.458, p<.001$) and the fluency-oriented strategies ($r= -.269, p<.05$). This indicates that students, with high L2 anxiety, may respond more negatively to developing social-affective strategies, in order to

communicate fluently and they would also have fewer resources to paying attention to features in conversation such as rhythm, intonation, and pronunciation.

With regard to the *strategies for coping with listening problems during communicative tasks*, there is a significant positive correlation between the *less active listener strategies* and the FLCAS ($r= .230, p<.05$), which implies that the more foreign language anxiety the students have during learning, the fewer abilities for interaction they may develop. Thus, students take fewer risks to guess the meaning from the context, and tend to translate more into L1 or depend more on familiar words.

4.4.4.3. Correlation Analysis between Foreign Language Class Anxiety Scale and Survey of Reading Strategy per level of English (SORS)

In order to know whether Foreign Language Anxiety Class per level (A1-B2) and Survey of Reading Strategy (SORS) are related to a statistical significance, linear correlation analysis by means of Pearson statistic analysis has been conducted.

Table 14.- Correlation analysis between FLCAS and SORS per level of English (A1-B2)

	SORS Global	SORS Problem Solving	SORS Support
FLCAS A1 (n=111)	-.202* (sig=0.034)	-.049	.014
FLCAS A2 (n=113)	-.134	.034	-.103
FLCAS B1 (n=98)	.033	.245* (sig=0.016)	-.110
FLCAS B2 (n=85)	.043	.014	.040

** $p<.001$

* $p<.05$

The results in Table 14 show the correlations between the three subscales of the Survey of Reading Strategy instrument and the Foreign Language Anxiety Class instrument per level of English. Thus in the case of A1 level, there is a significant negative correlation between FLCAS and *global reading strategies* ($r=-.202, p<.05$). Therefore, students at A1 level with high levels of foreign language anxiety, lack strategies to organize the text and reorganise ideas. These strategies are useful to manage and monitor their reading process.

In the case of B1 level, there is a significant positive correlation between anxiety and *problem solving strategies* ($r=.245, p<.05$). Hence, students at B1 level with high levels of foreign language anxiety, tend to develop more strategies such as adjusting their own speed when reading the text, guessing the meaning from the context, and re-reading the text to understand the meaning of the text. No other significant correlations have been found in the rest of the levels.

4.4.5. Relation between the Self-Concept instrument and the Levels of English (A1-B2)

Firstly, a descriptive analysis of mean and standard deviation is presented, in order to know the general tendency of students' Self-Concept per level of English. Each of the levels (A1-B2) is scored to all the strategies contained in the instrument (Self-Concept).

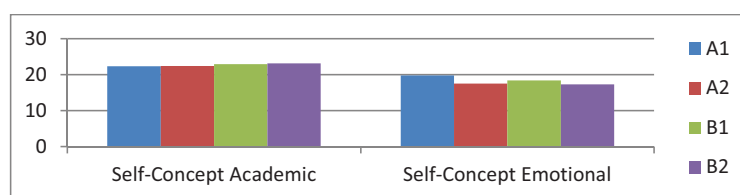
Table 15.- Mean and SD of the Self-concept in each of the levels of English (A1-B2)

Self-Concept	A1 (n=110)		A2 (n=112)		B1 (n=98)		B2 (n=85)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Academic	22.28	2.92	22.38	2.74	22.90	2.45	23.14	2.66
Emotional	19.75	5.70	17.49	5.29	18.40	5.50	17.28	6.06

As can be observed in Table 15, students at B2 level ($M=23.14\pm SD=2.66$) have the highest *academic self-concept* score in comparison with the rest of the levels A1 ($M=22.28\pm SD=2.92$), A2 ($M=22.38\pm SD=2.74$), and B1 ($M=22.90\pm SD=2.45$). Besides, students at A1 level show the highest emotional self-concept score ($M=19.75\pm SD=5.70$).

Secondly, the ANOVA shows differences among the groups in self-concept instrument, $F_{(3, 403)}=2.285, p>.014$, (Bonferroni correction= .025). Scheffe post hoc analysis shows that A1 level students ($M=19.75\pm SD=5.70$) present more *emotional self-concept* than the rest of the levels A2 ($M=17.49\pm SD=5.29$), B1 ($M=18.40\pm SD=5.50$), and B2 ($M=17.28\pm SD=6.06$). This indicates that A1 level students are more aware of their emotional states while they are learning the L2 than the rest of the levels.

Figure 23 reflects the mean values of the variables which show significant differences. Figure 23 Mean scores of Self-concept in each of the levels of English (A1-B2).



4.4.5.1. Correlation analysis between Self-Concept and Strategy Inventory for Language learning (SILL) per groups (A1-B2)

Table 16.- Correlation analysis between Self-Concept and SILL per level of English (A1-B2)

Self-Concept	SILL Memory	SILL Cognitive	SILL Compensatory	SILL Metacognitive	SILL Affective	SILL Social
Acad A1 (n=111)	.367** (sig=0.000)	.431** (sig=0.000)	.168	.429** (sig=0.000)	.284** (sig=0.003)	.296** (sig=0.002)
Acad A2 (n=113)	.227* (sig=0.016)	.186* (sig=0.049)	.030	.250** (sig=0.008)	.253** (sig=0.007)	.251** (sig=0.008)
Acad B1 (n=98)	.311** (sig=0.002)	.327** (sig=0.001)	-.027	.383** (sig=0.000)	.141	.302** (sig=0.003)
Acad B2 (n=85)	.180	.216* (sig=0.047)	.070	.142	.187	.295** (sig=0.006)
Emo A1 (n=111)	.116	-.060	.013	.074	-.160	-.213* (sig=0.025)
Emo A2 (n=113)	-.025	-.123	.037	.016	-.154	-.190* (sig=0.046)
Emo B1 (n=98)	.036	-.098	.143	-.183	.057	-.137
Emo B2 (n=85)	-.043	-.208	.103	-.016	-.004	-.255* (sig=0.019)

** $p < .001$

* $P < .05$

Table 16 shows the statistical correlation between Self-concept and the Strategy Inventory for Language Learning Instrument (SILL).

As observed in Table 16, students of A1 level show a significant positive correlation between **academic self-concept** and *memory* ($r=.367, p<.001$), *cognitive* ($r=.431, p<.001$), *metacognitive* ($r=.429, p<.001$), *affective* ($r=.284, p<.01$), and *social* strategies ($r=.296, p<.01$). Thus, students at A1 level with high a perception of their academic work are also skilful at developing several strategies related to improve, control, and monitor their second language learning. In contrast, there is a significant negative correlation between A1 level students' **emotional self-concept** and the *social strategies* ($r=-.213, p<.05$). This proves that students at this level (A1), who are aware of their

emotional states towards learning, are less capable of developing certain social strategies in order to interact with their interlocutors.

Students at A2 level, also show significant positive correlation between **academic self-concept** and *cognitive* ($r=.186, p<.05$), *metacognitive* ($r=.250, p<.01$), *affective* ($r=.253, p<.01$) and *social strategies* ($r=.251, p<.01$). Thus, students with a high perception of their academic achievement, develop certain linguistic strategies to accomplish their academic goal. In contrast, there is a significant negative correlation between A2 level students' **emotional self-concept** and the *social strategies* ($r=-.190, p<.05$). Thus, students at A2 level who perceive their emotional states are less able to respond properly in a social interaction.

In the case of B1 level students, there is a significant positive correlation between **academic self-concept** and *memory* ($r=.311, p<.002$), *cognitive* ($r=.327, p<.001$), *metacognitive* ($r=.383, p<.001$), and *social strategies* ($r=.302, p<.01$). This indicates that students at B1 level with high a perception of their academic achievement in the L2 display certain strategies such as memory, cognitive, metacognitive and social during the language learning process.

Finally, in the case of B2 level students, there is a significant positive correlation among **academic self-concept** and the *cognitive* ($r=.216, p<.05$) and *social strategies* ($r=.295, p<.01$). On the contrary, there is a significant negative correlation between B2 level students' **emotional self-concept** and the *social strategies* ($r=-.255, p<.05$). Hence, students at B2 level, who are aware of their emotional states, are less able to develop certain social strategies in order to interact in the L2.

In summary, as can be read in the Table there is a significant correlation between academic self-concept and the cognitive and the social strategies in the four levels (A1-B2). Furthermore, there is a significant correlation between emotional self-concept and the social strategies for A1, A2, and B2 levels.

4.4.5.2. Correlation between Self-Concept and Oral Communication Strategy Inventory

Table 17.- Correlation between Self-Concept and OCSI per level of English (A1-B2)

	SPEAKING OCSI										LISTENING OCSI				
	Socio- affective	Fluency oriented	M.negot	Accura	Message Reductio	Non verbal	Aband. Messag	Think Englis	M.negot	Fluency	Scan.	Globa Under	Non- Verbal	Less listener	Word- oriented
Aca A1 (n=111)	.179	.238* (0.012)	.183	.388** (0.000)	.162	.210* (0.028)	-.100	-.064	.403** (0.000)	.213* (0.025)	.334** (0.000)	.129	.114	.070	.294** (0.002)
Aca A2 (n=113)	.040	.291** (0.002)	-.018	.269** (0.004)	-.005	.140	.125	-.038	.183	.063	-.031	-.041	.125	-.038	.059
Aca B1 (n=98)	.264** (0.009)	.477** (0.000)	.193	.335** (0.001)	-.030	.179	-.164	.093	.077	.266** (0.008)	.334** (0.001)	.009	.170	.089	.304** (0.002)
Aca B2 (n=85)	.290* (0.007)	.050	.117	.149	-.063	-.007	-.117	-.106	.139	.225* (0.038)	.265* (0.014)	.309** (0.004)	.204	-.129	.012
Emo A1 (n=111)	-.448** (0.000)	-.327** (0.000)	-.249** (0.008)	-.253** (0.007)	-.063	-.161	.303** (0.001)	.041	-.181	-.142	-.307** (0.006)	-.107	-.164	-.026	-.167
Emo A2 (n=113)	-.292** (0.002)	-.024	-.012	-.014	.186* (0.049)	-.111	.175	.266** (0.005)	-.191* (0.043)	-.222* (0.019)	-.119	-.047	-.015	.201* (0.034)	-.091
Emo B1 (n=98)	-.482** (0.000)	-.300** (0.003)	-.007	-.291** (0.004)	.149	-.035	.439** (0.000)	.147	.023	-.145	-.107	.090	.176	.222* (0.028)	.078
Emo B2 (n=85)	-.421** (0.000)	-.294** (0.006)	-.133	-.136	.239* (0.028)	-.181	.479* (0.000)	.184	-.200	-.197	-.070	-.174	-.134	.187	.056

** $p < .001$ * $p < .05$

The results presented in Table 17 show the correlations between the Oral Communicative Strategy Inventory and the Academic and Emotional self-concept variables per level.

Firstly, the results regarding students at **A1 level** show that there are significant correlations for both strategy groups and both self-concept dimensions.

With regard to the **academic self-concept** dimension and the *strategies for coping with speaking problems during communicative tasks*, there is a significant positive correlation between academic self-concept and *fluency oriented* ($r=.238, p<.05$), *accuracy strategies* ($r=.388, p<.001$) and *non-verbal strategies* ($r=.210, p<.05$). This indicates that students with a high a perception of their academic achievement use strategies to develop communication, considering pronunciation, clarity of the speech, the context and other non-verbal skills to understand communication. As for *the strategies for coping with listening problems during communicative tasks*, there is also a significant positive correlation between A1 level academic self-concept and *negotiation for meaning while listening strategies* ($r=.403, p<.001$), *fluency maintaining strategies* ($r=.213, p<.05$), *scanning strategies* ($r=.334, p<.001$), and *word-oriented strategies* ($r=.294, p<.01$). Thus, students at this level (A1), who show a positive perception of their own academic performance, display certain strategies such as negotiating the meaning when possible, scanning the information received, and looking for familiar words within the text, in order to understand the speaker's intention.

With reference to the **emotional self-concept** dimension and the *strategies for coping with speaking problems during communicative tasks*, there is significant negative correlation between A1 level and the *socio-affective* ($r=-.448, p<.001$), *fluency oriented* ($r=-.327, p<.001$), *meaning negotiation* ($r=-.249, p<.01$), *accuracy oriented strategies* ($r=-.253, p<.01$). This suggests that students with high emotional perception of their learning, show fewer abilities to interact, in a fluent and accurate way, with others to negotiate meaning. Furthermore, there is a positive correlation between emotional self-concept and *abandon message strategies* ($r=.303, p<.001$), which suggests that the more emotionally aware the students are about their performance, the more they tend to leave the interaction abandoned. Regarding *the strategies for coping with listening problems during communicative tasks*, there is a significant negative correlation between emotional self-concept and the *scanning strategies* ($r=-.307, p<.01$). This indicates that students, who

are aware of their emotional states during language learning, are less expert to scan the message in order to understand the message.

Secondly, the results for **A2 level** show that there are significant correlations for both strategy groups and both self-concept dimensions:

With regard to the **academic self-concept** and *strategies for coping with speaking problems during communicative tasks*, there is significant positive correlation for the *fluency oriented* ($r=.291, p<.01$) and *accuracy* ($r=.269, p<.01$) strategies. This indicates that students at A2 level with a high perception of their performance in the L2 are more prepared to use strategies in order to communicate smoothly and accurately. No significant correlations have been found in the strategies for coping with listening problems during communicative tasks.

Regarding the **emotional self-concept** and the *strategies for coping with speaking problems during communicative tasks*, there is significant negative correlation for the *socio-affective* ($r=-.292, p<.01$) and the *think in English* ($r=.266, p<.01$) strategies. This indicates that students with a high perception of their emotional states are less competent to control their feelings during interaction and also are less able to control their performance in the L2. On the contrary, there is a significant positive correlation for *the message reduction strategies* ($r=.186, p<.05$), which suggests that students tend to simplify and reduce their message during interaction. For the *strategies for coping with listening problems during communicative tasks*, there is significant negative correlation for the *meaning negotiation* ($r=-.191, p<.05$) and the *fluency maintaining* ($r=-.222, p<.05$) strategies. This suggests that students with a high perception of their emotional states have fewer abilities to negotiate meaning and maintain fluency during interaction. Furthermore, there is a significant positive correlation between the emotional self-concept and the *less active listener strategy* ($r=.201, p<.05$) this indicates that students' awareness of their emotional states makes the learner be less active during the listening task.

Thirdly, the results for **B1 level** show that there are significant correlations for both strategy groups and both self-concept dimensions:

With respect to the **academic self-concept** dimension and *strategies for coping with speaking problems during communicative tasks*, there is significant positive correlation for the *socio-affective* ($r=.264, p<.01$), *fluency oriented* ($r=.477, p<.001$), and *accuracy oriented* ($r=.335, p<.001$) strategies. This indicates that students with a high

perception of their academic achievement tend to develop more strategies to control their own mental states in order to communicate fluently and in a more accurate way.

As for the strategies for coping with listening problems during communicative tasks, there is significant positive correlation for the fluency maintaining ($r=.266, p<.01$), scanning ($r=.334, p<.001$), and word-oriented ($r=.304, p<.01$). This suggests that these students have certain strategies to comprehend the message such as maintaining the interaction, looking for the most important information and familiar words in the text.

In relation to the **emotional self-concept** dimension and the strategies for coping with speaking problems during communicative tasks, there is significant negative correlation for the socio-affective ($r=-.482, p<.001$), fluency oriented ($r=-.300, p<.01$), accuracy oriented ($r=-.291, p<.01$) strategies. This indicates that students at B1 level, who are aware of their emotional states, lack strategies addressed to communicating with others. Moreover, there is a positive correlation for the abandon message ($r=.439, p<.001$) strategies, which confirms that students' awareness of their emotional states, produces message abandonment. Regarding the strategies for coping with listening problems during communicative tasks, there is a significant positive correlation for the less active listener ($r=.222, p<.05$) strategies, which indicates that students' emotional states hamper their ability to participating in the conversation.

Finally, the results for **B2 level** show that there are significant correlations for both strategy groups and both self-concept dimensions:

With respect to the **academic self-concept** dimension and strategies for coping with speaking problems during communicative tasks, there is significant positive correlation for the socio-affective ($r=.290, p<.01$) strategies. This indicates that students' positive perception of their academic achievement, leads them to control better their interaction, trying to give a good impression and avoiding silences. As for the strategies for coping with listening problems during communicative tasks, there is significant positive correlation for the fluency maintaining ($r=.225, p<.05$), scanning ($r=.265, p<.05$), global understanding ($r=.309, p<.01$) strategies. This indicates a high development of certain strategies orientated to maintain the flow of conversation, trying to get the global message by scanning the most important words.

With reference to the **emotional self-concept** dimension and the strategies for coping with speaking problems during communicative tasks, there is significant negative

correlation for the *socio-affective* ($r=-.421, p<.001$), *fluency_oriented* ($r=-.294, p<.01$) strategies, which indicates that high emotional feelings among students might undermine students' ability to control their interaction and keep fluent. On the contrary, there is a significant positive correlation for the *message_reduction* ($r=.239, p<.05$) and the *abandon_message* ($r=.479, p<.001$) strategies. This indicates that students with high perceptions of their emotional states tend to modify or abandon the message, despite the risk of not achieving the communicative goal.

In the following section, the correlation analysis between Self-Concept instrument and the language learning instruments is presented. The language learning instruments are: the Strategy Inventory for Language Learning (SILL), the Oral Communication Strategy Inventory (OCSI) and the Survey of Reading Strategy (SORS).

4.4.5.3. Correlation between Self-Concept and Survey of Reading Strategy (SORS) per groups (A1-B2)

Firstly, the correlation analysis between Self-Concept and Survey of Reading Strategy is presented. Table 18 reflects the statistical correlation between Self-concept and the Survey of Reading Strategy (SORS) instrument per level.

Table 18.- Correlation analysis between Self-Concept and SORS per level of English (A1-B2)

AF Academic	SORS Global	SORS Problem solving	SORS Support Strategy
A1 (n=111)	.321** (sig=0.001)	.277** (sig=0.004)	.149
A2 (n=112)	.074	.086	.172
B1 (n=98)	.329** (sig=0.001)	.284** (sig= 0.005)	.184
B2 (N=85)	.174	.024	.095
AF Emotion	SORS Global	SORS Problem solving	SORS Support Strategy
A1 (n=111)	-.127	-.038	.054
A2 (n=112)	-.091	-.045	-.106
B1 (n=98)	.066	.277* (sig= 0.026)	.005
B2 (n=85)	.042	-.055	.054

** $p<.001$ * $p<.05$

Firstly, the results reveal that regarding students at A1 level there is a significant positive correlation between **academic self-concept** and the *global reading* ($r=.321, p<.001$) and *problem solving strategies* ($r=.277, p<.01$). This indicates that students at A1 level, who perceive themselves as having high qualities to perform well in a task, are also proficient to develop global and specific problem solving strategies such as organising the text, mind-mapping the structure of the text, guessing meaning, or rereading the text again in order to fully understand the content correctly.

Secondly, regarding students at B1 level there is a significant positive correlation between **academic self-concept** and *global reading* ($r=.329, p<.001$) and *problem solving strategies* ($r=.284, p<.01$). Accordingly, students at this level (B1) with high perceptions of their task achievement, develop specific strategies to overcome the difficulties they may find when reading a text. Likewise, at B1 level there is a positive correlation between **emotional self-concept** and *problem solving reading strategies* ($r=.277, p<.05$). This indicates that students with a high perception of their emotional states are capable of developing certain strategies to ease reading comprehension.

4.4.6. Relation between the Motivation instrument and Levels of English (A1-B2)

Firstly, a descriptive analysis of mean and standard deviation is presented in order to know the general tendency of students' Motivation (Kormos, Kiddle and Csizer, 2011) per level of English. Each of the levels (A1-B2) is scored to all the strategies contained in the instrument (Motivation).

Table 19.- Mean and SD between Motivation and Levels of English (A1-B2)

MOTIVATION questionnaire	A1 (n=110)		A2 (n=113)		B1 (n=98)		B2 (n=85)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Ideal L2-Self	2.46	.719	2.14	.633	2.11	.575	1.94	.716
Intrinsic	1.97	.565	1.90	.622	1.87	.580	1.86	.772
Instrumental	2.95	.769	2.80	.738	2.69	.709	2.72	.805
Self-efficacy	2.43	.658	2.16	.594	2.10	.509	1.99	.647
Peer-pressure	2.31	.535	2.32	.482	2.41	.468	2.35	.561
Parental	2.20	.791	2.19	.828	2.36	.833	2.28	.876
Anxiety	2.75	.851	3.05	.754	3.06	.857	3.29	.872
Technological	3.48	.786	3.21	.781	3.07	.815	2.98	.814
Resource	2.15	.608	2.17	.618	2.05	.589	2.06	.735
Satiation	3.28	.695	3.22	.652	3.24	.671	3.29	.675
Self-Regulation	2.73	.649	2.48	.593	2.61	.643	2.51	.702
Intensity	2.68	.421	2.77	.422	2.76	.394	2.72	.354
International	1.97	.635	1.77	.561	1.84	.571	1.81	.743

The motivation questionnaire (Kormos, Kiddle, and Csizer, 2011) measures 13 latent constructs and includes the most important factors in L2 learning motivation.

Table 19 reflects the main differences among the groups per each motivational variable. As can be observed in the Table, the main factors that affect A1 level students are: *Ideal L2-Self* ($M=2.46\pm SD=.719$), *intrinsic* ($M=1.97\pm SD=.565$), *instrumental* ($M=2.95\pm SD=.769$), *self-efficacy* ($M=2.43\pm SD=.658$), *technological* ($M=3.48\pm SD=.786$), *self-regulation* ($M=2.73\pm SD=.649$), and *international motivation* ($M=1.97\pm SD=.635$). In contrast, students at B2 level are more influenced by anxiety ($M=3.29\pm SD=.872$) than the rest of the levels.

Secondly, the relation between the Motivation instrument and the levels of English (A1-B2) is analysed, using the Bonferroni correction in the interpretation of significance (*Bonferroni adjustment significance: 0.003*). Scheffe post hoc test was used to determine the differences among the levels of English.

Regarding the *Ideal L2_Self factor*, the ANOVAS show differences between the groups, $F_{(3, 401)}= 4.786, p<.000$. Scheffe post hoc test shows significant differences between A1 and the rest of the levels. Thus, students at A1 level see themselves as possible-to-be successful learners ($M=2.46\pm SD=.719$), in comparison with the rest of the levels A2 ($M=2.14\pm SD=.633$), B1 ($M=2.11\pm SD=.575$), and B2 ($M=1.94\pm SD=.716$). Therefore, A1 students are more motivated to invest effort in learning the L2 because they have a higher Ideal L2 Self.

With regard to the *Self-efficacy_factor*, the ANOVAs also show differences among the groups, $F_{(3, 401)}= 3.460, p<.000$. Scheffe post hoc test shows that students at A1 ($M=2.43\pm SD=.658$) level have more intrinsic motivation than A2 ($M=2.16\pm SD=.594$), B1 ($M=2.10\pm .509$), and B2 ($M=1.99\pm SD=.647$) levels. This suggests that students at A1 level are more aware of their own abilities to perform a learning task than the rest of the levels.

Regarding the *motivation anxiety_factor*, the ANOVAs show differences among the groups, $F_{(3, 401)}= 4.750, p<.000$. Scheffe post hoc test reveals differences between A1 and B2. Thus, students at A1 ($M=2.75\pm SD=.851$) level show less second language anxiety than students at B2 ($M=3.29\pm SD=.872$) level. The motivation anxiety factor assesses students' anxiety feeling during the learning process. Thus, contrary to general thinking, students with less knowledge of English experience less second language anxiety when they are faced with a task in the L2 than higher levels.

Regarding the *technology based approaches* the ANOVAs show differences among the groups, $F_{(3, 401)}= 4.759, p<.000$. Scheffe post hoc test shows differences between A1 (M=3.48±SD=.786), B1 (M=3.07±SD=.815), and B2 (M=2.98±SD=.814). This indicates that students at A1 level show more interest and abilities to use technological devices in order to improve their language learning.

In summary, the analysis shows that students at A1 level exhibit more motivational attitudes to learn the L2 than the rest of the levels. Thus, these students imagine themselves as becoming successful learners and show interest in using technological approaches, in order to be more successful in the L2. Besides, they show more intrinsic motivation towards the foreign language, and are able to control their anxiety better.

Figure 24 reflects the mean values of the variables which show significant differences.

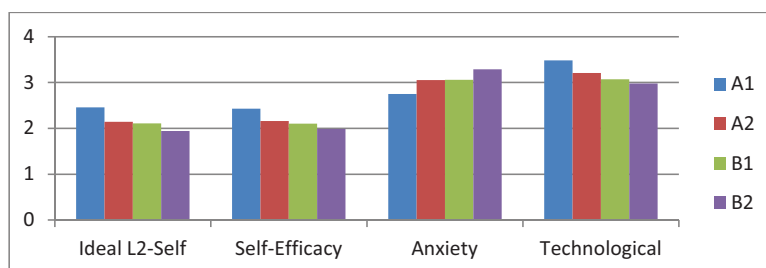


Figure 24. Mean scores of the Motivation instrument in each of the levels of English (A1-B2)

4.4.7. Relation between the Attributions and the Levels of English (A1-B2)

Firstly, a descriptive analysis of the mean and standard deviation is computed in order to know the general tendency of students' Attributions of Success per level of English (A1-B2).

Table 20.- Mean and SD of Attributions and levels of English (A1-B2) for Successful Outcomes

Attributions	A1 (n=111)		A2 (n=111)		B1 (n=97)		B2 (n=83)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Ability	2.27	1.17	2.88	1.15	3.65	1.08	3.97	.923
Effort	4.78	.898	4.57	1.10	4.46	1.16	4.59	1.03
Strategy	4.45	.979	4.36	.962	4.30	1.07	4.32	.916
Interest	5.20	.854	5.13	.825	5.10	.809	5.38	.640
Luck	2.54	1.31	2.83	1.41	2.76	1.39	2.83	1.35
Teacher influence	5.33	.778	4.91	.992	4.95	.888	4.97	.811
Task difficulty	4.28	1.07	3.86	1.05	3.62	1.26	3.80	1.29
Class atmosphere	4.99	.939	4.91	.832	4.86	.942	4.81	.977
Marks	4.96	1.02	4.97	.976	5.16	.920	5.18	1.02
Preparation	4.27	1.12	4.51	.882	4.59	.975	4.73	.938
Enjoyment	4.72	1.20	4.99	1.07	4.97	1.17	5.49	.592
Class Level	4.54	1.23	4.61	.964	4.70	.948	4.93	.874

The Attribution for Success and Failure instrument measures students' perceptions on successful and failure outcomes regarding the development of an activity in the L2. Table 20 corresponds to the different variables according to students' successful outcomes.

Students at A1 level show the highest mean values related with *effort* ($M=4.78 \pm SD=.898$), *strategy* ($M=4.50 \pm SD=.979$), *teacher* ($M=5.33 \pm SD=.778$), *task difficulty* ($M=4.28 \pm SD=1.07$), *class-atmosphere* ($M=4.99 \pm SD=.939$) variables. It is important to highlight that the *effort* and *strategy* variables are internal, thus students perceive that their success depends on their attitude towards the language learning process. On the contrary *teacher*, *task* and *class atmosphere* variables are external, which means that students at A1 level with high mean values of these variables depend on external factors to get successful outcomes in the L2.

Students at B2 level score the highest values at *ability* ($M=3.97\pm SD=.923$), *interest* ($M=5.38\pm SD=.640$), *marks* ($M=5.18\pm SD=1.02$), *preparation* ($M=4.73\pm SD=.938$), *enjoyment* ($M=5.49\pm SD=.592$), and *class level* ($M=4.93\pm SD=.874$) variables. The ability and interest variables are internal. Students' perception of their own success depends on factors related to achieving proficiency in the language learning and by other external factors such as marks, preparation, or class level.

Secondly, the differences among the groups in relation to Attribution for Successful Outcomes instrument for each of the levels of English (A1-B2) are analysed, using the Bonferroni correction in the interpretation of significance (*Bonferroni adjustment significance: 0.004*). Scheffe Post hoc test was used to determine the differences among the groups.

With reference to the ability attribution for successful outcomes, the ANOVAs show differences among the groups, $F_{(3, 398)}= 48.178$, $p<.000$. Scheffe post hoc test show significant differences between A1 level and the rest of the levels (A1, B1, and B2). Thus, students at A1 level ($M=2.27\pm SD=1.17$) perceive that their success is less due to their own ability than the rest of the groups A2 ($M=2.88\pm SD=1.15$), B1 ($M=1.65\pm SD=1.08$), and B2 ($M=3.97\pm SD=.923$).

Regarding the teacher influence for successful outcomes, the ANOVAs show differences among the groups, $F_{(3, 398)}= 5.256$, $p<.001$. Thus, students at A1 level ($M=5.33\pm SD=.778$) perceive that their success depends more on their teacher influence than the rest of the levels A2 ($M=4.91\pm SD=.992$), B1 ($M=4.95\pm SD=.888$), and B2 ($M=4.97\pm SD=.811$).

In the case of task difficulty for successful outcomes, the ANOVAs show differences among the groups $F_{(3, 398)}= 6.034$, $p<.001$. Scheffe post hoc shows that students at A1 level ($M=4.28\pm SD=1.07$) perceive that their success with the L2 depends more on the *task difficulty* than the rest of the levels, A2 ($M=3.86\pm SD=1.05$), B1 ($M=3.62\pm SD=1.26$) and B2 ($M=3.80\pm SD=1.29$).

Finally, with regard to the *enjoyment for successful outcomes*, the ANOVAs show differences among the groups, $F_{(3, 398)} = 8.539, p < .000$. Scheffe post hoc shows that students at B2 level ($M = 5.49 \pm SD = .592$) perceive that their success in relation to language learning outcomes are more dependent on the way they enjoy the learning process than the rest of the levels A1 ($M = 4.72 \pm SD = 1.20$), B1 ($M = 4.99 \pm SD = 1.07$), and B2 ($M = 4.97 \pm SD = 1.17$).

Figure 25 reflects the mean values of the variables which show significant differences.

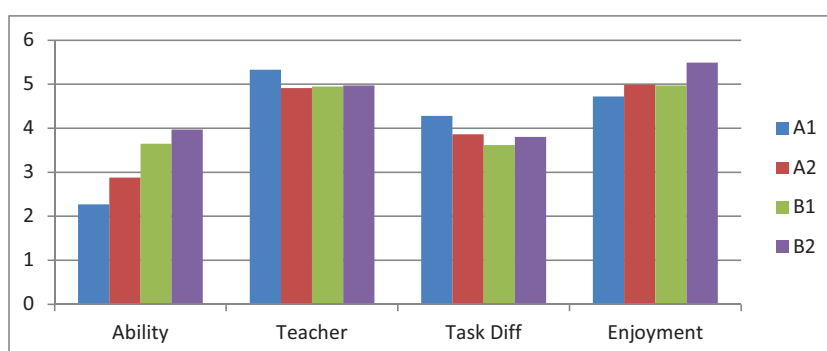


Figure 25. Mean scores of the Attributions for Successful outcomes in each of the levels of English (A1-B2)

In the following section a descriptive analysis of mean and standard deviation is analysed in order to know the general tendency of students' Attributions of Failure per level of English (A1-B2). In Table 21 means and SD of subjects are presented in each of the attributional dimensions for failure outcomes.

Table 21.- Mean and SD of Attributions and levels of English (A1-B2) for Failure Outcomes

Attributions	A1 (n=110)		A2 (n=111)		B1 (n=97)		B2 (n=83)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Ability	4.50	1.57	3.85	1.28	3.49	1.24	2.94	1.31
Effort	2.20	1.30	2.10	1.08	2.26	1.10	2.13	1.16
Strategy	3.06	1.18	3.30	1.29	3.37	1.24	3.59	1.35
Interest	2.28	1.36	2.02	1.09	2.23	1.19	2.00	1.19
Luck	2.16	1.33	2.29	1.24	2.40	1.15	2.45	1.22
Teacher influence	1.81	1.14	1.80	.912	1.72	.773	2.02	1.18
Task difficulty	3.28	1.40	3.10	1.32	3.47	1.35	3.53	1.30
Class atmosphere	1.80	1.14	1.73	.921	1.86	.985	1.76	.977
Marks	1.90	1.20	1.65	.836	1.93	1.25	1.83	1.26
Preparation	3.83	1.45	3.40	1.34	3.84	1.05	3.46	1.36
Enjoyment	2.10	1.34	1.62	.894	1.80	1.21	1.28	.550
Class Level	2.20	1.26	2.09	1.03	2.12	1.05	1.98	1.13

As can be observed in Table 21 the major differences are found between A1 and B2 level groups. Firstly, students at A1 level attribute their failure outcomes in the L2 to some internal factors such as *ability* ($M=4.50\pm SD=1.57$), *effort* ($M=2.20\pm SD=1.30$), and *interest* ($M=2.28\pm SD=1.36$). On the contrary, students at B2 level attribute their failure outcomes to *strategy* ($M=3.59\pm SD=1.35$), *luck* ($M=2.45\pm SD=1.22$), the *teacher influence* ($M=2.02\pm SD=1.18$), and the *task difficulty* ($M=3.53\pm SD=1.30$) variables.

Secondly, the relation between the Attribution for Failure instrument and the levels of English (A1-B2) is analysed, using the Bonferroni correction in the interpretation of significance (*Bonferroni adjustment significance: 0.004*). Scheffe post hoc test has been carried out in order to analyse between which groups there are differences.

Regarding the ability attribution for failure outcomes, the ANOVAs show differences among the groups, $F_{(3, 398)}=22.520$, $p<.000$. Scheffe post hoc shows that students at A1 level ($M=4.50\pm SD=1.57$) attribute their failure outcomes more to their lack of ability than the rest of the levels A2 ($M=3.85\pm SD=1.28$), B1 ($M=3.49\pm SD=1.24$), and B2 ($M=2.94\pm SD=1.31$).

With regard to the *enjoyment attribution for failure outcomes*, the ANOVAs show differences among the groups, $F_{(3, 398)}= 9.858, p<.000$. Scheffe post hoc test shows significant differences between A1, A2 and B2. Thus, post hoc analysis reveals that students at A1 level ($M=2.10\pm SD=1.34$) attribute failure outcomes more to the enjoyment in the class than A2 level students ($M=1.62\pm SD=.894$) and B2 level students ($M=1.28\pm SD=.550$).

In summary, with reference to both the attributions for success and failure outcomes in the L2, the data analysed shed light on students' perception of their success or failure outcomes when learning the L2. Thus, students at A1 level perceive their success as dependent on some internal but unstable controllable variables such as *effort* and *strategy*, and to some external variables such as teacher influence, task difficulty and class atmosphere, these variables are quite uncontrollable for the learner during his/her own learning process. Consequently, students at A1 level blame their failure outcomes to lack of ability or effort more than the rest of the levels.

On the contrary, students at B2 level perceive that their successful outcomes lie in their ability, marks, class level, preparation and enjoyment within the classroom; whereas their failure outcomes, are perceived due to external factors such as luck, teacher influence or task difficulty.

Figure 26 reflects the mean values of the variables which show significant differences.

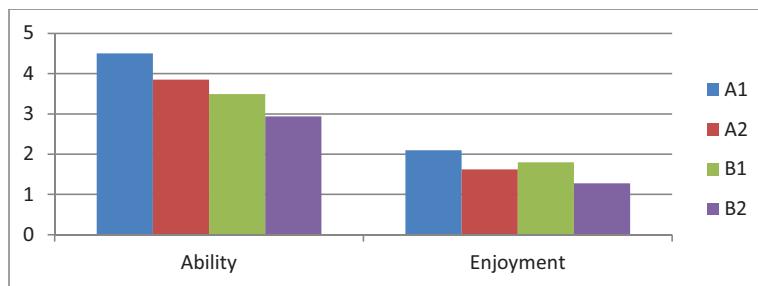


Figure 26 Mean scores of Attributions for Failure outcomes in each of the levels of English (A1-B2).

4.4.7.1. Frequency of Reported Successful and Unsuccessful Activities per Level

In this section general reported tendency of students' successful and unsuccessful activities per level is presented, in order to obtain specific information about their beliefs on their L2 performance.

Table 22.- Frequency of reported successful and unsuccessful activities per level of English (A1-B2)

Reported activities	Successful %				Unsuccessful %			
	A1 %	A2 %	B1 %	B2 %	A1%	A2%	B1%	B2%
Reading texts using appropriate strategies	4.5	2.7	3.1	4.8	1.8	0.0	2.1	1.2
Answering comprehension questions	8.1	9.9	6.2	4.8	0.0	2.7	0.0	4.8
Learning vocabulary	9.9	4.5	3.1	6.0	3.6	0.9	2.1	2.4
Understanding grammar	21.6	10.8	7.2	7.2	11.7	1.8	4.1	4.8
Translating texts and passages from English	3.6	4.5	3.1	0.0	2.7	0.0	0.0	1.2
Reading and summarising texts	0.9	0.9	1.0	0.0	0.0	0.9	1.0	0.0
Exams (reading)	9.9	12.6	4.1	10.8	0.0	1.8	5.2	6.0
Other (reading)	0.9	0.0	0.0	0.0	3.6	0.0	1.0	0.0
Reading Total	59.4	45.9	27.8	33.6	23.4	8.1	15.5	20.4
Understanding a listening passage using appropriate strategies	9.9	3.6	5.2	3.6	8.1	8.1	11.3	8.3
Listening and repetition/dictation	2.7	0.9	1.0	1.2	3.6	3.6	6.2	0.0
Listening and note taking	9.0	3.6	1.0	3.6	8.1	6.3	7.2	7.1
Exams (Listening)	0.0	7.2	10.3	7.2	4.5	15.3	6.2	13.1
Other (Listening)	0.0	0.9	1.0	1.2	0.9	1.8	0.0	0.0
Listening Total	21.6	16.2	18.5	16.8	25.2	35.1	30.9	28.5
Giving a presentation and or speech	1.8	5.4	10.3	7.2	9.0	12.6	5.2	8.3
Role play	1.8	1.8	3.1	2.4	1.8	1.8	2.1	0.0
Giving opinions/sharing ideas in class/groups	1.8	2.7	11.3	10.8	4.5	0.9	12.4	4.8
Answering teacher's questions	4.5	4.5	5.2	2.4	8.1	4.5	8.2	3.6
Exams (Speaking)	1.8	2.7	7.2	4.8	12.6	20.7	10.3	16.7
Other (Speaking)	0.0	0.0	2.1	0.0	3.6	0.9	1.0	1.2
Speaking total	11.7	17.1	39.2	27.6	39.6	41.4	39.2	34.6
Writing a summary	0.9	3.6	3.1	1.2	3.6	1.8	3.1	1.2
Writing paragraphs	1.8	2.7	1.0	0.0	1.8	1.8	0.0	1.2
Writing diaries and/or port-folios	0.0	0.0	0.0	1.2	0.9	0.0	4.1	2.4
Writing a report	0.0	1.8	0.0	4.8	0.9	0.0	4.1	2.4
Exams (Writing)	2.7	10.8	8.2	8.4	4.5	10.8	2.1	9.5
Other (Writing)	1.8	1.8	2.1	6	0.9	0.9	5.2	2.4
Writing Total	7.2	20.7	14.4	21.6	12.6	15.3	18.6	19.1

Table 22 shows the types of activities chosen by students and their frequency per level. In the first section of the questionnaire, students were asked to choose one successful activity and one unsuccessful activity they were good at in the second language learning within the classroom. This question is included so that students could focus on one specific activity when answering the attribution questions in the subsequent section of the questionnaire, instead of focusing on their perceptions of English learning as a whole.

The following Figure illustrates more visually the differences of reported successful activities per group of students.

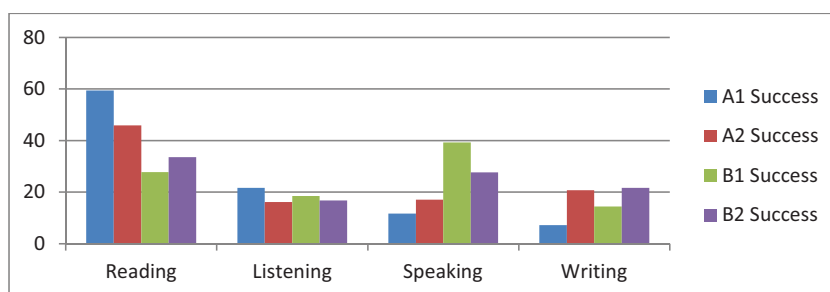


Figure 27. Frequency of reported Successful Activities per level of English (A1-B2)

As can be observed in Figure 27, the activity reported as the most successful among the four is the reading task. Besides, students at A1 level report the highest rate of successful activity. In regard to the listening activity, students at A1 and B1 have chosen this activity as the most frequent reported successful outcome among the groups. Curiously as could be expected, the speaking activity is the highest reported frequent activity by students at B1 level; whereas, A1 level students perceive the speaking activity is the least successful activity. Finally, with reference to the writing activity, students at A2 and B2 level perceive this task as being the most frequent successful activity.

In summary students report the *reading* as the most frequent successful activity; on the other hand, students report the *listening and the writing* as the least frequent successful activities.

The following Figure illustrates more visually the differences of reported unsuccessful activities per group of students

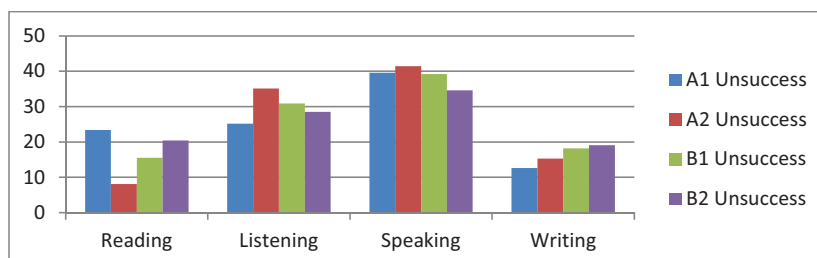


Figure 28. Frequency of reported Unsuccessful Activities per level of English (A1-B2)

As can be observed in Table 22 and Figure 28, there are significant differences among the groups regarding the frequency of reported unsuccessful outcomes activities.

Students at A1 level and B2 level report the *reading activity* as most unsuccessful outcome among the groups. In the case of the *listening activity*, students at A2 level have chosen this activity as the most unsuccessful activity, in comparison with the rest of the groups, followed by the B1 and the B2 level students. In general, students of the four levels have chosen the *speaking activity* as the most common unsuccessful activity, being A2 the group which scores the most. Finally, students at B2 level have reported the *writing activity* as the most frequent unsuccessful activity, in comparison with the rest of the groups.

In summary students of the four levels perceive the listening and the speaking as the most frequent unsuccessful activities. In general terms, A1 level students have, in general, a higher unsuccessful perception of the four activities compared to the rest of the levels.

4.4.8. Structural Equation Modelling Analysis of the Affective Variables and the Language learning Instruments

Structural equation modelling (SEM), also known as path analysis with latent variables, is a regularly used analysis for representing dependency (arguably “causal”) relations in multivariate data in the behavioural and social sciences.

4.4.8.1. Estimation of measuring models through structural equations

In this section the scales of the different dimensions are analysed. The estimation of these dimensions are framed in the proposition made in chapter 3, therefore these dimensions will be analysed in accordance with the motivation, successful external attributions, successful and unsuccessful internal attributions, academic self-concept, anxiety, and the language learning instruments: Survey of Reading Strategy (SORS), Strategy Inventory Language Learning (SILL), and Oral Communication Strategy Inventory (OCSI).

The assessment of the scales with more than one item starts with the exploratory factor analyses of the different scales, through the estimation of the main components with Varimax rotation. These analyses allow us to have a first approach to the dimensionality and reliability of the measurement instrument.

In the following section, the results of the exploratory factor analysis (EFA) of the motivation scale (Table 23) are shown. As can be observed in Table 23 the corresponding items to this scale clearly load to two factors.

4.4.8.1.1. Estimation of Motivation

Table 23.- EFA Rotated Factors of Motivation Instrument

Items		External Motivation (F15)	Internal Motivation (F6)
(MOTI 1)	MOTIVAIDEAL2	.457	.876
(MOTI 3)	MOTIVAINSTRUMENT	.505	.272
(MOTI 4)	MOTIVASELFEFFICACY	.437	.678
(MOTI 5)	MOTIVAPEERPRESS	.525	-.052
(MOTI 6)	MOTIVAPARENTAL	.512	.076
(MOTI 7)	MOTIVAANXIETY	.031	-.406
(MOTI 8)	MOTIVATECHNO	.130	.276
(MOTI 9)	MOTIVARESOURCE	.348	.328
(MOTI 10)	MOTIVASATIATION	-.046	-.058
(MOTI 11)	MOTIVASELF-REGUL	.227	.273
(MOTI 12)	MOTIVAINTENSITY	.294	.081
(MOTI 13)	MOTIVAINTERNATIONAL	.713	0.251
		Eigenvalue: 3.99	Eigenvalue 1.38
		Variance explained : 18.75%	Variance explained: 13.04%
		Cronbach's Alpha: .678	Cronbach's Alpha: .900
		KMO Measure: 0.781	
		Bartlett's test: X ² (66): 1511.82 (p-value: 0.000)	
		Variance explained: 41.56%	

The first dimension gathers the items which correspond to External Motivation (M3, M5, M6 and M13), which explains the 18.75% of the variability of the information and an initial reliability of $\alpha=0.678$. The second factor refers to Internal Motivation (M1 and M4), which explains the 13.04% of the variance and has an initial reliability of $\alpha=0.900$. Both dimensions show Cronbach's Alpha values higher than 0.6 (Nunnally, 1967). The rest of the items have been eliminated from the analysis as no clear load was identified with the two factors. In this analysis, the goodness of fit test is confirmed with the results obtained in the measure of sampling adequacy test KMO and in Bartlett's test for sphericity, which indicates the rejection of null hypothesis (Hair et al., 1999).

4.4.8.1.2. Estimation of Successful External Attributions

In the present section the attribution scales are validated. Table 24 shows the results of the exploratory factor analysis of the successful external attributions. The results of the analysis present a one-dimensional scale, because there is no item which loads in a clear way to the second factor. Thus, the first factor includes items: ATEXEX2, which refers to teacher influence; ATEXEX4, which refers to class atmosphere; ATEXEX5, which refers to the marks obtained by students; ATEXEX7, which refers to enjoyment within the lass; and ATEXEX8, which refers to class level. All these factors are external attributions which have approximate loadings to 0.5 and explain the 18.39% of the variability. This dimension has consistent reliability, as it represents a Cronbach's Alpha which is over the minimum recommended threshold ($\alpha=0.67$). The rest of the items do not contribute to the factor, therefore they have been eliminated. Table 24 summarises in an accurate way the information provided, as it is indicated in the measure of sampling adequacy $KMO=0.683$ and the rejection of Bartlett's test for sphericity null hypothesis (see Table 24).

Table 24.- EFA Rotated Factors of Successful External Attributions

	Items	Successful External Attribution 1 (F10)	Successful External Attribution 2
ATEXEX1	Luck Successful Attribution	-.030	.208
ATEXEX2	Teacher Successful Attribution	.455	.300
ATEXEX3	Task Successful Attribution	-.052	.348
ATEXEX4	Class Atmosphere Successful Attribution	.531	.509
ATEXEX5	Marks Successful Attribution	.497	-.089
ATEXEX7	Enjoyment Successful Attribution	.494	-.232
ATEXEX8	Class Level Successful Attribution	.551	-.035
		Eigenvalue: 1.99	Eigenvalue: 1.27
		Variance explained: 18.39%	Variance explained: 8.24%
		Cronbach's Alpha: .676	
		KMO Measure: 0.683	
		Bartlett's test:	
		X ² (21): 232.58 (p-value: 0.000)	
		Variance extracted total: 26.62%	

4.4.8.1.3. Estimation of the Successful Internal Attributions

Regarding the successful internal attributions, the results of the estimation of exploratory factor analyses show that three items load to one dimension (see Table 25). This factor reaches the appropriate levels of reliability ($\alpha=0.668$), which explains the 31.3% of the variability of the information. With reference to the fit quality of the analysis, the factor consists of three items, which adequately summarises the information provided, as can be observed in the measure of sampling adequacy $KMO=0.639$ and Bartlett's test for sphericity null hypothesis rejection (see Table 25).

Table 25.- EFA Rotated Factors of Successful Internal Attributions

Items	Successful Internal Attribution 1 (F9)	Successful Internal Attribution 2
Ability Attributions	.038	.450
Effort Attributions	.737	-.096
Strategy Attributions	.604	.118
Interest Attributions	.585	.075
	Eigenvalue: 1.82	Eigenvalue: 1.02
	Variance explained: 31.30%	Variance explained: 11.3%
	Cronbach's Alpha: .668	
	KMO Measure: .639	
	Bartlett's test:	
	$X^2(6)$: 190.14 (p-value: 0.000)	
	Variance extracted total: 42.59%	

4.4.8.1.4. Estimation of Unsuccessful Internal Attributions

With reference to the unsuccessful internal attributions, the results of the estimation of the exploratory factor analysis indicate that this dimension consists of two items (Unsuccessful Effort Attribution and Unsuccessful Interest Attribution). Both items load over 0.6 in the creation of this dimension (see Table 26). The factor summarises the 30.86% of the variability of the information, and reaches a reliability point ($\alpha=0.658$). Furthermore, the goodness of fit indexes is confirmed with the results of the measure of sampling adequacy KMO=0.622, and in Bartlett's test for sphericity, which indicates a null hypothesis rejection (Hair et al., 1999).

Table 26.- EFA Rotated Factors of Unsuccessful Internal Attributions

Items	Unsuccessful Internal Attributions 1 (F11)
Ability Attributions	.032
Effort Attributions	.800
Strategy Attributions	.297
Interest Attributions	.612
	Eigenvalue: 1.78
	Variance explained: 30.86%
	Cronbach's Alpha: .658
	KMO Measure: .622
	Bartlett's test:
	X ² (6): 172.83 (p-value: .000)

4.4.8.1.5. Exploratory factor analysis of SORS

In this section the exploratory factor analysis of the language learning instruments (SORS, SILL, and OCSI) are analysed. Table 27 shows that SORS dimension includes two items, which explains the 68.8% of the variability of the information. The reliability is slightly low, but it is advisable to maintain the two items which load to the factor. Furthermore, both the measure of sampling adequacy $KMO=0.500$ and Bartlett's test for sphericity, which indicate the rejection of null hypothesis, are significant to the good of fit data (Hair, et al., 1999).

Table 27.- EFA Rotated Factors of SORS instrument

Items	SORS (F1)
SORS Global Reading Strategies	.829
SORS Problem Solving Reading Strategies	.829
	Eigenvalue: 1.78
	Variance explained: 68.80%
	Cronbach's Alpha: .538
	KMO Measure: .500
	Bartlett's test:
	$X^2(1): 61.34$ (p-value: .000)

4.4.8.1.6. Exploratory Factor Analysis of SILL

Regarding the exploratory factor analysis of SILL instrument, the results in Table 28, indicate that the five items that are included in the scale load to one single factor. Despite the fact that the factor loadings are slightly low, it is concluded to maintain all the items to provide SILL factor with significant meaning. The reliability of the dimension ($\alpha=0.800$) reaches values over the recommended minimum of 0.6 (Nunnally, 1967). In addition, the factor explains the 46.5% of the variability of the total information. To conclude, the goodness of fit indexes is confirmed with the results obtained from the measure of sampling adequacy $KMO=0.804$, and Bartlett's test for sphericity, which indicate the rejection of null hypothesis (Hair et al., 1999).

Table 28.- EFA Rotated Factors of SILL instrument

Items	SILL (F2)
SILL Memory	.560
SILL Cognitive	.831
SILL Metacognitive	.805
SILL Affective	.569
SILL Socio-Cultural	.591
Eigenvalue: 2.82	
Variance explained: 46.50%	
Cronbach's Alpha: .802	
KMO Measure: .804	
Bartlett's test:	
X ² (10): 631.24 (p-value:	
.000)	

4.4.8.1.7. Exploratory Factor Analysis of OCSI

Finally, Table 29 reflects the estimation of the factor analysis of the items contained in the OCSI instrument. The items related to this instrument clearly load to two factors, each of them consisting of three variables. The first dimension OCSI 1 consists of items: OCSI-Speaking Socioaffective, OCSI-Speaking Fluency, and OCSI Speaking Accuracy, which reach a reliability index of $\alpha=0.740$ and a percentage of latent variable of 22.1%. The second dimension consists of items: OCSI-Speaking Abandon Message, OCSI-Speaking Think English, and OCSI-Listening Less Active Listener. The estimation fit indicate that the results are adequate, as it is proven by the measure of sampling adequacy KMO =0.682 and Bartlett's test for sphericity rejection null hypothesis.

Table 29.- EFA Rotated Factors of OCSI instrument

Items	OCSI 1 (F3)	OCSI 2 (F4)
Speak Socio-affective	.577	-.242
Speak Fluency	.881	-.095
Speak Accuracy	.640	.014
Speak Abandon Message	-.195	.584
Speak Think English	.034	.626
Speak Less Active Listener	-.122	.725
	Eigenvalue: 2.34	Eigenvalue: 1.55
	Variance explained: 26.23%	Variance explained: 22.10%
	Cronbach's Alpha: .740	Cronbach's Alpha: .683
	KMO Measure: .682	
	Bartlett's test:	
	X ² (15): 543.44 (p-value: .000)	
	Variance extracted total: 48.33%	

4.4.8.2. Evaluation of the measurement scales through confirmatory factor analysis (first order measurement model)

A confirmatory factor analysis (CFA) has been conducted with all the items contained in each of the dimensions: motivation, successful external attributions, successful and unsuccessful internal attributions, academic self-concept, anxiety, and the language learning processing instruments: SORS, SILL, and OCSI. Thus, a first order measurement model was estimated through robust maximum likelihood, due to the lack of normally distribution of the initial variables. The results of the estimation are reflected in Table 30. Factor loadings were set for the first item of each dimension, as well as the two dimensions which contain one single item (academic self-concept and anxiety). The results indicate that the standardised factor loadings are significant to 99% in their totality. Thus, it can be concluded that the items correctly fit to their dimensions.

Table 30.- CFA: Estimation of the first order measurement model

Factor	Items	λ Standardised (t-student stat)	R ²	Reliability
F1	SORS Global Reading Strategies	.603	.364	AVE: .369 CR: .539
	SORS Problem Solving Reading Strategies	.612 (7.689**)	.375	
F2	SILLMemory	0.549	.301	AVE: .459 CR: .805
	SILLCognitive	.826 (10.728**)	.682	
	SILLMetacognitive	.789 (10.264**)	.622	
	SILLAffective	.565 (8.636**)	.320	
F3	SILLSociocultural	.609 (9.326**)	.371	AVE: .492 CR: .743
	OCSISpeak SocioAffective	0.708	.501	
	OCSI Speak Fluency	.742 (11.551**)	.550	
F4	OCSI Speak Accuracy	.651 (10.082**)	.423	AVE: .424 CR: .687
	OCSI Speak Abandon Message	.643	.414	
	OCSI Speak Think English	.586 (8.245**)	.343	
F5	OCSI Less Active Listener	.718 (9.650**)	.516	AVE: 0.381 CR: .699
	Motivation Instrumental	0.601	.362	
	Motivation Peer Pressure	.402 (4.252**)	.362	
F6	Motivation Parental	.463 (6.800*)	.415	AVE: .825 CR: .904
	Motivation International	.796 (8.165**)	.634	
	Motivation Ideal L2	0.912	.832	
F7	Motivation Self-Efficacy	.904 (22.604**)	.818	CR: .904
F8	Academic Self-Concept	1.000	1.00	---
F9	FLCAS	1.000	1.00	---
	Successful Effort Attributions	0.657	.432	AVE: .408 CR: .674
	Successful Strategy Attributions	.636 (8.308**)	.404	
	Successful Interest Attribution	.623 (6.986**)	.388	
	Successful Teacher Attribution	.335	.112	
Successful Class Attribution	.250 (4.536**)	.062		
F10	Successful Marks Attribution	.571 (4.973**)	.326	AVE: .408 CR: .647
	Successful Enjoyment Attribution	.580 (5.478**)	.336	
	Successful Class Attribution	.450 (5.478**)	.203	
F11	Unsuccessful Effort Attribution	.943	.889	AVE: .581 CR: .719
	Unsuccessful Strategy Attribution	.522 (4.525**)	.272	

χ^2 Sat.(379)=760.29 (p-value< .05); RMSEA= 0.051; CFI= 0.879;
GFI= 0.875; AGFI= 0.836; CFI=0.879

CR: composite reliability; AVE: Average variance extracted
**: significant at 99%

With reference to the goodness of fit measurement model (Table 30), the evaluative absolute indexes present adequate values (RMSEA=0.051; GFI=.879) except for the Robust Chi Squared value (p-value<.05). Furthermore, the incremental fit index reaches correct value (AGFI=.836). Therefore, it can be stated that the fit measure of the proposal is considerably acceptable, if we cautiously consider the contrast associated to the authenticity ratio of Robust Chi-square, due to the sensitiveness of the sample over 400 data.

Regarding the validity of the scales, the significance of items for each of its dimensions allows to conclude the existence of the discriminant validity (Anderson and Gerbing, 1988). In order to verify the discriminant validity, linear correlation was compared among the latent factors and the root of the variance from each dimension. The results collected in Table 31 show that the correlations between each pair of dimensions (figures under the main diagonal) are inferior to the square root of the percentage of the variance extracted (figures in bold and italics in main diagonal). Thus, it can be concluded that the scales are provided with the adequate discriminant validity (Anderson and Gerbing, 1988).

Table 31.- CFA: Discriminant validity of the first order measurement model

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
F1	.607										
F2	.600	.677									
F3	.479	.527	.701								
F4	.414	-.303	-.319	.651							
F5	-.199	-.309	-.232	.041	.617						
F6	-.152	-.489	-.524	.329	.736	.908					
F7	.290	.405	.373	-.096	-.292	-.350	---				
F8	.016	-.304	-.541	.462	.156	.458	-.234	---			
F9	.518	.511	.258	.125	-.267	-.270	.404	-.061	.639		
F10	.346	.604	.629	-.271	-.307	-.490	.476	-.283	.541	.639	
F11	-.246	-.237	-.185	.075	.162	.073	-.207	.053	-.329	-.329	.762

4.4.8.3. Estimation of causal relations

As previously mentioned in the beginning of this chapter this study is aimed at analysing the influence of the different emotional affective variables over adults' second language learning. Thus, the main objective is to link and associate several affective variables in order to understand the multifaceted process involved in second language learning at an adult stage. One of the specific objectives is to hypothesize about the relation between affective emotional variables such as motivation, anxiety, self-concept and attribution, and language learning processing strategies.

Thus, once the dimensionality and validity of the scales have been analysed, the following step is to examine the influence that these affective emotional variables exert on the language learning processing strategies (SORS, SILL and OCSI). In order to examine the possible influence that motivation may have on attributions and the influence of the attribution dimensions over self-concept and anxiety. Furthermore, this analysis examines the influence of the previously mentioned affective variables over the language learning processing strategies that students use throughout their L2 process and development. These strategies have been measured with the SORS, SILL and OCSI instruments. Specifically, structural equations have been estimated in order to study these relations through the algorithm of Robust Maximum Likelihood, due to the lack of multivariate normal distribution of the variables in the model (p-value associated to Mardia statistic <0.01).

Figure 29 shows the causal relations estimation among the precedent dimensions. It also shows the influence these factors have on the language learning instruments and the t-Students statistics per each causal relation.

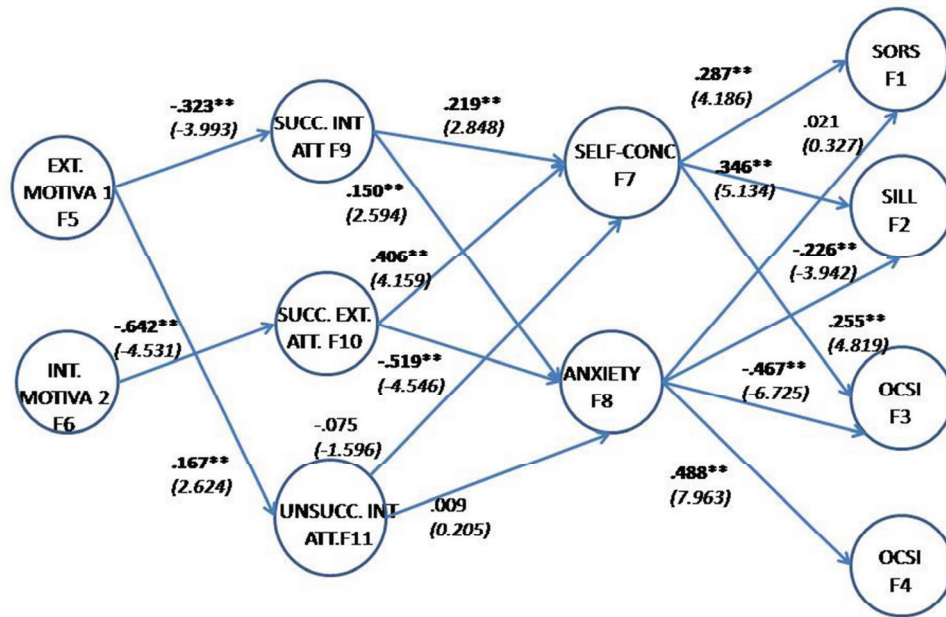


Figure 29 Estimation of the causal relations

The estimation of the relations collected in Figure 29 shows the interconnection among the variables measured. Firstly, Figure 29 shows the significant influence that both motivation dimensions have on attributions.

First of all, the **External Motivation** (F5) dimension, which consists of instrumental, peer-pressure, parental and international motivation, has a significant negative effect on Successful Internal Attributions (F9) ($\beta = -.323^{**}$, $t\text{-Stat} = -3.993$). This indicates that students, who have an external motivation, tend to attribute less their success to internal factors such as effort, strategy and interest. Furthermore, External Motivation dimension (F5) has a significant positive effect ($\beta = .167^{**}$, $t\text{-Stat} = 2.624$) on the Unsuccessful Internal Attribution dimension (F11). This indicates that students with high external motivation attribute their failure outcomes to internal factors such as effort and interest. The **Internal Motivation** dimension (F6), which corresponds to the Ideal L2-Self and Self-Efficacy variables, has a significant negative effect on the Successful External Attributions (F10) ($\beta = -.642^{**}$, $t\text{-Stat} = -4.531$). This indicates that students with high levels

of internal motivation attribute less their successful outcomes in the L2 to external factors, such as teacher, class atmosphere, marks, enjoyment, and class level.

Secondly, regarding the relation between the **Attribution** dimensions and **Self-Concept** the model indicates the following relations. The **Successful Internal Attribution** dimension (F9) ($\gamma=.219^{**}$, $t\text{-Stat}=2.848$), which corresponds to effort, strategy, and interest, and the **Successful External Attribution** dimension (F10) ($\gamma=.406^{**}$, $t\text{-Stat}=4.159$), which corresponds to teacher influence, class atmosphere, marks, enjoyment, and class level, exert a significant positive influence on the Academic Self-Concept (F7). This indicates that regarding the relation between Successful Internal Attributions with the Academic Self-Concept, the students who attribute their success to internal factors, are more aware of their academic progress and achievement. Furthermore, regarding the relation between Successful External Attributions with the Academic Self-Concept, students who attribute their success to external factors, also perceive positively their performance in the L2. Finally, the **Unsuccessful Internal Attributions** dimension (F11) ($\gamma=.150^{**}$, $t\text{-Stat}=2.594$) exert a significant negative effect on Academic Self-Concept. This suggests that students who attribute their failure outcomes to internal factors, such as effort and strategy, tend to perceive less their academic achievement in the L2.

Thirdly, regarding the relation between the **Attribution** dimensions and **Anxiety** the model suggests the following causal relations. The **Successful Internal Attribution** dimension (F9) ($\gamma=.150^{**}$, $t\text{-Stat}=2.594$) has a significant positive influence on Anxiety. This indicates that students who attribute their success to internal factors, experience more second language learning anxiety. Besides the **Successful External Attribution** dimension (F10) ($\gamma=0.-519^{**}$, $t\text{-Stat}=-4.546$) has a significant negative effect on Anxiety (F8), this indicates that students, who attribute success to external factors, tend to have less L2 anxiety. Finally, it should be pointed out that the attributions, the academic self-concept and the anxiety dimensions do not depend significantly on the Unsuccessful Internal Attributions (F11) (see Figure 29).

Finally, regarding the relation of the **Academic Self-Concept** (F7) and **Anxiety** (F8) with the language learning instruments (**SORS, SILL, and OCSI**) it should be pointed out the following results.

The **Academic Self-Concept** dimension has a significant positive effect on the **SORS** dimension (F1) ($\gamma=.287^{**}$, $t\text{-Stat}=4.186$), which corresponds to global and problem solving reading strategies. This indicates that students with a high perception of their academic outcomes in the L2 are more able to develop specific techniques orientated to monitor and resolve reading difficulties. There is also a significant positive effect between Academic-Self-Concept and **SILL** dimension (F2) ($\gamma=.346^{**}$, $t\text{-Stat}=5.134$), which corresponds to memory, cognitive, metacognitive, affective, and sociocultural strategies. This suggests that students with a high perception of their academic achievement also display more memory, cognitive, affective and sociocultural strategies when faced with L2 tasks. Besides there is a significant positive relation between Academic Self-Concept and **OCSI** dimension (F3), which consists of socio-affective, fluency oriented and speaking accuracy strategies ($\gamma=.255^{**}$, $t\text{-Stat}=4.819$). Thus, students with a high perception of their academic results are able to interact with others and maintain fluent conversations.

The **Anxiety** dimension (F8) has a significant positive effect on **SORS** (F1) dimension ($\gamma=.021$, $t\text{-Stat}=0.327$), which corresponds to monitoring and problem solving at reading tasks strategies. This indicates that students with high levels of L2 anxiety develop more strategies concerned with monitoring and solving problems while reading a text in the L2. Besides, the Anxiety dimension has a significant positive effect on **OCSI** (F4) ($\gamma=.488^{**}$, $t\text{-Stat}=7.963$), which corresponds to strategies related to abandoning the message in conversations, thinking in English, and becoming less active listener. This indicates that students with high levels of anxiety tend to interrupt communication due to their lack of ability to maintain the conversation. In contrast, the Anxiety dimension (F8) shows a significant negative effect on **SILL** (F2) dimension ($\gamma=-0.226^{**}$, $t\text{-Stat}=-3.942$), which corresponds to memory, cognitive, metacognitive, affective, and sociocultural strategies, and on **OCSI** (F3) dimension ($\gamma=-0.467^{**}$, $t\text{-Stat}=-6.725$), which consists of socio-affective, fluency oriented and speaking accuracy strategies. This indicates that students with high levels of anxiety are less able to use memory, cognitive processes or socio-affective strategies and they also lack abilities to maintain the fluency in communication.

The evaluation of the estimated causal model has been carried out with the same indexes used in the analysis of the measurement models fit ($\chi^2\text{Sat.}(420)=1297.7804$ ($p\text{-valor}< .05$); $\text{RMSEA}= .073$; $\text{CFI}= .979$; $\text{GFI}= .787$; $\text{AGFI}= .749$; $\text{CFI}= .979$). The absolute evaluative statistic present acceptable values ($\text{RMSEA}=.073$) except for the

contrast associated with the Robust Chi-square statistics ($p\text{-value} < .05$). Similarly, the incremental fit index is close to the recommended limit. One can conclude that the goodness of fit collected in our proposal is acceptable, taking into account that it should be cautiously considered the contrast associated with the Robust Chi-square test, due to its sensitivity towards sample size determinations over 400 data.

The structural equation model reported in this section investigates the relations between affective motivational variables and the language learning processing instruments. This model indicates that there is a clear influence of students' affective feelings and the way they process and learn the L2. As can be observed the affective motivational variables that have been included in this study are Motivation, Attribution for Successful and Unsuccessful outcomes, Self-Concept, and Anxiety are precedent factors that determine students' language learning strategies and outcomes. Furthermore, the model has aimed to integrate several affective variables with different language learning processing instruments, in an attempt to understand the multifaceted process that entails learning an L2 at an adult stage.

CHAPTER FIVE

CONCLUSIONS

- 5.1. Introduction
- 5.2. Discussion
- 5.3. Limitations of the Study
- 5.4. Final Remarks
- 5.5. Further Research

5. CONCLUSIONS

You see things, and you say, why? But I dream things and I say, Why not? (G.B.Shaw)

5.1. Introduction

Following the initial structure presented in this thesis, the conclusions based on the results provided in chapter four, are presented in this chapter, and supported by the theoretical framework explained in chapters one and two, all of which tries to respond to the objectives set in this thesis.

As already stated second language learning/development is a multifaceted phenomenon that implies neurological, linguistic, emotional, and physiological factors that take place during language learning and which clearly intervene in the language learning process. In the last decades, there has been a change of direction in the way second language learning has been investigated. Thus, currently there is a need to consider the emotional variables involved in SLA, which are fundamental to understand the process of learning the L2. Stevick (1980) already argued that learners have internal and external factors that determine their second language learning process. In this study, the focus has been placed on the internal factors that affect learners during second language learning at an adult stage. It is a fact that learning a second language at a certain age is one of the most challenging activities that adults can face, as it is laborious and extremely difficult, due to the already established linguistic patterns in the L1 that students have when they start studying the L2.

We should remember that the main objective of the present study is to investigate the role of emotional affective variables within second language learning. More specific objectives of this study are:

- 1-To analyse students' language learning skills such as, overall language learning strategies, oral communication strategies and reading comprehension strategies when learning an L2 according to the different English levels (A1-B2).
- 2.-To study the differences among affective variables according to the different levels (A1-B2).

- 3.-To analyse the influence of the different affective variables on the language learning strategies.

5.2. Discussion

In the following section, the main results of this study are presented. Firstly, the relation between the language learning instruments and the levels of English (A1-B2) will be illustrated. Secondly, the main conclusions regarding the relation between the affective variables and the levels of English (A1-B2) will be explained. Thirdly, the main conclusions on the influence of affective motivational factors and language learning strategies will be described. Finally, the limitations of this study and future lines of investigation will be commented.

5.2.1. Research question one: To analyse students' language skills such as, overall language learning strategies, oral communication strategies and reading comprehension strategies when learning an L2 in each of the levels (A1-B2).

The first objective of the present work is to examine the relation between the language learning processing instruments and the levels of English (A1-B2) in a classroom context.

First of all, regarding the *Strategy Inventory Language Learning* instrument (SILL), the results have shown that students at higher levels use more language learning strategies than at lower levels. Specifically, students at A1 level have fewer cognitive, compensation, and social strategies, which hampers their communication ability and their cognitive processing skills. In support to this finding, a study carried out by Ansarin, Zohrabi, and Zeynali (2012) concludes that advanced learners use more strategies than lower levels. Furthermore, Wong and Nunan (2011) stated that there were key differences in language learning strategies found between effective and ineffective language learners.

Regarding the analysis of all the levels and the SILL instrument, the present study also shows that, in general, the preferred language learning strategies used by students of the four levels (A1-B2) were the cognitive and social strategies. Besides, A1 and A2 level use more memory strategies than students at higher levels. This could be due to the fact that at lower levels, students have fewer resources to learn the L2 and they tend to memorise the information given instead of reflecting on the language use.

Furthermore, the results reveal that students at B2 level show more social strategies than the rest of the levels. Wharton (2000) used Oxford's Strategy Inventory for Language Learning (SILL) in order to examine the self-reported language learning strategy use of 678 university students, who were learning Japanese and French as a foreign language in Singapore. Results showed that higher proficient students used more learning strategies, such as motivation, language studied, and self-rated proficiency than lower levels. In contrast, other studies (Alhaisoni, 2012; Adu-Radwan, 2011) have concluded that students preferred to use cognitive and metacognitive strategies, instead of affective and memory strategies.

Secondly, regarding the *Oral Communication Strategy Inventory* (OCSI) instrument the main differences are found between A1 and B2 levels. One should remember that the OCSI instrument measures the use of all kinds of strategies during communication tasks, either speaking or listening. As a general conclusion, we can state that students at lower levels show fewer abilities to face problems related to speaking and listening activities, as they lack fluency to maintain conversation, social strategies and global understanding abilities. Besides, students at these lower levels tend to abandon communication more frequently and attempt translation more often than at higher levels. In contrast, students at higher levels (B2) have more strategies to maintain the conversation, interact with their peers and continue fluent communication. Regarding *the strategies for coping with speaking problems*, students at lower levels, such as A1 and A2 levels, have fewer socio-affective, fluency communication and meaning negotiation strategies. This indicates that at beginner levels students lack confidence to interact and negotiate meaning appropriately. Besides, students also tend to leave the message unfinished and use more translation from L1 to L2 than higher levels. It is obvious that students at lower levels have not yet developed the correct strategies to communicate smoothly and tend to abandon the message due to lack of specific strategies that could help them maintain communication properly. In contrast, students at B2 level are more prone to negotiate meaning during interaction, use more strategies orientated to maintain fluency such as rhythm and intonation, and are more aware of the context in which communication occurs. Similar findings have been reported by previous studies (Chen, 2002; Weng, 2008).

With regard to *strategies for coping with listening problems*, the results of the present study show that in general students at B2 level have more socio-affective,

fluency and word-orientated strategies to understand the message in a conversation. In contrast students at lower levels (A1) tend to fail the global understanding of the message, because they are not skilled enough to pay attention to the information provided and they are also less aware of the context of conversation. This means that students at higher levels use more metacognitive and cognitive strategies to overcome listening difficulties in the L2 (Vandergrift, 2003).

Finally, regarding the *Survey of Reading Strategies* (SORS) instrument, the main differences are found between A1, A2, and B2 levels. We should remember that SORS is an instrument that measures the reading strategies that the learners use when reading a text in English.

As a general conclusion, it can be stated that students at the lowest level (A1) show more problem solving and support strategies whilst reading a text in the L2. This means that despite their lack of knowledge in the L2, students at A1 level attempt to overcome difficulties of the L2 text, by using certain strategies orientated to diminish their difficulties. Poole (2005) and Boonkongaen (2014) found similar results in their work. The reason why students at lower levels have developed these strategies may be found in that the process of reading is quite similar in the L1 and the L2. According to Swan (2008) the reading strategies are transferable. Thus, students are probably able to transfer L1 strategies to L2 without being trained. This indicates that students' already background knowledge is sufficient to overcome reading difficulties. In contrast, B2 level students have more global strategies to manage and monitor their reading than lower levels. As previous work has already confirmed (Mokhtari & Sheorey, 2008; Kummin & Ramman, 2010) proficient learners often use a wide variety of reading strategies to overcome difficulties, in contrast to less proficient learners.

Thus, it is important that students develop reading skills in order to understand the global and specific meanings of a text, as Poole (2010) states learners should use reading strategies to plan how to read and to enhance their reading comprehension.

5.2.2. Research question two: To study the differences among affective variables and the levels of English (A1-B2)

The second objective of this study is to establish the differences between affective variables and the levels of English (A1-B2).

Firstly, with regard to the *Motivation instrument* the results indicate that the main factors that affect students' motivation at A1 level are the Ideal L2-Self, the Self-efficacy, the Intrinsic, the Technological, the Instrumental, the Self-Regulation and the International motivation. This means that students at lower levels give importance to several internal factors such as their view of becoming successful L2 learners, their ability to look for opportunities in order to use the L2, and the international interest in the L2. This finding has also been supported by Kormos and Csizer (2008) and it also supports Dörnyei's (2005) L2 Motivational System Theory, which emphasises that students' vision of themselves as future proficient users of L2 is a powerful motivator that enables learners to make an effort in order to acquire the L2. In addition, self-regulation and self-efficacy contribute to students' improvement of the L2. As Bown (2009) concluded in his work, effective self-regulation is a strong characteristic to modulate and shape students' emotions and motivation, thus creating an affective environment appropriate for their language learning. Besides, other external factors such as technologically based resources or instrumental motivation help learners to approach the foreign language. These two factors are intrinsically related to adults learners, who seek to learn a language not only for personal purposes, but also for instrumental objectives, such as finding a better job or using the L2 in several contexts, for example digital media. Furthermore, the results of our study show that anxiety motivation does not diminish A1 level students' motivation, as their willingness to learn the language is stronger than their own fears. This has also been confirmed by Ghanizadeh's and Rostami's (2015) research, which showed that students' volition to learn the language is the key factor in learning the L2. Thus, it can be concluded that students at A1 level are in general more motivated than the rest of the levels, mainly due to their lack of negative experiences with the L2, their few frustrating experiences, or their high motivational drive. These students engage in an English course with the desire to communicate in the L2 and with the attempt to communicate in the same way as in their own native language.

Secondly, the *Foreign Language Class Anxiety Scale instrument* shows students' fear and apprehension to communicate in the L2. This instrument has measured students' foreign language anxiety among the four levels of English (A1-B2). The results of the present study reveal that A1 level students show more language learning anxiety than the rest of the levels (A2, B1, and B2). This means that students at lower levels experience more foreign language anxiety than the rest of the levels. In support to this finding, other researchers have found similar results, such as Sparks and Ganschow (2007), who found that students with the lowest levels of foreign language (Spanish, French or German) anxiety in the classroom exhibited the highest grades. Besides, Liu (2006) found evidence in his work with Chinese learners of English that the higher their language level, the less anxious they were in oral English. MacIntyre and Gardner (1991b) suggested that anxiety declines consistently as learners' experience and proficiency increases. Furthermore, students at lower levels with high degrees of anxiety see their language production diminished as they do not feel confident enough to interact in the L2. Thus, Na (2007) states that anxiety can make learners get discouraged, lose faith in their abilities, and avoid participating in class. Cui (2011) concludes that learners with high levels of anxiety often perform with lower levels of proficiency than those with less anxiety.

However, other studies support that students at higher levels feel more anxiety than at lower levels because proficient students tend to have more frustrating experiences with the L2. Thus, Kitano (2001) explains that high levels of anxiety in higher proficient learners may be due to the increase of complexity of instruction. Besides, Onwuegbuzie, Bailey, and Daley (1999) found a positive relationship between university academic achievement and language anxiety in learners of French, Spanish, German and Japanese. In contrast, Marcos-Llinás and Juan-Garau (2007) have found that students with high levels of anxiety do not exhibit lower course achievement in comparison to students with low levels of language anxiety. Furthermore, Zhang and Zhong (2012) state that other elements such as classroom-related anxiety, peer-relation, foreign language enjoyment and classroom practices may influence students' anxiety. Besides, several studies (Dewaele & MacIntyre, 2014; Dewaele, MacIntyre, Boudreau, & Dewaele, 2016) have focused on students' foreign language enjoyment in the class, which could cooperate with anxiety within the class, in an attempt to both encourage playful learning, and boost attention while learning.

Thirdly, the *Self-concept Instrument* has measured students' academic and emotional self-perceptions with the L2. The present study has examined adult second language learners' academic and emotional self-perceptions towards the L2.

Regarding the relation between Academic Self-Concept and the levels of English (A1-B2) the present study has concluded that B2 level students perceive more Academic Self-Concept than the rest of the levels. This may be due to the fact that at B2 level, students have a proficient command of the L2. Thus, they feel confident enough to participate in interactions with other peers or native people. As Seaton, Marsh and Craven (2010) state academic self-concepts are related to a social comparison among classmates. Thus, several studies have confirmed that academic self-concept positively predicts the students' achievement (e.g., Guay, Marsh, & Boivin, 2003; Marsh & O'Mara, 2008; Pinxten, et al., 2014). Hence, academic self-concept and achievement are mutually developing. This means that students with high academic self-concept are more likely to develop higher achievement over time. Huang (2011) in his meta-analysis of 39 longitudinal studies found that academic self-concept correlated significantly with achievement.

With regard to the relation between Emotional Self-Concept and the levels of English (A1-B2), the current study shows that students at A1 level have more emotional self-concept than the rest of the levels. One should remember that the emotional self-concept analyses the perception that a person has of his/her emotional state and his/her responses to specific situations. This indicates that students at the lowest levels are more aware of their emotional states whilst learning the L2. A study carried out by Idjhanine (2011) with two group school students of 19 and 20 years old found a positive correlation between emotional and both English language learning groups.

However, despite foreign language learners' desire to express in the L2, they will nevertheless avoid the use of L2 due to lack of confidence (Yoshida, 2009). This desire is known as students' Willingness to Communicate (WTC) (MacIntyre, Baker, Clément, & Conrod, 2001).

Finally, as for the *Attribution for Successful and Unsuccessful Outcomes* dimension is concerned, the results of the present study indicate that A1 level students attribute successful outcomes to the teacher and the task difficulty. This suggests that students at this early stage of learning rely more on external factors for their successful outcomes than on internal factors. It should be pointed out that, students at A1 level

may feel discouraged by the difficulty of tasks presented in the classroom. Thus, task difficulty is a disadvantage at the earlier stages of learning. Erler and Macaro (2011) found in their work that task difficulty, which is an uncontrollable/stable attribution factor, correlated negatively with the intention to continue learning French as a Foreign Language. In addition, the results of our study also indicate that students at A1 level attribute failure outcomes to internal factors such as ability or enjoyment in the class. This indicates that students at lower levels have less confidence in themselves and attribute possible failure outcomes to their own ability with the L2. A study conducted by Thang, Gobel, Nor, and Suppiah (2011) concluded that students tended to attribute successful outcomes to external factors, such as “getting a good grade” or “teacher influence”; the study also revealed that failure was mainly attributed to internal factors, such as preparation and ability. Other studies have obtained similar results such as Gobel et.al., (2011) and Mori, Gobel, Thepsiri, and Pojanapunya (2010), who concluded that both Japanese and Thai students attributed success to external factors and failure to internal factors, these results were argued to be related to some cultural background in Asian contexts, which are characterised by high respect for the teachers and a self-critical tendency. The context in which our study has been carried out is in Spanish adult language learning classrooms, obviously the personal values of students is different to Asian context; however, adults also exhibit a high respect either for their peers and their teachers, especially at beginner levels.

The results of our study also show that B2 level students have reported successful outcomes to ability and enjoyment. This indicates that students at higher levels feel more confident about attributing their successful outcomes to internal factors such as their own ability in the language. Research in this area has confirmed that students, who did well in achievement measures, believed that their achievement sourced mostly from uncontrollable/stable attribution factors such as ability (Hsieh and Schallert, 2008). Furthermore, Mercer (2011) discussed that there is a relationship between feeling competent and a positive response to the L2. Mercer found that foreign language learners perceived that experiences of success and failure influenced their self-concepts. In addition, Navarro and Thornton (2011) and Yang and Kim (2011) found that Foreign Language learners’ perceptions of successful learning actions influenced the development of their beliefs about Foreign Language learning. These findings suggest that learners’ perceived success can influence both their self-concepts and beliefs about L2 learning. Navarro and Thornton (2011) and Mercer (2011b) found that

the learners' positive self-concepts and beliefs about foreign language learning (the importance of practise, confidence and participation) seemed to strengthen through their perceived successful learning actions and speaking up without feeling embarrassed when making mistakes.

5.2.3. Research question three: To analyse the relationship between the different affective variables and the language learning skills.

The third objective of this study is to analyse the influence of affective motivational variables on the language learning strategies that students use during language learning. Due to the multifaceted process of learning an L2, it is important to investigate the effect that several affective motivational variables may exert on language learning strategies. The results collected in chapter four explain that in general the affective motivational variables have a clear impact on language learning strategies.

Firstly, regarding *Motivation*, the structural equation model shows that some sub-dimensions related to external motivation such as instrumental, peer-pressure, parental and international motivation have a significant negative effect on Successful Internal Attributions, which are related to effort, strategy and interest and on the contrary. Besides, this external motivation dimension has a significant positive effect on Unsuccessful Internal Attributions, which are related to effort and interest. Thus, it can be concluded that students, who are motivated by external factors such as seeking for a job, classmates, or international reasons, attribute their successful outcomes less to internal factors, and attribute more their failure outcomes to internal factors such as effort or interest. Furthermore, our work also concludes that students with an internal motivation related to seeing themselves as successful speakers in the L2 and being confident about their own abilities when performing the second language, attribute less their success to external factors such as the teacher influence, the class atmosphere and level, the marks, or the enjoyment in the class. This indicates that the role of the teacher, the marks obtained, or even the enjoyment in the class is not really important if the student has a strong internal motivation towards the L2. Similar findings have been supported by Kormos and Csizer (2008).

Secondly, the results of our study show that the *Attribution Dimensions* have an impact on Self-concept and second language learning Anxiety. Thus, Successful Internal Attributions have a significant positive effect on Academic Self-Concept and

Second language learning anxiety. Thus, students who attribute success to internal factors such as effort, strategy, and interest, perceive positively their academic achievement in the L2. However, these students tend to experience more second language learning anxiety. Mercer (2011) found that, foreign language learners' perceived experiences of success and failure influenced their self-concepts. Besides, Lim (2007) concluded that when learners feel they had more control over the success of foreign language learning, due to their effort or ability, they are more likely to have high levels of foreign language use anxiety. In contrast, our study reflects that Successful External Attributions have a significant negative effect on second language anxiety and a significant positive effect on Academic Self-Concept. This suggests, that students who attribute successful outcomes to external factors, tend to experience less second language learning anxiety and are aware of their academic achievement in the L2. Finally, the Unsuccessful Internal Attribution dimensions have a significant negative effect on Academic Self-Concept and a significant positive effect on second language learning Anxiety. This suggests that students, who attribute their failure outcomes to internal factors, tend to be less aware of their academic achievement and experience more second language anxiety.

Thirdly, the structural equation model shows on the one hand the effect of Academic Self-Concept on the Language learning Instrument, and on the other hand the effect of second language learning Anxiety on the language learning Instruments.

The *Academic Self-Concept* dimension has a significant positive effect on the Survey of Reading Instrument (SORS), which is related to global and problem solving reading strategies. This indicates that students with a high perception of their academic achievement are also able to use reading strategies orientated to monitor and solve problems whilst reading a text in the L2. A similar finding was revealed in a study carried out by Retelsdorf, Köller, and Möller (2014) with secondary school children. The authors concluded that self-concept predicts achievement in the early years of secondary school, concluding that the reading habit should be implemented in the first years of secondary school. Furthermore, Richardson (2003) concluded in his work that when learners work together, they develop certain attitudes such as self-concept, which can help them improve their reading skills. Furthermore, the Academic Self-Concept also has a significant positive effect on the Strategy Inventory for Language Learning instrument (SILL). This suggests that students with a high perception of their academic

achievement display a set of strategies such as memory, cognitive, affective, and sociocultural that help the learner to improve their language learning process. Several studies have already confirmed the benefits of having a positive image of ourselves in order to be proficient in the L2 (Guay, Marsh, & Boivin, 2003; Liu (2010); Marsh & O'Mara, 2008; Pinxten, et al, 2014; Wouters, Germeijs, Colpin, & Verschueren, 2011). Besides, Xu Jin and Zhao (2006) conducted a survey among 598 medical sophomores of a medical university by using the self-concept questionnaire and strategy inventory of language learning. The results showed that self-concept had significant correlation with language learning strategies. The results of our work also reveals that the Academic Self-Concept dimension has a significant positive effect on the Oral Communication Strategy Inventory (OCSI), namely speaking socioaffective, speaking fluency, and speaking accuracy strategies. This indicates that students with a high perception of their academic achievement tend to focus on strategies related to improve their fluency and accuracy with other peers in the L2. Pellegrino (2005) suggests that when learners feel that are in a familiar setting with their interlocutors, their social and psychological security in speaking a SL increases.

The *Foreign Language Learning Anxiety* dimension has a significant negative effect on the Strategy Inventory for Language learning and the Oral Communication Strategy (OCSI) inventory (fluency, socioaffective, accuracy) instrument. This suggests that students who experience second language learning anxiety feel less confident to speak fluently and accurately with their peers. Mercer (2011) reports in her studies, that students' apprehension to speak in the L2 is correlated with their lack of confidence in the language. Furthermore, our findings suggests that L2 Anxiety dimension has a positive effect on some Oral Communication Strategies related with less active listening, message abandon, and think in the L2. In summary, these two findings suggest that students who experience high levels of L2 anxiety are less able to communicate smoothly with other students or native people, and they tend to leave the message unfinished, paying less attention to the speaker's message; and even students resort to L1 translation in order to understand the message. Students with high levels of foreign language anxiety exhibit avoidance behaviour (Gregersen & Horwitz, 2002). Besides, our work shows that the L2 Anxiety dimension has a significant negative effect on the Strategy Inventory for Language Learning (SILL), which indicates that students under L2 anxiety have fewer resources to improve in the L2. Thus, they lack memory,

cognitive, metacognitive, affective, and sociocultural strategies. Finally, it should be pointed out that students' lack of social-affective strategies under FL anxiety, make it difficult to socialise with other people in the L2. However, students should be aware of the importance of interacting with others in order to improve their L2. Tang (2005) indicates that contact with the people and culture of the target language could reduce anxiety. In addition, social context is very important for language learning improvement, as Hashemi and Abbasi (2013) state that the more friendly and informal the language classroom environment is, the less likely it is to be anxiety provoking.

5.3. Limitations of the study and future lines of investigation

This study has some limitations that warrant consideration.

First of all, some researchers, who defend DST, have used idiodynamic approaches (Gregersen, MacIntyre, and Meza, 2014) in order to collect specific information about the learner's process at a specific time, considering several variables such as linguistic, emotional and physiological variables. However, due to the large sample gathered in this study, it is impossible to conduct more specific, situational, and physiological tests. The number of students initially collected were four hundred in total, one hundred for each level, A1, A2, B1, and B2. However, some questionnaires remained unanswered, which reduced the total amount of students per level. Thus the sample for A1 level is 111, for A2 is 113, B1 98, and finally, B2 is 85.

Secondly, this study was not able to include personal interviews. The present study was conducted for students to respond anonymously. Consequently, we were not able to conduct personal interviews to delve into students' questionnaire responses; however, we thought it was more important for students to remain anonymous and answer freely. Interviews would have given more specific answers and reasons to why a student feels a specific way when learning the L2, however in this case we opted for more statistical and analytical results. Thus, as explained in chapter three, students were given a pack of questionnaires that completed at home and then, gave back to their teachers, so that they had time to complete all the questionnaires; however we could not analyse all the questionnaires, as some students did not respond to all the questions in each of the questionnaire, thus invalidating the questionnaire itself.

Finally, another limitation has been the transversal characteristic of the study. Thus, a longitudinal analysis of the four levels of English would have provided further detailed information of the evolution of students' emotional affective variables from A1 level until B2 level.

5.4. Final Remarks

As can be drawn from previous conclusions, learning a second language at an adult stage entails many different variables that should be examined at the same time. Thus, foreign language learning occurs in the interaction of several factors that firmly influence the learning process, such as motivation, anxiety, learning achievements, self-concepts, attributions etc (Gardner, 1960; Lehmann, 2006). Besides these affective motivational variables influence the way students learn the language, in such an extent that these variables determine the cognitive, memory, metacognitive, and even social strategies that students use in their daily language learning process. Thus, students' affective factors ultimately result in what is called the learners' attitude towards the language learning process, which as Fayeke (2010) mentions it is one of the most important factors that impact on learning a language.

Therefore, it is very important that affective motivational variables be in the centre of SLA research, because it is the only way we might understand what really happens inside the learner's second language cognitive process. As Dewaele (2015) points out the emotional component is too often ignored within the classroom setting. This results in a null control of the emotional atmosphere in the classroom, leading to general boring classes. In contrast, curriculum designers and teachers should eventually focus their attention on fostering emotional situations as part of their teaching methods.

5.5. Future lines of work

The aim of the present study was to gain a broad picture of how affective motivational variables influence adults' L2 learning. This goal has been achieved to a degree. Thus, several relationships have been established, first between affective motivational variables and the levels of English, second between language learning strategies and the levels of English, and finally between affective motivational variables and language learning strategies.

Future research in the area of SLA should be focused on combining several affective motivational variables with the physiological responses of students at a specific moment of time. This information could give more in depth results of what mechanisms adult learners use in order to perform in the L2.

A further investigation can be addressed to analyse in a longitudinal work the affective variables of students from beginner levels to upper-intermediate levels. This could be done giving the same students the questionnaires when they are at the beginner level, then at the intermediate level and finally at upper-intermediate level. Thus, it can be analysed a more in-depth observation of students' emotional responses to the learning process.

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Appendix 1

4.4.6.1. Correlation analysis between Motivation and SILL levels A1 and A2

	A1 (n=110)					A2 (n=113)						
	Mnemotec	Cognitiva	Compensat	Metacogn	Afectiva	Sociocult	Mnemotec	Cognitiva	Compensat	Metacogni	Afectiva	Sociocult
Ideal L2-Self	-210*	-299**	-102	-362**	-245*	-241*	-241*	-357*	-119	-369**	-417**	-457**
Intrinsic	-268**	-432**	-207*	-518**	-302**	-440**	-092	-100	.003	.242*	-.161	-.290**
Instrumental	.005	-.069	-.049	-.148	-.040	-.057	-.017	-.028	-.039	-.083	-.075	-.218*
Self-efficacy	-.297**	-.409**	-.176	-.489**	-.344**	-.358**	-.316**	-.412**	-.104	-.455**	-.455**	-.471**
Peer-pressure	-.011	-.063	-.214*	-.124	-.035	-.230*	-.118	-.189*	-.150	-.185	-.086	-.168
Parental	-.174	-.190*	-.226*	-.265**	-.245*	-.136	-.170	-.175	-.213*	-.121	-.269**	-.227**
Anxiety	-.075	-.141	.013	.038	.230*	.314**	.126	.189*	.138	.042	.105	-.280**
Technological	-.156	-.316**	.008	-.407**	.179	-.230*	-.388**	-.461**	-.058	-.428**	-.378**	-.314**
Resource	-.261**	-.393**	-.227*	-.483**	-.360**	-.414**	-.328**	-.360**	-.059	-.323**	-.214**	-.452**
Satiation	-.234*	-.198*	-.162	-.241**	-.251**	-.160	-.282**	-.202*	-.118	-.189*	-.230*	.015
Self-Regulation	-.378**	-.564**	-.094	-.668**	-.364**	-.298**	-.608**	-.587**	-.029	-.686**	-.453**	-.444**
Intensity	-.300**	-.221*	-.233*	-.312**	-.207*	-.333**	-.294**	-.078	-.011	-.101	-.254**	-.094
International	-.209*	-.338*	-.190*	-.323**	-.252**	-.257**	-.145	-.245**	-.129	-.330	-.274**	-.379**

**p<.001

Correlation Analysis between Motivation and SILL (levels B1 and B2)

	B1 (n=98)					B2 (n=85)					
	Mnemotec	Cognitiva	Compensat	Metacogn	Sociocult	Mnemotec	Cognitiva	Compensat	Metacogni	Afectiva	Sociocult
Ideal L2-Self	.099	-.304*	.255*	-.217	-.038	.008	-.232*	-.030	-.039	-.166	-.210
Intrinsic	-.188	-.224*	.182	-.321**	-.105	.012	-.087	.034	-.118	-.204	-.051
Instrumental	-.048	-.032	.162	-.091	.047	-.072	-.062	.015	.036	-.031	-.188
Self-efficacy	-.139	-.276**	.147	-.331**	-.129	-.108	-.279*	-.085	-.132	-.202	-.216*
Peer-pressure	.030	.027	.144	-.100	.045	.073	.004	.013	.013	-.045	.065
Parental	-.171	-.091	-.068	-.154	-.101	-.114	-.110	.003	-.129	-.331*	-.056
Anxiety	.004	.110	-.062	.091	.016	.090	.212	-.064	-.081	-.080	.341**
Technological	-.183	-.225*	.177	-.310**	-.078	-.160	-.314**	-.047	-.228*	-.408**	-.147
Resource	-.244**	-.319**	.153	-.338**	-.154	-.144	-.290**	-.043	-.266*	-.210	-.238*
Satiation	-.045	-.048	-.258*	.012	-.253*	-.265*	-.139	.015	-.322*	-.217*	-.136
Self-Regulation	-.357**	-.459**	.221*	-.628**	-.288**	-.273	-.389**	-.006	-.431**	-.360**	-.232*
Intensity	.003	-.041	.071	-.132	-.033	-.075	-.318**	-.071	-.257*	-.123	-.260*
International	-.148	.020	.222*	-.098	.023	.202	-.046	-.140	-.087	-.098	-.096

Appendix 2

4.4.6.2. Correlation Analysis between Motivation and OCSI Level A1 (n=111)

	SPEAKING OCSI										LISTENING OCSI				
	Socio-affective	Fluency oriented	M.negot	Accura	Message Reductio	Non verbal	Aband. Messag	Think Englis	M.negot	Fluenc	Scan.	Globa Under	Non-Verbal	Less listener	Word-oriented
Ideal L2	-.355*	-.215*	-.258**	-.322**	-.167	-.220*	.072	-.211*	-.347*	-.468**	-.361**	-.197*	-.257**	-.164	-.294**
Intrinsic	-.267*	-.173	-.209*	-.234*	-.169	-.253**	.030	-.062	-.308**	-.336**	-.179	-.232*	-.241*	-.020	-.387**
Instrum	-.064	.004	-.014	.092	-.137	-.039	-.099	-.216*	-.142	-.171	.030	.030	-.157	-.141	-.195*
Self-eff	-.485**	-.341**	-.363*	-.408**	-.125	-.351**	-.061	-.158	-.398**	-.515**	-.377**	-.292**	-.423**	-.121	-.343*
Peer-pressure	.081	.072	-.004	.002	-.103	-.188*	-.042	.005	-.065	.040	.065	.028	-.058	-.225*	-.194*
Parental	-.090	-.034	-.035	-.042	-.225*	-.294**	.050	.028	-.134	-.092	.001	-.070	-.249**	-.003	-.171
Anxiety	.440**	.236**	.261**	.222*	.035	.166	-.359**	-.109	-.163	.232*	.281**	.209*	.213*	.082	.232*
Technol	-.188	-.088	-.124	-.139	-.097	.000	.148	.151	-.030	-.363**	-.154	-.236*	-.152	-.002	-.178
Resourc	-.355*	-.284**	-.396**	-.340**	-.204*	-.318**	-.011	-.081	-.501**	-.462**	-.368**	-.151	-.370**	-.090	-.334*
Satiatio	-.123	-.205*	-.037	-.041	-.031	-.079	.024	-.039	-.119	-.136	-.009	-.005	-.098	-.001	.017
Self-reg	-.219*	-.175	-.135	-.246**	-.051	-.029	.260**	.170	-.180	-.335**	-.210*	-.152	-.218*	.113	-.334**
Intensit	-.166	-.028	-.108	-.124	.052	-.017	.050	-.107	-.161	-.156	-.035	-.040	-.110	-.027	-.238*
Internati	-.180	-.124	-.291**	-.220*	-.256**	-.263**	-.119	-.305**	-.424**	-.197*	-.265**	-.175	-.189*	-.171	-.316**

**p<.001

*p<.05

Correlation Analysis between Motivation and OCSI Level A2 (n=113)

	SPEAKING OCSI					LISTENING OCSI									
	Socio-affective	Fluency oriented	M.negot	Accura	Message Reductio	Non verbal	Aband. Messag	Think Englis	M.negot	Fluenc	Scan.	Globa Under	Non-Verbal	Less listener	Word-oriented
Ideal L2	-.393**	-.336**	-.350**	-.267**	.046	-.087	.087	.234	-.165	-.312**	-.081	-.120	-.123	.202	.061
Intrinsic	-.044	-.145	-.199*	-.199*	-.005	-.025	-.018	.045	-.054	-.125	-.040	.030	-.074	.008	-.136
Instrum	-.110	-.168	-.032	-.133	-.010	-.027	.083	-.006	.025	-.060	.047	-.171	.045	.049	-.143
Self-eff	-.363**	-.290**	-.287**	-.280**	.011	-.064	.085	.243**	-.192*	-.323**	-.111	-.129	-.152	.293**	-.064
Peer-pressure	-.070	-.081	-.146	-.101	-.225*	.019	.058	-.027	-.169	-.091	-.143	-.124	-.032	.080	-.184
Parental	-.120	-.184	-.111	-.179	.068	-.043	.015	.001	-.041	-.093	-.079	-.098	-.109	.020	-.041
Anxiety	-.385**	-.124	-.247**	-.013	-.026	.099	-.233*	-.281**	.173	.180	.027	.071	-.001	-.314	-.069
Technol	-.154	-.213	-.111	-.306*	.116	.023	-.037	-.079	-.013	-.159	-.125	-.183	.069	.057	-.018
Resourc	-.125	-.223*	-.270**	-.356**	.122	-.115	-.138	-.038	-.096	-.108	-.154	.110	-.179	-.129	-.168
Satiatio	-.131	-.174	-.113	-.163	-.071	-.156	-.078	-.013	.119	-.070	-.183	-.215*	-.053	.067	-.091
Self-reg	-.186*	-.346**	-.262**	-.384**	-.116	-.054	-.064	-.030	-.144	-.322**	-.255**	-.134	-.028	.149	-.128
Intensit	-.082	-.165	-.189*	-.218*	-.033	.018	-.065	.013	.061	-.115	.174	.240*	-.010	-.031	-.068
Internati	-.152	-.281**	-.328**	-.225**	-.143	-.057	.085	.090	-.174	-.162	-.181	-.137	-.115	.137	-.209*

**p<.001

*p<.05

Correlation Analysis between Motivation and OCSI Level B1 (n=98)

	SPEAKING OCSI						LISTENING OCSI								
	Socio-affective	Fluency oriented	M.negot	Accura	Message Reductio	Non verbal	Aband. Messag	Think Englis	M.negot	Flutenc	Scan.	Globa Under	Non-Verbal	Less listener	Word-oriented
Ideal L2	-.307**	-.329**	-.243**	-.311**	.087	-.014	.263**	.048	-.155	.037	-.025	.176	.222*	-.225*	.008
Intrinsic	-.209*	-.294**	-.353**	-.405**	.033	-.044	.059	-.176	.024	.032	-.127	.126	.160	.065	-.296**
Instrum	-.201*	-.149	-.152	-.216*	-.079	-.102	.018	-.162	-.099	-.055	-.222*	.073	.097	-.011	-.160
Self-eff	-.354**	-.439**	-.261**	-.246*	.075	-.069	.321*	.001	-.120	-.050	.011	-.012	.090	.232+	.071
Peer-pressure	-.115	-.174	-.255*	-.248*	.114	.001	.112	-.004	-.178	.055	-.021	.212*	.151	.139	.052
Parental	-.146	-.275**	-.165	-.360**	.021	-.157	.117	.042	-.171	-.182	-.217*	.025	.070	.059	-.034
Anxiety	.443*	.306**	.124	.277**	-.098	.116	-.420	-.203*	.197	.225*	.058	-.136	-.109	-.327**	-.008
Technol	.022	-.119	-.067	-.136	.214*	.173	.043	-.126	-.124	.019	-.025	.167	.126	-.166	-.038
Resourc	-.190	-.165	-.258*	-.245*	-.008	-.058	.161	-.048	-.236*	-.121	-.131	.210*	.068	.165	-.322**
Satiatio	.081	.023	.046	.183	.185	-.027	-.158	.054	.066	-.078	.154	-.207	-.271**	-.077	.039
Self-reg	-.087	-.330*	-.113	-.370**	.369**	.151	.263**	-.019	-.096	-.007	-.049	.206*	.295**	-.008	-.052
Intensit	.185	-.005	.055	-.026	-.090	.265**	.018	-.025	.085	.084	.102	.148	.119	-.220*	-.028
Internati	-.039	.012	-.105	-.067	.047	-.007	.018	-.231*	-.147	-.046	-.081	.118	.106	-.123	-.023

** $p < .001$

* $p < .05$

Correlation Analysis between Motivation and OCSI Level B2 (85)

	SPEAKING OCSI						LISTENING OCSI								
	Socio-affective	Fluency oriented	M.negot	Accura	Message Reductio	Non verbal	Aband. Messag	Think Englis	M.negot	Flutenc	Scan.	Globa Under	Non-Verbal	Less listener	Word-oriented
Ideal L2	-.347**	-.084	-.267*	-.169	-.132	-.296**	.190	.005	-.172	-.226*	-.216*	-.114	-.211	.303**	.140
Intrinsic	-.039	.049	-.228	-.191	.052	-.094	.088	-.081	-.105	-.122	-.021	.029	-.082	.125	.114
Instrum	-.221*	-.016	-.105	-.016	-.002	-.146	.002	-.002	-.030	-.136	-.241*	-.223*	-.100	.095	.032
Self-eff	-.280**	-.210	-.202	-.245*	.138	-.317**	.195	.034	-.196	-.226*	-.034	-.003	-.204	.264*	.188
Peer-pressure	.039	.042	-.063	-.160	-.052	-.052	.033	-.014	.111	.007	.123	.148	-.141	.018	.112
Parental	-.138	-.047	-.142	-.175	-.038	-.168	.005	.008	-.026	-.052	-.133	-.107	-.152	.150	-.012
Anxiety	.367**	.345**	.129	.247*	-.138	.191	-.451**	-.322**	.188	.215*	.068	.136	.217*	-.294	-.032
Technol	-.174	-.068	-.195	-.061	.193	-.337**	.127	.115	-.044	-.136	-.094	-.183	-.156	.021	-.142
Resourc	-.265*	-.073	-.449**	-.191	-.099	-.282**	.152	-.063	-.292**	-.348**	-.189	-.121	-.213	.163	.107
Satiation	.011	-.133	.032	-.157	.221*	.033	-.020	.054	-.106	-.026	.127	.208	.045	-.160	-.128
Self-reg	-.132	.011	-.079	-.137	.170	-.128	.202	-.065	-.026	-.039	-.201	-.139	-.059	.133	.186
Intensiti	-.238*	-.161	-.231*	-.193	-.011	-.075	-.029	-.063	-.131	-.125	.143	.076	-.061	.047	.072
Internati	-.090	.110	-.174	-.016	-.049	-.120	.155	-.032	-.063	.006	-.127	.033	-.062	.218*	.088

** $p < .001$

* $p < .05$

Appendix 3

4.4.6.3. Correlation Analysis between Motivation and Survey of Reading Strategy per Level of English (A1-B2)

	A1 (n=110)			A2 (n=113)			B1 (n=98)			B2 (n=85)		
	Glob	Prob	Supp	Glob	Prob	Supp	Glob	Prob	Supp	Glob	Prob	Supp
Ideal L2-Self	-.319**	-.148	-.059	-.067	-.131	-.036	-.007	-.037	-.170	-.035	.066	-.041
Intrinsic	-.253**	-.303**	-.128	.006	-.238*	-.005	-.189	-.315**	-.269**	-.094	-.014	-.017
Instrumental	.079	-.001	.035	-.024	-.007	-.047	-.030	-.047	-.114	-.084	.015	-.106
Self-efficacy	-.383**	-.209*	-.040	-.170	-.126	-.170	-.081	-.028	-.158	-.058	.060	-.119
Peer-pressure	-.092	-.236*	.011	-.243**	-.258**	-.184	-.153	-.154	-.142	.050	.098	.136
Parental	-.122	-.215*	.022	-.190*	-.040	-.085	-.011	-.117	-.217*	-.026	.066	-.045
Anxiety	.104	-.025	.002	.142	.009	.033	-.050	-.264**	.077	-.102	-.004	-.064
Technological	-.199*	.104	-.101	-.247**	-.038	-.322**	-.199	-.042	-.119	-.238*	-.004	-.121
Resource	-.340**	-.290**	-.125	-.279**	-.373**	-.288**	-.266**	-.201*	-.355**	-.281**	-.229*	-.282**
Satiation	-.105	-.022	.151	-.183	.090	-.147	-.120	-.010	-.042	-.161	-.109	-.276*
Self-Regulation	-.301**	-.163	-.225*	-.144	-.110	-.272**	-.199	-.257*	-.307**	-.216*	-.078	-.132
Intensity	-.056	-.181	.012	.082	.054	-.109	-.183	-.021	-.150	-.094	-.266*	-.200
International	-.265**	-.326**	-.073	-.121	-.312**	-.074	-.029	-.160	-.195	-.049	.119	.087

**p<.001

*p<.05

UNIVERSIDAD DE VALENCIA
DEPARTAMENTO de PSICOLOGIA EVOLUTIVA y de la EDUCACIÓN



LOS FACTORES AFECTIVOS EN EL APRENDIZAJE DE LA SEGUNDA
LENGUA (INGLÉS) EN EDAD ADULTA

Programa de Doctorado: Neurociencia Cognitiva y Educación

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“... todo alumno necesita ante todo: ser atendido, ser valorado, y ser reafirmado. De esa atención y reafirmación nace la confianza, y por tanto, el coraje para aprender; si el profesor se atreve a enseñar, es decir, a atender y cuidar de sus estudiantes, entonces los estudiantes se atreven a aprender”. (Whitaker, 1995)

Introducción

El presente resumen pretende dar una visión general de los principales apartados recogidos en la tesis doctoral *The Role of Affective Variables in Adult Second Language Acquisition (English)*. En primer lugar, se hace una revisión de las principales teorías lingüísticas, psicológicas y sociales relacionadas con el aprendizaje de una segunda lengua (L2) y las nuevas teorías que han emergido recientemente sobre el aprendizaje de segundas lenguas. En segundo lugar, se describe el concepto de las emociones y el papel de las variables afectivas y las estrategias de procesamiento en el aprendizaje de una L2. En tercer lugar, se presenta la muestra y la metodología empleada. En cuarto lugar, se explican los resultados obtenidos de los análisis. Por último se plantean las conclusiones de este trabajo, las limitaciones y las futuras líneas de investigación.

El aprendizaje de una segunda lengua (L2) en edad adulta es uno de los mayores desafíos lingüísticos que puede afrontar un adulto con respecto a su aprendizaje académico. Esto se debe al hecho de que aprender una segunda lengua, una vez ya se ha adquirido la lengua nativa (L1), exige que ambas estructuras lingüísticas convivan de manera simultánea. En este sentido, los niños que aprenden dos lenguas simultáneamente siguen el mismo proceso de aprendizaje para ambos idiomas; primero identifican sonidos, después palabras hasta que desarrollan una competencia general en ambos idiomas con las mismas estrategias de aprendizaje. Sin embargo, un adulto sigue un patrón totalmente distinto entre la adquisición de su lengua nativa (L1) y la L2. Cuando un adulto aprende una L2 en un contexto formal, diversos factores externos e internos intervienen en este proceso. Los factores internos que intervienen en el aprendizaje de una L2 están relacionados con aspectos neurológicos, tales como el deterioro cognitivo que viene acompañado con la edad (Park y Reuter-Lorenz, 2009), aspectos afectivo-motivacionales, tales como la ansiedad, la motivación, la autoestima, y las atribuciones, y por último, los alumnos emplean diversas estrategias de procesamiento lingüístico para aprender la L2 y superar las dificultades lingüísticas en dicho idioma. Por su parte, los factores externos se

relacionan con aspectos sociales tales como la interacción en el aula, el tiempo de exposición a la L2, la práctica en la L2 con hablantes nativos, y la relación con el profesor, entre otros.

1.-El Aprendizaje de una Segunda Lengua: Perspectivas lingüísticas, psicológicas y sociales

Tradicionalmente las investigaciones en aprendizaje de una L2 en edad adulta se han realizado desde tres principales líneas de análisis: *lingüística*, *psicológica* y *sociológica*.

En primer lugar, las perspectivas *lingüísticas* se han centrado en examinar las diferencias y similitudes entre la L1 y L2. Dentro del marco lingüístico una de las figuras más representativas es Noam Chomsky (1957, 1965), que postuló la *Teoría de la Gramática Universal* (GU). Esta teoría defiende que el ser humano tiene un mecanismo cerebral llamado Dispositivo de Adquisición de un Lenguaje (DAL) que le permite adquirir y utilizar el lenguaje de forma natural. Asimismo el modelo de Procesamiento de Entrada (VanPatten, 2002) estudia los procesos por los que los alumnos aprenden unas formas lingüísticas y otras no, analizando las estrategias internas que los alumnos utilizan para desarrollar su propio aprendizaje y las asociaciones que los alumnos crean entre forma y significado en la L2.

En segundo lugar, las perspectivas *psicológicas* han examinado la relación entre lenguaje y cerebro, los procesos de aprendizaje y las diferencias individuales. Las primeras investigaciones en psicología sobre el aprendizaje de una segunda lengua se centraron en el comportamiento humano y su respuesta ante diversos estímulos (Skinner, 1957). Asimismo Lenneberg (1967) desarrolló la *Teoría del Periodo Crítico*, cuya base neurológica explica que existe un periodo crítico después del cual es imposible adquirir una L2 debido a la falta de plasticidad neuronal. En los últimos años las investigaciones en psicología sobre el aprendizaje de una segunda lengua se han centrado en estudios de neurociencia cognitiva, incluyendo técnicas avanzadas de neuroimagen, potenciales evocados y resonancia magnética funcional. Estas técnicas han permitido descubrir que el cerebro desarrolla lo que se conoce como plasticidad neuronal, contradiciendo las tradicionales teorías psicológicas sobre el deterioro neuronal (para revisión Hickok, 2009; Poeppel, Emmorey, Hickok, y Pylkkanen, 2012; Price, 2000, 2010). Es decir, el cerebro crea unas redes neuronales secundarias que reemplazan las funciones de las redes neuronales primarias deterioradas con la edad, para seguir aprendiendo o ejecutando otras funciones cognitivas.

En tercer lugar, las perspectivas *sociolingüísticas* examinan la interacción entre lenguaje y usuarios del lenguaje en un contexto real. La Teoría Socio-Cultural (Vygotsky, 1962; 1978) explica que la interacción facilita y causa el aprendizaje de un lenguaje, y por tanto, este aprendizaje se considera como un proceso social, basado en un marco sociocultural.

Las teorías previamente mencionadas han contribuido a desarrollar una teoría más holística en referencia al aprendizaje de una L2 en edad adulta. En este sentido, es importante mencionar la *Teoría de los Sistemas Dinámicos* (TSD.- Dynamic Systems Theory; Larsen-Freeman, 1997), que tiene su base en los principios matemáticos aplicados a sistemas que experimentan cambios constantes. Esta teoría explica que el aprendizaje de una L2 es un proceso que incluye diferentes sistemas jerarquizados, donde el cambio de uno de sus elementos influye en el resto de los elementos y procesos. En el campo del aprendizaje de una L2, la *Teoría de Sistemas Dinámicos* (TSD) examina diversos factores del aprendizaje de manera dinámica y conjunta, a través de entrevistas personales, cuestionarios, y pruebas fisiológicas, analizando aspectos afectivo-emocionales, aspectos de procesamiento lingüístico, y otros aspectos fisiológicos, tales como ritmo cardíaco, salivación, e incluso variaciones en las ondas neuronales del alumno.

2.- Variables afectivas en el aprendizaje de una segunda lengua

2.1.- La emoción en el Aprendizaje de una Segunda Lengua

Las teorías desarrolladas sobre el aprendizaje de una segunda lengua se han centrado en aspectos lingüísticos, psicológicos y sociales; sin embargo, se han dedicado escasos esfuerzos a integrar aspectos emocionales, ya que siempre se han considerado factores subjetivos de difícil medida. Sin embargo, tal y como explica Schumann (2004), la emoción y la cognición son elementos integrados en una misma unidad. Reeve (2005) define que las emociones son fenómenos que expresan un sentimiento con una intención determinada en un espacio corto de tiempo, que ayuda a los seres humanos a adaptarse a las situaciones y desafíos de la vida. Por tanto, las emociones se producen a causa de una interacción entre ciertos mecanismos del cerebro ante respuestas externas de nuestro entorno. En términos biológicos, las áreas del cerebro encargadas de activar las emociones son la amígdala, el lóbulo frontal, el hipotálamo, y la región frontal del cerebro, entre otras. Además diversos modelos han intentado explicar el funcionamiento de las emociones. David Sander (2013) explica que las emociones se producen por la interacción de diversos

factores biológicos, fisiológicos y cognitivos y que las teorías sobre la emoción describen cuatro criterios importantes de la emoción:

- Las emociones tienen una funcionalidad multimodal, es decir las emociones se producen por una convergencia de elementos que interactúan entre sí.
- Las emociones siguen un proceso dual de estimulación y respuesta emocional.
- Existe un vínculo entre una emoción y la situación en la que es generada.
- Las emociones tienen una durabilidad concreta en comparación con otros aspectos afectivos, sin embargo algunos investigadores (Verduyn, Van Mechelen, y Tuerlinckx, 2011) constatan que es difícil medir un episodio emocional.

Según Sander (2013) los principales modelos sobre emoción son: los *Modelos Básicos de Emoción*, los *Modelos Bidimensionales*, y los *Modelos de Estimulación de la Emoción*.

Los *Modelos Básicos de la Emoción* están representados por Matsumoto y Ekman (2009), que defienden que las emociones se almacenan en paquetes separados de información, donde cada emoción se desencadena por la activación de una secuencia neuronal situada en el Sistema Nervioso Central (SNC). Algunos autores han criticado la falta de robustez que esta teoría ofrece para explicar las características específicas de desórdenes mentales; además diversas investigaciones neuro-científicas han demostrado que las emociones surgen de las interpretaciones cognitivas de experiencias fisiológicas (Cacioppo, Berntson, Larsen, Poehlmann, y Ito, 2000; Russell, 2003) en vez de la mera relación entre una emoción y su correspondiente respuesta neuronal.

Los *Modelos Bidimensionales de la Emoción* se basan en la idea de que las emociones están interconectadas entre sí. Russel (2009) enfatiza que la emoción tiene un constructo psicológico, basado en elementos contextuales y culturales y se compone de dos elementos: la valencia (que puede ser positiva o negativa) y el nivel de alerta (que puede ser alto o bajo) (Sander, Grafman, y Zalla, 2003). Por tanto, según esta teoría, dado que las emociones están interrelacionadas, aparecen interpretaciones cognitivas que identifican cambios neurofisiológicos en los sistemas de valencia y alerta. Estos cambios se reorganizan en relación a los estímulos, experiencias previas, respuestas de comportamiento y conocimiento semántico (Russel, 2003).

Por último, los *Modelos de Estimulación de la Emoción* identifican las emociones como una estructura polifacética, donde la cognición es considerada como el origen de la emoción (Sander, Grafman, y Zalla, 2003) ya que los procesos cognitivos evalúan el

significado subjetivo de una situación. La relación entre cognición y las emociones se ilustra perfectamente en la *Teoría de la Valoración* de Schumann (Appraisal Model of Emotion) (Schumann, 1997; Schumann y Crowell, 2004). Esta teoría explica que un estímulo genera una actividad mental que aumenta o inhibe el aprendizaje. Por tanto, la valoración del estímulo afectivo, que es entendido como la evaluación de los beneficios y las desventajas de un estímulo externo en cualquier situación, es el elemento central de la cognición.

En conclusión las emociones tienen dos funciones importantes en el aprendizaje: la primera función es que las reacciones emocionales influyen en la atención y el esfuerzo dedicado a aprender, la segunda función es que los patrones de valoración son la base de lo que se conoce como la motivación en el aprendizaje de una L2 (Schumann, 1997).

En relación a las investigaciones llevadas a cabo en el campo del aprendizaje de una segunda lengua, la mayoría de investigaciones se han centrado en dos importantes variables afectivas: la motivación (para una revisión Dörnyei, 2005; Dörnyei y Csizér 2002; Gardner y Lambert, 1972) y la ansiedad (Elkhafaiti, 2005; Horwitz, Horwitz, y Cope, 1986). En el siguiente apartado, se van a exponer las principales variables afectivas que se han tenido en cuenta para la elaboración de este estudio.

2.2.-Las Variables Afectivas en el Aprendizaje de una Segunda Lengua

Las variables afectivas juegan un papel primordial en el aprendizaje de una segunda lengua. En este apartado se van a detallar las variables afectivas que se han tenido en cuenta para la elaboración de esta tesis.

En primer lugar, la *Motivación* es una de las variables afectivas más estudiadas en el campo del aprendizaje de una L2. Dörnyei y Ushioda (2011) identifican cuatro periodos en relación a la investigación llevada a cabo sobre la motivación en L2: el Periodo Social Psicológico, el periodo Cognitivo-Situacional, el periodo de Proceso Orientativo, y el periodo Socio-Dinámico.

- El Periodo *Social Psicológico* (1959-1990) está representado por Gardner y Lambert (1953), que consideran que el alumno debe aprender una L2 y saber identificarse con el grupo nativo de esa lengua, adoptando sus costumbres y comportamientos, por tanto este constructo desarrolla dos tipos de motivación fundamentales: la motivación integradora e instrumental.

- El *Periodo Cognitivo-Situacional*, se centra en la motivación del alumno en clase de L2, incluyendo aspectos cognitivos de la psicología tales como la motivación intrínseca, la auto-eficacia, o las atribuciones.
- El *Periodo de Proceso Orientativo* pone énfasis en la conciencia social, es decir se centra más en la motivación individual del alumno. Dörnyei (2005) desarrolla *L2 Motivational Self-System* (Motivación del Auto-Sistema en L2) que incluye tres conceptos: un concepto asociado con el ideal de uno mismo, otro concepto asociado con la persona que debe ser, y el tercero concepto asociado con la experiencia de aprendizaje del alumno.
- El *Periodo Socio-Dinámico* está relacionado con los sistemas dinámicos y las interacciones contextuales entre los alumnos y los hablantes (Ellis y Larsen-Freeman, 2006).

Las investigaciones relacionadas con la motivación en el aprendizaje de una L2, confirman la importancia de la motivación el proceso académico de los alumnos. Por ejemplo existen estudios que examinan el nivel de compromiso del alumno para seguir estudiando la L2 (Dörnyei y Kormos, 2000); otros estudios investigan determinadas estrategias de procesamiento (Schmidt y Watanabe, 2001), o las diferencias entre niveles (Kormos y Csizer, 2008; Ghanizadeh y Rostami, 2015).

En segundo lugar, la *Ansiedad* es considerada un factor determinante en el aprendizaje de una L2. Horwitz (2001) resalta que un tercio de todos los estudiantes que aprenden una L2 experimentan en algún momento un episodio de ansiedad frente al aprendizaje de una segunda lengua. La literatura destaca tres enfoques que describen la ansiedad: la *ansiedad de rasgo*, la *ansiedad de estado*, y la *ansiedad de situación específica*. Según Spielberger (1983) la *ansiedad de rasgo* se define como la tendencia de una persona a responder de manera ansiosa ante cualquier situación; la *ansiedad de estado* es una emoción temporal que depende de las circunstancias que esté viviendo el individuo en un preciso momento. Finalmente, Horwitz, Horwitz y Cope (1986) desarrollaron el concepto de *ansiedad de situación específica* para referir a la ansiedad asociada al aprendizaje de una L2. Esta ansiedad es responsable de las reacciones emocionales negativas que tienen los alumnos frente al aprendizaje de una L2. Horwitz, et. al., (1986) desarrollaron la Escala de Ansiedad de Lengua Extranjera en Clase para medir la ansiedad situacional. Esta escala se ha usado en numerosos estudios (Ortega-Cebreros, 2003; Frantzen y Magnan, 2005; Von Wörde, 2003) y ha demostrado que la ansiedad asociada al

aprendizaje de una L2 es independiente de cualquier otro tipo de ansiedad. En el campo de la investigación, la ansiedad en el aprendizaje de una L2 ha sido objeto de infinidad de investigaciones, por ejemplo se han investigado los diferentes factores que promueven la ansiedad (Onwuegbuzie, Bailey, y Daley, 1999; Chen y Chang, 2004); también se ha estudiado la percepción de la ansiedad en el aprendizaje de una L2 (Gregersen y Horwitz, 2002; Cebberos, 2003; Haley, Romero-Marin, y Gelgand, 2015), o la relación entre la ansiedad en L2 y el miedo a ser evaluado de manera negativa (Shabani, 2012; Lin, Chao, y Huang, 2015); otros estudios han investigado la relación entre la ansiedad en L2 y factores de personalidad (Dewaele, 2010; Dewaele, 2013b; Dewaele y Thirtle, 2009) o las diferencias individuales (Arnaiz y Guillén, 2012; Sheen, 2008; Marcos-Llinás y Garau, 2009); finalmente, también se han llevado a cabo numerosos estudios sobre la relación entre la ansiedad en L2 y las estrategias de procesamiento y aprendizaje de los alumnos (Kao y Craigie, 2013; Cheng, 2002; Mills, Pajares, y Herron, 2013; Elkhafaiti, 2005; Zhao, Guo, y Dynia, 2013).

En tercer lugar, el *Auto-Concepto* es otro factor afectivo de gran importancia en el aprendizaje de una L2. Desde un punto de vista psicológico, el auto-concepto se define como un juicio auto-descriptivo que incluye una evaluación de la competencia y los sentimientos asociados a una situación específica (Pajares y Schunk, 2005). Un área importante de investigación dentro del auto-concepto es el auto-concepto académico, que comprende las representaciones mentales de las habilidades de un individuo en un ámbito académico (Pinxten et. al, 2015). La mayoría de las investigaciones psicológicas sobre el auto-concepto académico se han centrado en la relación entre auto-concepto académico y logros académicos (ej., Huang, 2011). Los modelos de auto-concepto más destacados son: el Modelo Recíproco, El Modelo Interno/Externo, y el Modelo de Comparación Dimensional.

- El *Modelo Recíproco* examina los efectos mutuos y recíprocos entre los auto-conceptos y los logros académicos, postulando que un alto logro académico promueve un mayor auto-concepto y viceversa.
- El *Modelo Interno /Externo* establece relaciones paradójicas entre logros académicos y auto-concepto en áreas de aprendizaje relacionadas con las matemáticas y el lenguaje.
- La *Teoría de Comparación Dimensional* desarrollada por Möller y Marsh (2013) explica que los auto-conceptos académicos se crean de la comparación de diferentes ámbitos académicos incluyendo sociales y temporales.

Las investigaciones sobre el auto-concepto en el aprendizaje de una L2 se centran en examinar la relación entre el auto-concepto académico y otras variables afectivas tales como la motivación (Guay, Marsh, y Boivin, 2003); otras investigaciones estudian aspectos internos y externos del auto-concepto académico de los alumnos en comparación con otros alumnos (Pinxten et. al, 2015; Wouters, Colpin, Damme, Laet, y Verschueren, 2013); y existen estudios que investigan la relación entre el auto-concepto académico y otras estrategias de aprendizaje (Retelsdorf, Köller, y Möller, 2014).

En cuarto y último lugar, las *Atribuciones*, descritas por Heider la *Teoría de las Atribuciones* (Heider, 1958; Kelley, 1971; Weiner, 1979) ha influido enormemente en la investigación de diversos contextos, entre ellos educación, clínica y trabajo. La Teoría de las Atribuciones explica que la manera que un individuo percibe sus propios éxitos o fracasos influye en sus propias expectativas y por tanto en sus logros. En consecuencia las atribuciones refieren a las interpretaciones que hacen los individuos de las situaciones que viven, y cómo dichas interpretaciones repercuten en su forma de pensar. Las Teorías más importantes sobre Atribuciones son las siguientes: La Teoría de Heider (1959), La Teoría de las Inferencias Correspondientes de Jones y Davis (1965), El Modelo de Co-Variación de Kelley (1967), la Teoría de Weiner (1986, 2000), Los Modelos Duales

- La *Teoría sobre la Percepción del Objeto y la Persona* de Heider (1959) describe que los objetos modulan el entorno, y por tanto, el sistema de percepción reconstruye los objetos en base a ese entorno. Este proceso reconstructivo se le denominó atribución. Las atribuciones por tanto son las cualidades que asignamos a un objeto localizado en un entorno para poder identificarlo. El trabajo de Heider se enfocó posteriormente en la percepción social y personal, en las interacciones entre las personas y las atribuciones que infieren los individuos de dichas interacciones.
- La *Teoría de las Inferencias Correspondientes* de Jones y Davis (1965) describe cómo los individuos usan el comportamiento de otros para inferir sus disposiciones o características.
- El *Modelo de Co-variación y los Esquemas Causales* de Kelley (1967) aborda el estudio de la validez atributiva, es decir cómo deciden las personas que sus impresiones sobre un objeto son correctas.
- La *Teoría de Atribución* de Weiner (1986, 2000) ha sido uno de los constructos teóricos más importantes en el campo de la psicología social. Este modelo describe cómo una persona intenta explicar las causas de sus éxitos y fracasos en

relación con logros anteriores. Según Weiner las atribuciones tienen tres dimensiones: a) *locus interno o externo*, que refiere a las atribuciones que se hace el individuo sobre sí mismo en base a factores internos personales o factores externos; b) *la estabilidad*, que refiere a la valoración del sujeto acerca de la estabilidad o inestabilidad en el tiempo del problema al que se enfrenta, y c) *la controlabilidad*, que refiere a la capacidad del individuo de controlar el resultado de sus acciones.

- En las últimas décadas, han surgido los *Modelos de Procesos Duales*, que describen la secuencia de las características de los procesos mentales que se producen en las inferencias de los individuos. Estos modelos dividen los procesos mentales en dos categorías generales: de manera automática o controlada (Gawronski y Greighton, 2013). Los procesos automáticos se caracterizan por ser involuntarios, inconscientes y requieren un bajo proceso cognitivo. Por el contrario, los procesos controlados se inician de manera voluntaria, consciente y requieren un mayor proceso cognitivo (para revisión consultar Moors y De Houwer, 2006).

En el ámbito del aprendizaje en segunda lengua, algunos estudios han investigado las atribuciones de los alumnos en relación con el rendimiento académico o rendimiento de tareas en el pasado o futuro. Por ejemplo algunas investigaciones encuentran una correlación significativa entre las estrategias de aprendizaje y las atribuciones de los alumnos en sus logros académicos (Soric y Palekic, 2009; Meyer y Koelbl, 1982). Asimismo, otros estudios se centran en identificar las atribuciones que realizan los alumnos sobre sus éxitos y fracasos académicos (Gobel y Mori, 2007; Mori, Gobel, Thepsiri, y Pojanapunya, 2010). Además algunas investigaciones incluyen entrevistas personales a los alumnos para buscar las causas de dichas atribuciones (Tse, 2000; Ushioda, 1996, 1998, y 2001) o estudian el papel de las variables afectivas tales como la ansiedad (Lim, 200) o la auto-eficacia (Hsieh y Kang, 2010) en relación con las atribuciones asignadas a sus éxitos y fracasos académicos.

2.3.- Las Estrategias de Aprendizaje en el aprendizaje de una segunda lengua

Este apartado describe la importancia de las estrategias de aprendizaje en la L2. Las Estrategias de aprendizaje se consideran herramientas que ayudan al alumno durante el proceso de aprendizaje de una lengua, ya que facilitan y promueven los procesos

cognitivos. Los modelos pedagógicos de las estrategias de aprendizaje han evolucionado desde los años setenta, donde lo más importante era el entorno de clase en el que aprendía el alumno, hasta llegar a un enfoque centrado en el alumno y los factores que le rodean. En la actualidad los enfoques pedagógicos se centran en estudiar los procesos cognitivos del alumno en el uso de estrategias de procesamiento para mejorar la L2. Las estrategias de aprendizaje se han categorizado en cuatro grupos según O'Malley y Chamot's (1990) y (Dörnyei, 2005): estrategias cognitivas, metacognitivas, sociales y afectivas. Además, Oxford (1990) distingue entre dos tipos de estrategias: las estrategias directas, que refieren a los procesos mentales que el alumno hace en la L2, y las estrategias indirectas, que refieren a otros aspectos afectivos y sociales que también influyen en el aprendizaje. Algunas investigaciones han apuntado a una relación positiva entre el uso de estrategias de aprendizaje y el éxito en la L2 (Macaro, 2001; Vandergrift, 1998; Peacock y Ho, 2003; Cabansag, 2013); también se ha investigado la relación entre las estrategias de aprendizaje y los factores emocionales como la motivación (Nunan, 1997; Oxford y Nyikos, 1989). Asimismo se ha estudiado la incidencia de las estrategias de aprendizaje en diferentes habilidades lingüísticas como la comprensión y expresión oral (Mansoor y Ebrahim, 2014) o la comprensión lectora (Munsakorn, 2012; Ghonsooly y Barghchi, 2011; Poole, 2005; Boonkongaen, 2014).

3.- Metodología e Instrumentos utilizados

Este estudio se ha llevado a cabo con la colaboración de dos Escuelas Oficiales de Idiomas (EEOOI) situadas en las poblaciones Quart de Poblet y Llíria (consultar figura 9, pg.139). Las Escuelas Oficiales de Idiomas son instituciones públicas de enseñanza no reglada especializadas en la enseñanza de idiomas modernos. Las EEOOI certifican de manera oficial los títulos oficiales según el Marco Común de Referencia Europea (MCRE) desde el A1 hasta el C2, avalados por el Consejo de Europa para el aprendizaje de lenguas (consultar figura 10 pg.141).

Los participantes de este estudio son alumnos de inglés como segunda lengua pertenecientes a las dos escuelas arriba citadas. Para la elaboración de este estudio se ha recopilado una muestra de 100 alumnos por nivel, teniendo en cuenta los niveles de A1 hasta el B2, según el MCRE. El procedimiento para recopilar la muestra se desarrolló en dos fases. En la primera fase, los alumnos completaron una Prueba de Nivel avalada por la Universidad de Oxford y Cambridge (2001). El resultado de esta Prueba de Nivel situaba a los alumnos en cada nivel desde A1 hasta B2. En la segunda fase, se proporcionó a los

alumnos un set de cuestionarios que contenía los instrumentos que se describen más abajo, relacionados con variables afectivas y estrategias de procedimiento;

Los alumnos completaban este set en casa y los devolvían a sus profesores en un término de dos semanas. Asimismo los estudiantes completaron una encuesta de hábitos de lectura (consultar figura 15, pg. 146) y un cuestionario de información personal y académica. Estos cuestionarios eran confidenciales y se unían a la prueba de nivel antes mencionada para cruzar los datos de cada alumno. Todos los instrumentos empleados en este estudio han sido previamente utilizados y validados en estudios previos.

Los cuestionarios que los alumnos completaron se basan en instrumentos que describen variables afectivo-emocionales (motivación, la ansiedad, el auto-concepto, y las atribuciones) e instrumentos sobre las estrategias de aprendizaje en el aula (destrezas orales, escritas, y de lectura). Los instrumentos que se han utilizado para la elaboración de este estudio son:

Instrumentos Afectivo/Emocionales

- Escala de Ansiedad en la Lengua Extranjera (Foreign Language Class Anxiety Scale (FLCAS) (Horwitz et. al., 1986) (versión española por Rodríguez y Abreu 2003) (Stephenson. W. J, 2006). Este instrumento mide la ansiedad de los alumnos frente al aprendizaje de la L2.
- Cuestionario de Motivación (Kormos, Kiddle y Csizer, 2011). Este instrumento examina los factores que influyen en la motivación de los alumnos frente al aprendizaje de la L2.
- Cuestionario de Atribuciones de Éxito y Fracaso en las tareas en L2 (basado en Vispoel y Austin, 1995). Este instrumento mide las atribuciones que los alumnos realizan de sus éxitos y fracasos en la L2.
- Instrumento de Auto-Concepto (AF-5 García y Musitu, 1999). Este instrumento mide el nivel de auto-concepto (académico y emocional) de los alumnos en L2.

Instrumentos de Estrategias de Procesamiento:

- Instrumento de Estrategias de Comunicación Oral (Oral Communication Strategy Inventory (OCSI, Nakatani, 2006) versión adaptada por Nakatani, Y. (2006). Este instrumento mide las estrategias de expresión y comprensión oral que los alumnos utilizan frente a dificultades con la L2
- Instrumento de Procesamiento de Lectura (Survey of Reading Strategy- SORS) (Mokhtari y Sheorey, 2002). Este instrumento mide las estrategias de lectura.

- Instrumento de Estrategias de Aprendizaje de la L2 (Strategy Inventory for Language Learning, SILL versión 7.0), (Oxford 1990). Este instrumento mide estrategias de aprendizaje relacionadas con la cognición, la memoria y la interacción social.
- Prueba de Nivel (Quick Placement Test , QPT) (Oxford University Press y University of Cambridge Local Examinations Syndicate 2001)
- Cuestionario Personal (basado en Stephenson y Hewitt, 2006; Li, Sepanski, y Zhao, 2006)

4.- Resultados

El principal objetivo de esta investigación es analizar la influencia de las variables afectivas en el aprendizaje de una L2 en edad adulta. Los objetivos específicos son:

- 1) Analizar las estrategias de aprendizaje que los alumnos utilizan en los diferentes niveles (A1-B2).
- 2) Estudiar las diferencias entre las variables afectivas en los diferentes niveles (A1-B2).
- 3) Analizar la relación entre las diferentes variables afectivas y las estrategias de aprendizaje de los alumnos.

Para analizar los resultados obtenidos en cada uno de los objetivos descritos anteriormente se han utilizado las siguientes herramientas estadísticas: análisis de varianza (ANOVAs) con pruebas post hoc (Test de Scheffé) con el fin de determinar entre qué pares de grupos se encuentran las diferencias, análisis correlacional, y análisis de ecuaciones estructurales. Nos vamos a centrar en aquellos resultados más significativos en relación a cada uno de los objetivos:

En relación al **primer objetivo**: examinar las estrategias de aprendizaje por niveles.

Los resultados de los ANOVAs y la prueba post hoc sobre la relación entre el instrumento de medida **SILL** (*Strategy Inventory for Language Learning*) y los diferentes niveles (A1-B2) muestran que los alumnos de nivel A1 usan más estrategias memorísticas ($F_{(3, 403)}= 5.201, p<.002$) y menos estrategias cognitivas ($F_{(3, 403)}= 18.760, p<.000$), compensatorias ($F_{(3, 403)}= 20.513, p<.000$), y sociales ($F_{(3, 403)}= 7.943, p<.000$). Por el contrario, los alumnos de nivel B2 utilizan más estrategias cognitivas, compensatorias, metacognitivas y sociales que el resto de niveles (consultar fig. 18, pg.183).

Los resultados de los ANOVAs y la prueba post hoc sobre la relación entre el instrumento de medida **OCSI** (*Oral Communication Strategy Inventory*) y los diferentes niveles (A1-B2) muestran los siguientes resultados:

En relación a las estrategias que utilizan los alumnos para afrontar una dificultad de expresión oral, los alumnos de nivel A1 tienden a usar menos estrategias socio-afectivas ($F_{(3, 403)}= 10.113, p < .000$), estrategias para mantener la fluidez de la conversación ($F_{(3, 403)}= 8.080, p < .000$), y estrategias enfocadas a negociar el significado con sus interlocutores ($F_{(3, 403)}= 5.729, p < .001$). Estos alumnos (nivel A1) también tienden a reducir el mensaje que quieren expresar o incluso a dejarlo inacabado por falta de fluidez en la L2 ($F_{(3, 403)}= 25.010, p < .000$). Por el contrario, los alumnos de nivel B2 muestran un mayor uso de las estrategias socio-afectivas, de fluidez, y de negociación del significado (consultar fig.19, pg.186).

Con respecto a las estrategias que utilizan los alumnos para afrontar una dificultad de comprensión oral, los datos revelan que los alumnos de nivel A1 muestran menos estrategias para mantener la fluidez de la conversación ($F_{(3, 403)}=11.006, p < .000$), tienen menos estrategias para comprender el texto de manera global ($F_{(3, 403)}= 13.559, p < .000$), y son menos propensos a escuchar a sus interlocutores en la L2 ($F_{(3, 403)}= 31.889, p < .000$) (consultar fig. 20, pg. 188).

Los resultados de los ANOVAs y la prueba post hoc sobre la relación entre el instrumento de medida **SORS** (*Survey of Reading Strategy*) y los diferentes niveles (A1-B2), muestran que los alumnos de nivel A1 ($F_{(3, 404)}=4.543, p < .004$) utilizan más estrategias que el resto de niveles para afrontar problemas de comprensión lectora y por consiguiente usan recursos para superar las dificultades asociadas a los textos, tales como el diccionario, la ayuda del profesor, etc. Los alumnos de nivel B2 muestran más estrategias para comprender el texto de manera global (consultar fig.21, pg. 190).

En relación al **segundo objetivo**: examinar las variables afectivas que los alumnos de los diferentes niveles (A1-B2) usan en el aprendizaje de la L2, se han obtenido los siguientes resultados.

Los resultados de los ANOVAs y la prueba post hoc, sobre la relación entre el instrumento de medida **FLCAS** (*Foreign Language Class Anxiety Scale*) y los diferentes niveles, revelan que los alumnos de nivel A1 ($F_{(3, 403)}=7.950, p < .000$) presentan mayor ansiedad que el resto de niveles (consultar fig.22, pg.191).

Los resultados de los ANOVAs y la prueba post hoc sobre la relación entre el instrumento de medida **Auto-Concepto AF5** y los diferentes niveles (A1-B2) indican que los alumnos de nivel A1 ($F_{(3, 403)}=2.285, p>.014$) tienen un mayor auto-concepto emocional que el resto de niveles, y por tanto son más conscientes de su propio proceso de aprendizaje (consultar fig. 23, pg.201).

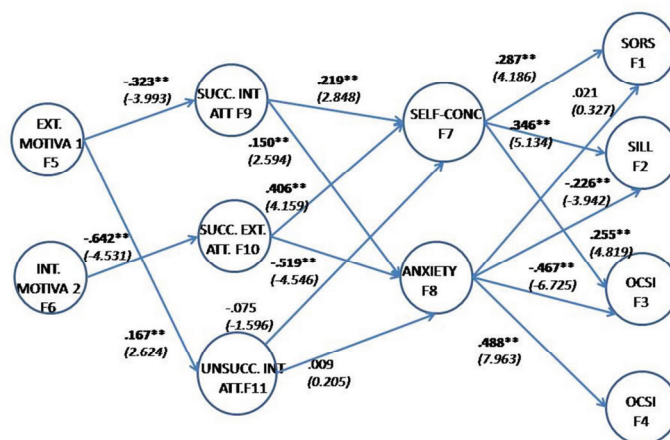
Los resultados de los ANOVAs y la prueba post hoc sobre la relación entre el instrumento de medida de **Motivación** y los diferentes niveles (A1-B2) señalan que los factores que más influyen en la motivación de los alumnos de nivel A1 son: la visión que los alumnos tienen de sí mismos como futuros hablantes de la L2 ($F_{(3, 401)}=4.786, p<.000$), la motivación de auto-eficacia ($F_{(3, 401)}=3.460, p<.000$), y la motivación tecnológica ($F_{(3, 401)}=4.759, p<.000$). Por el contrario, los alumnos de nivel B2 ven su motivación más influida por la ansiedad ($F_{(3, 401)}=4.750, p<.000$) que el resto de niveles (consultar fig.24, pg. 210).

Finalmente, los resultados de los ANOVAs y la prueba post hoc sobre la relación entre el instrumento de Atribuciones para Tareas de Éxito y Fracaso y los diferentes niveles (A1-B2) revelan los siguientes resultados:

En relación a las tareas de éxito, los alumnos de nivel A1 atribuyen menos su éxito a sus habilidades en la L2 ($F_{(3, 398)}=48.178, p<.000$) y atribuyen más éxito en sus tareas a la influencia del profesor ($F_{(3, 398)}=5.256, p<.001$) y la dificultad de la tarea ($F_{(3, 398)}=6.034, p<.001$); por otro lado, los alumnos de nivel B2 atribuyen su éxito en la L2 al divertimento y la atmosfera en la clase ($F_{(3, 398)}=8.539, p<.000$) (consultar fig. 25, pg.213).

En relación a las tareas de fracaso, los alumnos de nivel A1 atribuyen su fracaso en la L2 a factores internos como la falta de habilidad en la L2 ($F_{(3, 398)}=22.520, p<.000$) y la falta de divertimento en clase ($F_{(3, 398)}=9.858, p<.000$) (consultar fig. 26, pg. 215). Finalmente el análisis de atribuciones muestra que los alumnos se consideran más exitosos en las tareas de comprensión lectora (consultar fig.27, pg. 217), y menos exitosos en las tareas de comprensión oral (consultar fig.28, pg.218).

En relación al **tercer objetivo**: analizar la influencia de las variables afectivas en las estrategias de aprendizaje, se han observado los siguientes resultados.



Estimación de las relaciones causales.

En primer lugar, la estimación de las relaciones causales indica la influencia que las dos dimensiones de *Motivación* tienen sobre las dimensiones de Atribuciones. La Motivación Externa (F5) (motivación instrumental, presión de los compañeros, parental e interna) tiene un efecto significativo y negativo sobre las Atribuciones Internas de Éxito (F9) ($\beta = -.323^{**}$, $t\text{-Stat} = -3.993$), esto indica que los estudiantes cuya motivación depende de factores externos como la presión de sus compañeros, la influencia del profesor o familiares, tienden a atribuir menos su éxito a factores internos tales como el esfuerzo, la estrategia o el interés. Asimismo, la Motivación Externa (F5) tiene un efecto significativo y positivo sobre las Atribuciones Internas de Fracaso ($\beta = .167^{**}$, $t\text{-Stat} = 2.624$), lo cual indica que los estudiantes con este tipo de motivación atribuyen su fracaso en la L2 a factores internos tales como el esfuerzo o el interés por la lengua extranjera. Por su parte, la Motivación Interna (F6), que corresponde a la motivación relacionada con la visión de uno mismo como hablante ideal en la L2 y la motivación de auto-eficacia, tiene un efecto negativo y significativo sobre las Atribuciones Externas de Éxito ($\beta = -.642^{**}$, $t\text{-Stat} = -4.531$), esto indica que los estudiantes con una motivación interna elevada, atribuyen menos su éxito en la L2 a factores externos tales como la influencia del profesor, la atmósfera o el nivel de la clase y las notas.

En segundo lugar, con respecto a las *Atribuciones*. Las Atribuciones Internas de Éxito (F9) ($\gamma = .219^{**}$, $t\text{-Stat} = 2.848$), que corresponden a atribuciones de esfuerzo,

estrategia e interés, y las Atribuciones Externas de Éxito (F10) ($\gamma = .406^{**}$, $t\text{-Stat}=4.159$), que corresponden a la influencia del profesor, la atmosfera de la clase, las notas, el divertimento, y el nivel de clase, ejercen una influencia positiva y significativa sobre el Auto-Concepto Académico (F7). Esto indica que los alumnos que atribuyen su éxito a factores externos e internos, son más conscientes del progreso de su aprendizaje en la L2. Asimismo, las Atribuciones Internas de Fracaso (F11) ($\gamma = .150^{**}$, $t\text{-Stat}=2.594$), ejercen una influencia negativa y significativa en el Auto-Concepto Académico. Esto sugiere que los estudiantes que atribuyen su fracaso a factores internos, tienden a percibir en menor medida su progreso académico en la L2.

En tercer lugar, en referencia a la relación entre las Atribuciones y la Ansiedad, los resultados muestran que las Atribuciones Internas de Éxito (F9) ($\gamma = .150^{**}$, $t\text{-Stat}=2.594$) influyen de manera significativa y positiva sobre la Ansiedad, mientras que las Atribuciones Externas de Éxito (F10) ($\gamma = 0.-519^{**}$, $t\text{-Stat}=-4.546$) influyen de manera significativa y negativa sobre la Ansiedad. Esto indica que los estudiantes que atribuyen su éxito a factores internos, experimentan un mayor nivel de ansiedad en el aprendizaje de la L2, mientras que los estudiantes que atribuyen su éxito a factores externos tienen a experimentar menor ansiedad en la L2.

En cuarto lugar, en referencia a las relaciones de las dimensiones de Auto-Concepto y Ansiedad con los instrumentos de Estrategias de Aprendizaje. Los resultados muestran que la percepción de *Auto-Concepto Académico* (F7) presenta un efecto significativo y positivo sobre: la dimensión SORS-F1 ($\gamma = .287^{**}$, $t\text{-Stat}=4.186$), que corresponde a estrategias de comprensión lectora global y de resolución de problemas con el texto, la dimensión SILL F2 ($\gamma = .346^{**}$, $t\text{-Stat}=5.134$), que corresponde a estrategias de aprendizaje memorísticas, cognitivas, metacognitivas, afectivas y socioculturales, y la dimensión OCSI F3 ($\gamma = .255^{**}$, $t\text{-Stat}=4.819$), que corresponde a estrategias socio-afectivas, orientadas a la fluidez y de precisión con el lenguaje. Estos resultados indican que los alumnos que perciben sus progresos académicos en L2 son probablemente más capaces de solucionar problemas de comprensión lectora, también saben usar estrategias globales de aprendizaje tales como cognitivas, de memoria, afectivas o socioculturales y muestran más estrategias para mantener conversaciones de manera fluida con sus interlocutores.

Por último, en relación a las relaciones causales entre la dimensión de Ansiedad y los instrumentos de Estrategias de Aprendizaje, los resultados muestran que la dimensión

de la Ansiedad (F8) influye de manera significativa y positiva en la dimensión SORS F1 ($\gamma=.021$, $t\text{-Stat}=0.327$) (descrito anteriormente) y en la dimensión OCSI-F4 ($\gamma=.488^{**}$, $t\text{-Stat}=7.963$), que corresponde a estrategias de abandono del mensaje y pérdida de atención en las interacciones. Esto sugiere que los alumnos con mayores niveles de ansiedad desarrollan estrategias para superar dificultades en la comprensión lectora. Sin embargo, estos alumnos tienden a abandonar las conversaciones y a prestar menos atención a sus interlocutores. Por otro lado, la Ansiedad influye de manera significativa y negativa sobre la dimensión SILL F2 ($\gamma=-0.226^{**}$, $t\text{-Stat}=-3.942$), (descrito anteriormente), y sobre la dimensión OCSI F3 ($\gamma=-0.467^{**}$, $t\text{-Stat}=-6.725$), (descrito anteriormente). Esto indica que los alumnos con un mayor nivel de ansiedad utilizan menos estrategias orientadas a mejorar sus competencias lingüísticas, tales como estrategias memorísticas, cognitivas, o socio-afectivas, además los alumnos que sufren mayores niveles de ansiedad tienen más dificultad para mantener una conversación fluida.

5.- Discusión

Los resultados previamente expuestos arrojan una serie de conclusiones en cuanto a la influencia de las variables afectivas en los procesos cognitivos de los alumnos cuando se enfrentan al aprendizaje de una L2 (inglés).

En primer lugar, en relación a las estrategias de aprendizaje en los diferentes niveles (A1-B2). Los resultados muestran que en general los alumnos de nivel A1 utilizan más estrategias memorísticas en comparación con los alumnos de nivel B2, que utilizan estrategias cognitivas, de compensación o socio-afectivas para desarrollar su aprendizaje en L2. Diversos estudios han analizado las estrategias que utilizan los alumnos dependiendo de su nivel de competencia (Ansarin, Zohrabi, y Zeynali, 2012; Wong y Nunan, 2011; Alhaisoni, 2012; Adu-Radwan, 2011). Asimismo, los estudiantes de niveles bajos (A1-A2) tienen menos herramientas para afrontar problemas de comprensión y expresión oral en actividades con la L2, debido a que carecen de estrategias para mantener la fluidez de la conversación, estrategias sociales o de comprensión global de los mensajes; además estos alumnos tienden a abandonar la conversación más frecuentemente y recurren en mayor medida a la transferencia de significado entre L1 y L2. Algunos estudios han investigado el uso de estrategias de comunicación oral en el aprendizaje de L2 (Chen, 2002; Weng, 2008; Vandergrift, 2003). Los análisis del presente estudio muestran también que los alumnos de nivel A1 usan más estrategias de apoyo enfocadas a resolver problemas

globales de comprensión escrita, en comparación con otros niveles (Mokhtari y Sheorey, 2008; Kummin y Ramman, 2010).

En segundo lugar, se han analizado las variables afectivas en los diferentes niveles (A1-B2) de inglés. De este análisis podemos concluir que existen diversos factores que influyen en la motivación de los alumnos de nivel A1, tales como la motivación intrínseca, instrumental, de auto-eficacia, el uso de las tecnologías, de auto-regulación, o el sentimiento de internacionalización del alumno al aproximarse a la L2. Por el contrario, los alumnos de nivel B2 ven afectada su motivación por niveles de ansiedad elevados. Estudios previos confirman que estos factores influyen en la motivación de los alumnos (Kormos y Csizer, 2008; Bown, 2009; Ghanizadeh y Rostami, 2015).

Asimismo los resultados del presente estudio sugieren que los alumnos de nivel A1 tienen mayor ansiedad relacionada con el aprendizaje de una L2 que el resto de niveles, estudios previos (Liu, 2006; Cui, 2011; Na, 2007) han constatado que la ansiedad influye directamente sobre el aprendizaje del alumno. Liu (2006) evidencia en su trabajo que los alumnos con mayor competencia lingüística, sufrían menos ansiedad. Además Na (2007) confirma que la ansiedad sufrida por los alumnos puede provocar desánimo y pérdida de confianza en la L2. Sin embargo, otros estudios han comprobado que los alumnos de niveles avanzados sufren más ansiedad que los de niveles bajos, debido a las experiencias de frustración sufridas en la L2. Kitano (2001) explica que alumnos de niveles de competencia alta, sufren más ansiedad, debido a la complejidad de la instrucción en la L2.

Además los alumnos de nivel B2 tienen un mayor Auto-Concepto Académico que el resto de niveles. En este sentido, algunos estudios han confirmado que el auto-concepto académico predice de manera positiva el rendimiento de los alumnos (Guay, Marsh, y Boivin, 2003; Marsh y O'Mara, 2008; Pinxten, et. al., 2014). Los análisis de este estudio muestran que los alumnos de nivel A1 tienen un mayor auto-concepto emocional que el resto de niveles. Idjhanine (2011) indica en su estudio una correlación positiva entre el auto-concepto emocional y dos grupos de alumnos estudiantes de inglés como L2. En relación a las Atribuciones, el presente estudio muestra que los alumnos de nivel A1 atribuyen éxito en sus actividades académicas a factores como el profesor o la dificultad de la tarea, esto sugiere que los alumnos de niveles A1 y A2 consideran que su éxito en la L2 depende de factores externos a ellos mismos. Además los alumnos de nivel A1 atribuyen su fracaso a falta de habilidad o de entretenimiento en la clase. Algunos estudios confirman que la percepción de la dificultad de las tareas puede provocar el abandono del aprendizaje

por parte de los alumnos (Erlor y Macaro, 2011) o atribuir éxito en las tareas en L2 a factores externos (Thang, Gobel, Nor, y Suppiah, 2011; Gobel et. al ,2011; Mori, Gobel, Thepsiri y Pojanapunya, 2010). Por su parte los alumnos de nivel B2 atribuyen su éxito a factores como la habilidad o el divertimento en la clase. Diversos estudios han confirmado la influencia de las percepciones internas, por ejemplo la habilidad, en los resultados de éxito en la L2 (Mercer, 2006; Hsieh y Schallert, 2008; Navarro y Thornton, 2011; Yang y Kim, 2011).

En tercer lugar, se ha analizado la influencia de las variables afectivas en las estrategias de procesamiento a través de un modelo de ecuaciones estructurales. Este modelo muestra que las variables afectivas (tales como la motivación, las atribuciones, la ansiedad y el auto-concepto) tienen un impacto importante en las estrategias de procesamiento lingüístico que los alumnos utilizan durante su aprendizaje en la segunda lengua.

En relación a la *Motivación*, las sub-dimensiones relacionadas con la Motivación Externa, tales como la motivación instrumental, la presión de los compañeros o familiares y la motivación relacionada con aproximarse a las costumbres de la L2, ejerce una influencia significativa y negativa sobre las Atribuciones Internas de Éxito, que están relacionadas con el esfuerzo, la estrategia y la habilidad. Por el contrario, la misma Motivación Externa tiene un efecto significativo y positivo sobre las Atribuciones Internas de Fracaso, que están relacionadas con el esfuerzo y el interés. Por lo tanto, se puede deducir que los estudiantes, cuya motivación se origina por razones externas, tales como buscar un trabajo, los compañeros de clase, o razones de internacionalización en la L2, atribuyen menos sus resultados de éxito en la L2 a factores internos, y por el contrario atribuyen más sus resultados de fracaso a factores internos, como el esfuerzo o el interés por la L2. Asimismo, los resultados de este estudio concluyen que los estudiantes con una Motivación Interna, que refiere a la percepción que tienen como futuros hablantes de la L2 y las habilidades en la lengua, atribuyen menos su éxito en la L2 a factores externos, tales como la influencia del profesor, la atmosfera, el nivel de clase, o las notas. Esto sugiere que estos factores no son decisivos para promover la motivación del alumno frente a la L2 (Kormos y Csizer, 2008).

En relación con la dimensión de *Atribuciones*, los resultados de nuestro análisis muestran que las Atribuciones tienen un impacto sobre el Auto-Concepto y la Ansiedad del Inglés como L2. De esta manera, las Atribuciones Internas de Éxito tienen un efecto

significativo y positivo en el Auto-Concepto Académico y en la Ansiedad. Lo que sugiere que los alumnos que atribuyen su éxito en la L2 a factores internos tales como el esfuerzo, la estrategia o el interés, perciben positivamente su rendimiento académico en la L2. Sin embargo, estos estudiantes tienden a experimentar mayores niveles de ansiedad. Además nuestro estudio concluye que las Atribuciones Externas de Éxito tienen una influencia negativa sobre la ansiedad y positiva sobre el Auto-Concepto, por lo que se deduce que los alumnos que atribuyen su éxito a factores externos suelen experimentar menor ansiedad y percibir más positivamente su rendimiento académico. Además, las Atribuciones Internas de Fracaso se relacionan negativamente con el Auto-Concepto y positivamente con la Ansiedad. Esto indica que los estudiantes que atribuyen su fracaso a factores internos, son menos conscientes de su propio aprendizaje y experimentan más ansiedad en la L2. Mercer (2011) descubrió en su estudio que las experiencias de éxito y fracaso en L2 percibidas por los alumnos influían en su auto-valoración con el idioma.

En relación a la influencia del *Auto-Concepto* y la *Ansiedad* con los instrumentos de procesamiento del lenguaje, nuestro análisis muestra los siguientes resultados: El Auto-Concepto ejerce una influencia positiva y significativa en los instrumentos de lectura (SORS), el instrumento de Estrategias de Aprendizaje de L2 (SILL) y el instrumento de comprensión y producción oral (OCSI). Esto indica que los alumnos que tienen una percepción positiva de su aprendizaje son capaces de resolver problemas de comprensión lectora, expresión y comprensión oral y desarrollan algunas estrategias con el fin de mejorar sus habilidades en la L2. Estudios previos han constatado que la percepción de los alumnos sobre su propio aprendizaje influye positivamente en resolver problemas de comprensión lectora (Retelsdorf, Köller, y Möller, 2014; Richardson, 2003). Otros estudios ponen de manifiesto la importancia de tener una imagen positiva de sí mismo para ser más competentes en la L2 (Guay, Marsh, y Boivin, 2003; Liu (2010); Marsh y O'Mara, 2008; Pinxten, et. al, 2014; Wouters, Germeijs, Colpin, y Verschueren, 2011). Asimismo, Pellegrino (2005) constató en su estudio que cuando los alumnos se sienten cómodos en el entorno en el que hablan, desarrollan más estrategias de producción oral. Por otro lado, la Ansiedad en la L2 tiene un efecto negativo y significativo con los instrumentos de Estrategias de Aprendizaje de la L2 (SILL) y con el instrumento de Expresión y Comprensión Oral (OCSI). Esto sugiere que los alumnos con mayor ansiedad desarrollan menos destrezas orientadas a mejorar su competencia o mantener conversaciones fluidas en la L2, abandonando el mensaje o prestando menos atención a sus interlocutores. Estudios previos han confirmado los efectos que produce la Ansiedad en la L2 en el

aprendizaje de lenguas. (Gregersen y Horwitz, 2002). En este sentido, algunos estudios apuntan a la importancia de proporcionar un entorno en la clase más amable que favorezca la disminución de la ansiedad de los alumnos (Tang, 2005; Hashemi y Abbasi, 2013).

6.- Limitaciones del estudio

Este estudio presenta algunas limitaciones que deben ser mencionadas.

En primer lugar, las nuevas investigaciones en adquisición de una segunda lengua, incluyen no sólo pruebas cuantitativas, sino también cualitativas siguiendo un modelo idiodinámico (Gregersen, MacIntyre, y Meza, 2014). En este estudio, la muestra utilizada es muy amplia (alrededor de 400 alumnos) por lo que se ha omitido realizar entrevistas personales a los alumnos o examinar otros factores fisiológicos, tal y como aconsejan las recientes teorías en aprendizaje de un lenguaje (Dynamic Systems Theory). Además ha sido imposible recoger una muestra de 100 alumnos por nivel, dado que en algunos casos, los alumnos no completaban todos los cuestionarios del set que se les proporcionaba, por lo que el cuestionario quedaba invalidado. La realización de entrevistas personales a los alumnos participantes en el estudio confiere más fiabilidad al unir estas entrevistas con las respuestas de los cuestionarios, sin embargo, los cuestionarios que los alumnos rellenaban eran anónimos, con el fin de que respondieran libremente a cada pregunta que se les planteaba, por este motivo, ha sido imposible incluir entrevistas personales. Además, otra limitación ha sido el hecho de que algunos cuestionarios han quedado invalidados, ya que el alumno no respondía a todas las preguntas del cuestionario.

En segundo lugar, es importante destacar que un análisis longitudinal de los niveles implicados hubiera proporcionado más información sobre los alumnos de los distintos niveles, ya que se hubiera podido analizar la evolución de sus respuestas emocionales y uso de estrategias de aprendizaje en la L2 a lo largo de su evolución académica.

7.- Consideraciones Finales

La adquisición o aprendizaje de una L2 en edad adulta depende de diversos factores que intervienen de manera simultánea durante el aprendizaje. Las últimas teorías sobre el Aprendizaje de una L2 en edad adulta arrojan luz en un largo camino dividido entre las diferentes perspectivas lingüísticas, psicológicas y sociales. En este sentido, la Teoría de los Sistemas Dinámicos responde a la particular idiosincrasia del aprendizaje de

lenguas, debido a que considera diferentes factores emocionales, cognitivos y fisiológicos en un tiempo concreto de aprendizaje.

El objetivo de esta tesis es intentar establecer relaciones entre los diferentes factores emocionales y estrategias de aprendizaje, con el fin de aportar una visión más holística a la investigación sobre adquisición en L2 en edad adulta.

Las futuras líneas de investigación pueden estar enfocadas a analizar la combinación de algunas variables afectivas con las respuestas psicológicas y fisiológicas de los alumnos en un momento concreto del aprendizaje, para obtener información más detallada de los procesos de aprendizaje de los alumnos. Asimismo, los estudios longitudinales de las variables afectivas de los alumnos a lo largo de su aprendizaje pueden contribuir a conocer la evolución de estos alumnos en su proceso de aprendizaje, analizando este proceso desde el nivel más básico (A1) hasta niveles más avanzados (B2 o C1).