T.R.
ABANT İZZET BAYSAL UNIVERSITY
INSTITUTE OF EDUCATIONAL SCIENCES
DEPARTMENT OF ENGLISH LANGUAGE TEACHING

THE RELATIONSHIP AMONG LANGUAGE LEARNING STRATEGIES, MOTIVATION AND ACADEMIC ACHIEVEMENT OF UNIVERSITY PREPARATORY SCHOOL STUDENTS

GÖKHAN ÇETİNKAYA

BOLU – 2017

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M.A. THESIS

By
Gökhan ÇETİNKAYA

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TO THE INSTITUTE OF EDUCATIONAL SCIENCES,

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Gökhan ÇETİNKAYA

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LIST OF ABBREVIATIONS

CFA : Confirmatory Factor Analysis

ESL : English as a Second Language

FL : Foreign Language

L1 : First Language

L2 : Second Language

LLS : Language Learning Strategies

MAQ : Motivation/Attitude Questionnaire

SILL : Strategy Inventory for Language Learning

SLA : Second Language Acquisition

STD : Self-Determination Theory

ÖZET

ÜNİVERSİTE HAZIRLIK SINIFI ÖĞRENCİLERİNİN DİL ÖĞRENME STRATEJİLERİ, MOTİVASYON VE AKADEMİK BAŞARILARI ARASINDAKİ İLİŞKİ

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Bu çalışmanın amacı üniversite hazırlık sınıfı öğrencilerinin dil öğrenme stratejileri, motivasyon seviyeleri (bütünleyici, araçsal ve toplam motivasyon) ve İngilizce öğrenme başarıları arasındaki ilişkiyi ortaya çıkarmaktır. Ayrıca öğrencilerin dil öğrenme stratejileri ve motivasyonlarının cinsiyet, fakülte ve İngilizce öğrenmeye yönelik sınıf dışı etkinlerinin süresiyle ilgili ilişkisi de araştırılmıştır. Bu bağlamda veri toplamak için 50 maddelik dil öğrenme stratejileri envanteri, 30 maddelik motivasyon/tutum anketi ve kişisel bilgi formu kullanılmıştır. Çalışmaya Düzce Üniversitesi hazırlık sınıflarında öğrenim gören 499 (207 kız ve 292 erkek) öğrenci katılmıştır. Elde edilen veriler AMOS ve SPSS yardımıyla analiz edilmiştir.

Çalışmanın sonuçları öğrencilerin dil öğrenme stratejilerini orta sıklıkta kullandıklarını ve orta seviyede bütünleyici ve toplam motivasyon seviyelerinin olduğunu göstermektedir. Ayrıca öğrencilerin araçsal motivasyon seviyeleri yüksek olarak bulunmuştur. Cinsiyet değişkenine göre sadece hafıza stratejileri (kız öğrencilerin lehine) ve telafi stratejileri (erkek öğrenciler lehine) istatistik olarak fark göstermiştir. Ancak kız öğrencilerin motivasyon seviyeleri erkek öğrencilerden daha yüksek olduğu ortaya çıkmıştır. Genel olarak turizm öğrencilerinin dil öğrenme stratejilerini daha sık kullandıkları ve daha yüksek motivasyon seviyelerine sahip oldukları ortaya çıkmış ve bu durum İngilizce bilmenin ilerideki iş yaşamlarında önemli bir yere sahip olduğu ile ilişkilendirilmiştir. Ayrıca ders dışında İngilizce öğrenmek için daha fazla süre harcayan

öğrencilerin hem dil öğrenme stratejilerini daha sık kullandıkları hem de daha yüksek motivasyon seviyelerine sahip oldukları ortaya çıkmıştır.

Öğrencilerin dil öğrenme stratejileri ve motivasyon seviyeleri ile İngilizce öğrenme başarıları arasında istatiksel açıdan pozitif bir bağ olduğu ortaya çıkmıştır. Bu sonuca paralel olarak başarısı yüksek olan öğrencilerin dil öğrenme stratejilerini daha sık kullandıkları ve daha yüksek motivasyon seviyesine sahip oldukları, başarısız grupta olan öğrencilerin ise en az motivasyona sahip olup stratejileri en az kullandıkları bulunmuştur. Ayrıca öğrencilerin motivasyon ve başarıları arasındaki ilişkinin dil öğrenme stratejileri ve başarı arasındaki ilişkiden daha zayıf olmasına rağmen, dil öğrenme stratejileri ve motivasyon seviyeleri arasında pozitif yönde güçlü bir ilişki olduğu bulunmuştur. Bu durum başarının sadece yüksek motivasyon ile değil öğrencilerin dil öğrenme stratejileri kullanması ve benzeri davranışlar sergilemesiyle sağlanacağı sonucunu vermektedir.

Anahtar kelimeler: Dil öğrenme stratejileri, dil öğrenme motivasyonu, bütünleyici motivasyon, araçsal motivasyon

ABSTRACT

THE RELATIONSHIP AMONG LANGUAGE LEARNING STRATEGIES, MOTIVATION AND ACADEMIC ACHIEVEMENT OF UNIVERSITY PREPARATORY SCHOOL STUDENTS

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The current M.A. thesis is based on a quantitative survey method and aims to investigate the relationship among preparatory school students' LLS use, motivation levels (integrative, instrumental and total motivation) and their academic achievement in English. In addition, the probable relationship between the participants' LLS use and motivation levels and the demographic variables, gender, faculty and the amount of time spent studying English outside the class, were examined. In order to collect data, two questionnaires, specifically a 50-item strategy inventory for language learning (SILL) and a 30-item motivation/attitudes questionnaire (MAQ), were used together with a demographic information form. A total of 499 (207 females and 292 males) students studying English at the foreign language school of Düzce University participated in the study. The statistical programs, AMOS and SPSS, were used to analyze the obtained data, as well.

The results show that students use LLS at a moderate frequency, and they have moderate levels of integrative and total motivation but a high instrumental motivation level. In terms of LLS use, there are only two sub-categories – memory strategies in favor of female students and compensation strategies in favor of male students – showing significant difference by gender. However, female students were found to be both integratively and instrumentally more motivated than males. With respect to faculties, there was a general tendency for tourism students' high LLS usage and higher motivation levels. These findings are linked to the importance of English in tourism students' future career, as

well. In addition, students spending more time studying English outside the class use LLS more frequently and have higher levels of motivation.

The results also reveal that both the participants' motivation levels and LLS use are positively correlated to their academic achievement; in parallel to these findings, the high achievers were found to use LLS the most frequently and have higher levels of motivation than both low and non-achievers, and non-achievers are the least motivated and least frequent users of LLS. Furthermore, there is a strong positive relationship between the motivation levels and the LLS use of the participants even though the relationship between students' motivation levels and achievement scores is weaker than the relationship between their LLS use and achievement scores. Based on these findings, it was also concluded that unless the students show any instances of effortful behaviors like the use of LLS, only the motivation itself cannot lead them to success.

Keywords: Language Learning Strategies, Language Learning Motivation, Integrative Motivation, Instrumental Motivation.

CHAPTER I

1. Introduction

This chapter presents the background to the study, purpose of the study, the research questions, the significance of the study and the setting in which the study was conducted. Each section in details will enable an overall understanding of the whole study.

1.1. Background to the Study

Being proficient in another language different from one's mother tongue is one of the academic, professional and social requirements of the 21st century as the world is getting smaller and everyone has equal opportunities for international events. In other words, as Brown (1987) states bilingualism is a way of life. People all around the world tend to learn a second language to be able to catch these international chances; however, it is not an easy task for everyone; it is a complex process involving a great deal of variables (Brown, 1987) and a series of diverse learning behaviors (Dörnyei, 1990); thus, the outcome of L2 (second language) acquisition is different from the L1 (first language) and ranges from zero to native-like proficiency (Dörnyei, 2005). A language learner makes his own way of learning the language with his own goals, weaknesses and strengths. As Williams and Burden (1997) express "learning is essentially personal and individual" (p. 96). Realizing the importance of this fact, research concerns in SLA (Second Language Acquisition) shifted from teaching methods to learner characteristics since the early seventies (Wenden, 1987).

Researchers see motivation as one of the key determinants of success or failures of students in L2 learning. Dörnyei (2005) urges that "All the other factors involved in SLA presuppose motivation to some extent" (p. 65) because "it provides the primary impetus to initiate learning L2 and later the driving force to sustain the long and tedious learning process" (Dörnyei, 1998, 2005; Dörnyei & Csizer, 1998). Ushioda (2013) expresses that motivation is not only one of the determinants of success in SLA, but also a variable that distinguishes L2 acquisition from L1.

In SLA research, there are two major dichotomies in motivation; they are integrative/instrumental and intrinsic/extrinsic (Rivera-Mills & Plonsky, 2007). The latter is not exclusive for SLA, though. Integrative motivation facilitates the learning of the language to become a part of the target language community and instrumental motivation is to learn the language just for pragmatic reasons like social recognition and economic advantages (Gardner & Lambert, 1972). Intrinsic motivation is to be engaged in the activity for its own sake and the pleasure and satisfaction derived from it; in contrast, extrinsic motivation is instrumental in nature; the activity is done to get benefits from it (Deci, Vallerand, Pelletier & Ryan, 1991).

Even though the construct of LLS (language learning strategies) suffers from terminological problems and not having a clear theoretical basis, along with motivation, LLS is another key factor effecting the success in learning L2. LLS research started by identifying the characteristics of good language learner and the underlying assumption is that the strategies employed by the good and experienced language learners can be taught to less successful and novice ones (Grenfell & Macaro, 2007; Griffiths & Parr, 2001; O'Malley, Chamot, Stewner-Manzanares, Russo & Küpper, 1985; Parks & Raymond, 2004; Purdie & Oliver, 1999; Skehan, 1998). This feature of LLS makes it distinct from other individual variables (Oxford & Nyikos, 1989). As Reiss (1981) explains we cannot change students' personality, but we can give our students an explanation of the process of language learning.

Regardless of success, all students use strategies to make their learning more effective (Hong-Nam & Leawell, 2006); however, more successful learners use more strategies and more appropriately (Chamot & El-Dinary, 1999; Chu, Lin, Chen, Tsai & Wang, 2015; Hong-Nam & Leawell, 2006; Liu & Chang, 2013; Oxford, 1989; Oxford & Crookall, 1989; Oxford & Nyikos, 1989). In addition, LLS are context-dependent; they are neither good nor bad until they are considered in the context (Ehrman, Leaver & Oxford, 2003).

Motivation is a variable that affects the use of the LLS. As Oxford and Schramm (2007) explain, motivation is the learner variable which has the strongest correlation with LLS. More motivated learners use more strategies than less motivated ones (Grenfell & Macaro, 2007; Oxford, 1994; Rivera-Mills & Plonsky, 2007; Takeuchi, Griffiths & Coyle, 2007), and these two factors are interactive (Oxford & Schramm, 2007); that is, high motivation may lead to high use of strategies or vice versa. Thus, together with motivation, LLS leads to autonomous learning (Altan, 2003; Hong-Nam & Leawell, 2006) and more success in learning L2. As Rubin (1987) explains, "it is essential for students to be able to control their own learning so that they can learn outside the classroom once they are on their own" (p. 17), and they can be more closely involved in language learning (Wenden, 1987).

The present MA thesis "The relationship among language learning strategies, motivation and academic achievement of university preparatory school students" will attempt to describe Düzce University Hakime Erciyas Preparatory School students' motivations, use of language learning strategies and investigate their possible correlation with each other and students' achievements in English. Following the theoretical information and the prominent studies and research on the issue in Chapter 2, the methodology adopted and the instruments will be introduced in Chapter 3. Moreover, the data collected through MAQ (Motivation/Attitude Questionnaire) developed by Dörnyei (1990) and SILL (Strategy Inventory for Language Learning) by Oxford (1990) will be

presented and discussed in Chapter 4. Finally, conclusions, implications and directions for future research will be presented in Chapter 5.

1.2. Statement of the Problem

Students at variety of faculties have to attend English preparatory school in their first year of study at Düzce University, but they do not have to pass the proficiency exam or present an accepted score from YDS – a nationally accepted language exam in Turkey- or internationally accepted exams like TOEFL, IELTS to continue their education in their departments; the only requirement is the 80% of attendance to all classes. Under these conditions, while some of the students show a great progress and reach the required level of proficiency at the end of the year, others do not even want to come to school, and state their disapproval of the preparatory program and urge that they waste their one year at the preparatory school. The latter group of students attend classes reluctantly just to meet the requirements of attendance. In addition to these two groups of students, some students indicate the importance of learning English and the effective role the preparatory school has to learn English. However, these students experience great difficulties in learning English and show little progress during the year, thus fail the proficiency exam.

The main problem leading the current research is that while some students are willing to learn English, they study hard to get high marks from the exams and become successful at the end of the term although they do not have to, the others are not. Thus, what makes the successful students want to learn English and what hinders the unsuccessful students? How do the successful students achieve the goal of learning English and what do the unsuccessful students not do or what differs successful students from unsuccessful ones? With these questions in mind, this study aims to explore students' motivation levels and their language learning strategy use at Hakime Erciyas Foreign Language School at Düzce University. It also aims to analyze the students' types of motivation and their levels and language learning strategy use in accordance with their academic achievement in

English language and investigate the possible relationship between students' motivation levels and their LLS use. The aim of the study is summarized in Figure 1.1 below.

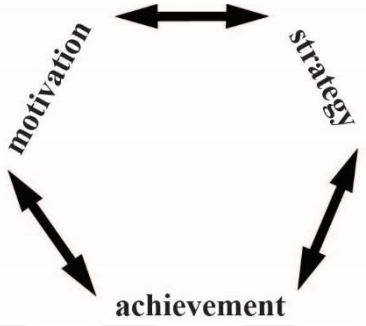

Figure 1.1. Schematic representation of the aim of the thesis.

1.3. Research Questions

The research questions in the current thesis are:

1) What is the LLS use profile of the participants in the current study?
2) What is the level of motivation and its sub-constructs (integrative and instrumental) of the participants in the current study?
3) Do the participants' reported use of language learning strategies and its sub-categories (memory, cognitive, compensation, meta-cognitive, affective, social) differ according to
   a) gender?
   b) faculty?
   c) hours of study outside class?
4) Do the participants' motivation and its sub-constructs (integrative and instrumental) differ according to
   a) gender?
   b) faculty?
   c) hours of study outside class?
5) Is there a relationship between participants' achievement scores in English and their motivation level and its sub-constructs (integrative and instrumental)?

6) Is there a relationship between participants' achievement scores in English and their reported use of language learning strategies and its sub-categories (memory, cognitive, compensation, meta-cognitive, affective, social)?
7) Is there a relationship between participants' motivation level and its sub-constructs (integrative and instrumental) and their total strategy use and its sub-categories (memory, cognitive, compensation, meta-cognitive, affective, social)?

1.4. Significance of the Study

In our shrinking world, communication and personal interaction gains importance day by day. With the help of technology, it is a lot easier to get in contact with people from other countries and participate in international events. Thus, learning at least one foreign language is both a career and an intellectual requirement in our globalized world. Since English is accepted as the lingua franca all around the world (Ushioda & Dörnyei, 2012), it is the most commonly learned foreign language in Turkey. An advanced level of English is a must in fields like academic studies, education, international trade and affairs, tourism, business and so on. For these reasons, most universities in Turkey offered English preparatory classes for their students in the first year of education whether the medium of instruction at faculties was English or not.

Although the importance of English cannot be denied by both students and teachers, it is not always the case that all students reach the expected level of proficiency. The study looks into two factors – language learning motivation and strategies - that can be responsible for the success or failures of students in Hakime Erciyas Foreign Language School at Düzce University. The better understanding of students' motivation to learn English and the strategies they use to reach that goal can help us to individualize our teaching responding to every students' needs and expectations thus to provide an effective education at preparatory classes.

1.5. Setting

The study is conducted in the English preparatory school of Düzce University. Düzce University is a state university located in the Western Black Sea Region, between Istanbul and Ankara. The students of the university come from all over Turkey and from variety of social classes.

There are two kinds of instructional design carried out at the preparatory school. The first type of design is that students studying at Business, Tourism and Hotel Management, Forestry, Forest Industry, Landscape Engineering, Computer Engineering, Environmental engineering and Electric and Electronic Engineering departments have to attend classes, but they do not have to pass the proficiency examination. To be able to go on their education in their departments, what they need to do is to meet the requirements of attendance; that is, they have to attend the 80% of classes during the year. In addition, the medium of instruction in the following years is Turkish, not English. The second type of instructional design is that preparatory school is optional for students studying at Mechanical Engineering department; the students volunteer. They neither have to attend classes, nor pass the proficiency examination. In addition, the medium of instruction in the following years is Turkish, not English, too.

1.6. Definition of Terms

Language Learning Strategies: They are the activities consciously chosen by the learners for the purpose of regulating their own language learning (Griffiths, 2008a, 87).

Language Learning Motivation: It is the combination of effort plus desire to achieve the goal of learning the language plus favorable attitudes towards learning the language (Gardner, 1985, 8).

Integrativeness: It is a genuine interest in learning the second language for the purpose of communicating with members of the other language community (Gardner, 2010, 88).

Integrative Motivation: It is the aggregation of integrativeness, attitudes towards the learning situation and motivation (Gardner, 2006, 250).

Instrumentality: It refers to conditions where the language is being studied for practical or utilitarian purposes (Gardner, 2006, 249).

Instrumental Motivation: It is the combination of instrumentality and motivation (Gardner, 2006).

CHAPTER II

2. Review of Literature

This chapter presents the background on individual differences, language learning strategies and language learning motivation. First, the theoretical background on LLS and language learning motivation are provided. Then, the role and the definitions of basic individual differences in SLA are briefly reviewed. Afterwards, the definitions and the taxonomies of LLS are provided. Following this, the definitions and models and frameworks of language learning motivation are presented. Finally, the related studies conducted in both international and national settings are reviewed.

2.1. Theoretical Framework

An effective instructional design should take the theoretical bases into consideration since they provide clarity, direction and focus for the instructional design process (McLeod, 2003). Since the variables – language learning strategies and language learning motivation – are studied under science of cognitivism in the current thesis, a brief overview of cognitive approach to learning is provided below.

2.1.1. Cognitive approach to learning

One of the most influential views on learning and teaching is cognitivism, and according to cognitivist approach, learning is an inner process in which the new events or items are linked to the already existent ones in a meaningful way (Anderson & Ausubel,

1965; cited in Brown, 1987). In this sense, how human mind thinks and learns is in the center of cognitivism; therefore, the learning process requires learners' active participation (Williams & Burden, 1997). In other words, "a cognitivist views the learning process as an internal and active mental process, which develops within a learner, increased mental capacity and skills in order to learn better" (McLeod, 2003, 38). However, the approaches held by the researchers to investigate human cognition varied considerably, and some of these approaches are information processing and constructivism.

Information processing, as the name implies, focuses on how new information is taken in, processed and new behavior occurs. Attention, perception and memory are in the center of the model, as well (Williams & Burden, 1997). On the other hand, the constructivist approach to cognitivism is centered on the view that learning is personal; that is, learners construct their own personal meanings based on their experiences. As cited in Williams and Burden (1997), another perspective to the constructivist approach is the discovery learning suggested by Bruner (1960). In his view, "learning how to learn" has a central role which emphasizes the process of learning, and that way what we learn today can allow us to go further more easily in the future (Bruner, 1960; cited in Williams & Burden, 1997).

Although the cognitive theory did not originally come out to explain solely SLA, the principles of the theory were applied to the field by the researchers, as well. Scovel (2001) explains that every aspect of SLA includes cognition; therefore, considering SLA as a complex cognitive skill is the best way to understand it (O'Malley & Chamot, 1990). Furthermore, methods like Silent way, Cognitive code learning, constructs such as interlanguage, language retention, and hypothesis such as interaction, noticing, etc. are all based on cognitivist theory. In short, from a cognitivist point of view, L2 learning is individual and a meaningful mental process in which the learners are active.

2.2. Individual Differences

From a cognitivist perspective, a mental process like learning a foreign language requires learners' active involvement. For this reason, the language learner has one of the most important roles in SLA research since he is also the one to reach the desired achievement and proficiency levels. Therefore, the focus of the researchers has shifted from the teachers to the learners for the last few decades (Lessard-Clouston, 1997). As a result of this shift, the term, learner-centeredness, has come to be used in L2 field, and "it is now an accepted belief that the instruction in language teaching must be learner-centered for achieving an effective language learning and teaching atmosphere" (Yapıcı & Bada, 2004, 233). In a learner centered classroom, as Reid (1998) states, students have the chance to choose the tasks, materials and learning in general so that these allow every individual to use their strengths to learn. Ellis (1985), in addition, argues that learners, "even in similar learning environments", (Roberts & Meyer, 2012, 1) learn L2 in different ways. This view has led the researchers to investigate the characteristics of individual learners to have a deeper understanding of their success and failures in their L2 learning adventure and provide better opportunities for every one of them. These individual differences, "the dimensions of enduring personal characteristics that are assumed to apply to everybody and on which people differ by degree" (Dörnyei, 2005, 4), affect learners' achievement and proficiency levels in L2 learning (Dörnyei, 2005; Dörnyei & Skehan, 2003; Ellis, 1985; Pawlak, 2012; Roberts & Meyers, 2012). Thus, they play an important role in common teaching practices and L2 research field. There are many variables attributable to those differences. According to Dörnyei (2005), the concept of individual differences contains core variables and many optional ones. The core variables are personality, ability/aptitude, learning styles and strategies and motivation.

Personality has been defined as "those aspects of an individual's behavior, attitudes, beliefs, thought, actions and feelings which are seen as typical and distinctive of that person and as recognized as such by that person and others" (Richards, Platt & Platt, 1998, p. 340 cited in Ehrman, 2008). Stern (1983) states that some personality

characteristics lead to successful learning while some hinder it. Oxford (1989) also proposes that personality characteristics are either context-dependent or long-term traits. Although it has been proposed to have an important influence on L2 learning, the effects of personality variables on SLA are contradictory (Dörnyei, 2005; Ellis, 1985; Lightbown & Spada, 2006), and these confusing findings may be due to the fact that the personality is a major factor in the acquisition of communicative skills (Ellis, 1985; Lightbown & Spada, 2006).

Lightbown and Spada (2006) define aptitude as "the specific abilities thought to predict success in language learning have been studied under the title of language learning aptitude" (p. 57); therefore, as Stern (1983) states "... aptitude is not a single entity, but a composite of different characteristics which come into play in second language learning" (p. 369). Simply, language learning aptitude is based on the view that people with the higher levels of aptitude than others can learn the language faster and more easily (Skehan, 1998). This view does not propose that someone cannot learn a language, though because as Spolsky (1989) expresses, everyone has some degree of aptitude to learn a foreign language, but "it may vary to a great extent between learners" (Dörnyei & Skehan, 2003). Researchers agree that language aptitude has positive effects on second language learning; however, they severely criticize the results obtained through language aptitude tests, Carrol and Sapon's Modern Language Aptitude Test (1959) and Pimsleur's Language Aptitude Battery (1966), since these tests are concerned of formal classroom learning and not the communicative aspects of the language (Dörnyei, 2005; Ellis 1985; Harmer, 2001; Lightbown & Spada, 2006; Spolsky, 1989; Stern, 1983). Ellis (1985) summarizes the point as followed:

> "The kinds of test that have been used in the correlation studies of the effects of aptitude typically measure the cognitive/academic language proficiency. The results, therefore, do not demonstrate that aptitude plays a major role where basic interpersonal and communicative skills are concerned. (p. 113)"

In the literature, the term, learning style, is interchangeably used with the term, cognitive style, but Dörnyei and Skehan (2003) makes the distinction; while they define cognitive style as "a predisposition to process information in a characteristic manner, they define learning style as "a typical preference for approaching learning in general" (p. 602). Unfortunately, this is not the only problematic issue in the research literature. Dörnyei (2005) briefly indicates that

> "There is a confusing plethora of labels and style dimension; there is a shortage of valid and reliable measurement instruments; there is a confusion in underlying theory; and the practical implications put forward in the literature are scarce, and rather mixed, and rarely helpful. (p. 120)"

Despite all those problems in the area, learning styles attract attention of researchers with its underlying goal that understanding and identifying the students' learning styles can help us arrange classes in a way that appeals to every student, at least, not favor one style and ignore the others (Harmer, 2001; Nel, 2008; Peacock, 2001; Spolsky, 1989). Thus, the learning style of an individual cannot be seen as good or bad (Dörnyei, 2005; Nel, 2008; Reid, 1998). Moreover, learners display styles to some degree, from low to high poles in the continuum (Nel, 2008), and the most successful ones are those who are multi-stylistics (Reid, 1998).

The next two sections present the concept of language learning strategies and language learning motivation in more details since they constitute the core variables of the current thesis.

2.3. Language Learning Strategies

Language learning strategies have been one of the core issues in L2 research since Rubin's (1975) pioneering study on the good language learner. In her article, Rubin defines strategies as techniques or devices which a learner may use to acquire knowledge. Giving

more details about the aims of the learning strategies, Oxford (1990) defines them as "specific actions that are taken by the learner to make learning easier, faster, more enjoyable more self-directed, more effective and more transformable to new situations" (p. 8). O'Malley and Chamot's (1990) definition includes not only the actions but also the thoughts of an individual as a strategy with the purpose of comprehension, learning and retaining of new information. Later, the element of consciousness was included into the definitions by researchers (eg. Chamot, 2004; Cohen, 1998; Griffiths, 2008a, 2013; Oxford & Nam, 1998; Reid, 1998). According to Cohen (1998, 1995), what differs strategies from processes is consciousness, and learners must at least be partially conscious of their activities. On the other hand, consciousness is one of the features that separates strategies from styles (Reid, 1998). While Oxford and Nam (1998) define strategies as any specific conscious action or behavior, Oxford and Schramm (2007) change the statement to "some degree of consciousness" because some researchers put forward that under certain circumstances, some strategies are not at a level of consciousness (eg. Jang & Jimenez, 2011; Liang, 2009; Williams & Burden, 1997). However, to clarify the issue, Griffiths (2013) urges that the use of a strategy is a conscious activity, so the use of the terms "deliberate vs automatic" rather than "conscious vs unconscious" is a more useful distinction because as she explains, "a conscious activity can be either automatic or deliberate" (p. 9). In addition, she suggests that strategies are not solely deliberate or automatic but on a continuum between them.

There are terminological ambiguities in the LLS literature. First of all, as Macaro (2006) states, there is a semantic-equivalence dilemma: the terms like strategy, operation, routine, process, procedure, action, tactic, technique, plan, and step are interchangeably used. According to Wenden (1987), this is the result of the elusive nature of the term "strategy". Second, there are two widely used terms "language learning strategies" and "language learner strategies" referring to the same phenomena. According to Cohen (1998), the term "language learner strategies" is a broader term comprised of language learning and use strategies, and he defines them as "the steps or actions consciously selected by learners either to improve the learning of a second language, the use of it, or both" (p. 5). However,

Hsiao and Oxford (2002) state that such a distinction is a matter of emphasis and it is hard to separate them in practice. In addition, Griffiths (2003) proposes a similar definition for language learning strategies but according to her, LLS overlap with communication strategies. She also explains that "these actions may involve communicating with others, but go beyond the point where communication has been affected to learning which is available for future use." (p. 9), so she prefers language learning strategies as the broader term.

O'Malley and Chamot (1990) base LLS on Anderson's (1983, 1987) cognitive theory and propose a taxonomy consisting of three categories. In addition, Macaro (2006) proposes a strategic framework based on the cognitive science and urges that learner strategies occur in the working memory. On the other hand, Dörnyei and Skehan (2003) state that learning strategies have a shaky theoretical basis because something cannot be cognition, emotion and behavior related at the same time. However, Griffiths (2013) and Griffiths and Oxford (2014) prefer the adjective "eclectic" referring to the theoretical basis of LLS, but she further explains that learning strategies are essentially cognitive although they include the elements of Schemata theory, Complexity/Chaos theory, Behaviorism, Sociocultural theory, Activity theory and perhaps others. Learning strategies are also learnable and teachable in nature. (Griffiths, 2013; Griffiths & Oxford, 2014; Oxford & Nyikos, 1989; Oxford & Schramm, 2007; Rodgers, 2001); for these reasons, we study the LLS under the science of cognitivism in the current MA thesis.

Griffiths (2008a, 2013) proposes a list explaining the essential features of strategies based on the consensus drawn on in the literature. The key features of the strategies are that they are;

1. Learners' activities including physical and mental behaviors.
2. Conscious.
3. Chosen by the students.
4. Goal-oriented; the purpose is to learn the language.
5. Used by the learners to regulate or control their learning.

6. Learning-focused; that is, they are used to facilitate learning.

While identifying these key features, Griffiths (2008a) draws a conclusion and proposes a broad definition of language learning strategies as "activities consciously chosen by the learners for the purpose of regulating their own language learning" (p. 87).

2.3.1. Taxonomies of Language Learning Strategies

LLS research started with the lists of the characteristics of good language learners and then turned into complex classifications. As Hsiao and Oxford (2002) state there are 15 classifications based on their research review. However, Zare (2012) and Purdie and Oliver (1999) indicate that the classifications are fundamentally the same. Below are the classifications of Rubin's (1975) list, Rubin (1987), O'Malley and Chamot's (1990) and Oxford's (1990) classifications.

The good language learner

LLS research has started with Rubin's (1975) list of the characteristics of good language learner. Her study is based on the claim that we can teach the good learners' strategies to the poorer learners thus enhance their success. In her study, Rubin (1975) identified seven strategies that the good language learners use as;

The good language learner;

1) is a willing and accurate guesser
2) has a strong drive to communicate or learn
3) is not inhibited
4) is prepared to attend to the form
5) practices
6) monitors his own and others' speech
7) attends to the meaning.

Later, she provides a more detailed classification of LLS in 1981 and 1987. Below is Rubin's (1987) taxonomy.

Rubin's (1987) Classification

Her taxonomy is based on Rubin's (1981) study. She identifies three types of strategies; they are learning strategies (including cognitive and meta-cognitive strategies), communication strategies and social strategies. While learning strategies contribute directly to language learning, communication and social strategies have an indirect role in learning.

Learning strategies

According to Rubin (1987), learning strategies contribute directly to the development of the language system which the learner constructs. She also states that there are two major kinds of learning strategies as cognitive and meta-cognitive. "Cognitive strategies are steps or operations used in learning or problem-solving that require direct analysis, transformation, or synthesis of learning material" (Rubin, 1987, p. 23). She proposes six cognitive strategies. They are

1) clarification
2) Guessing/inductive
3) Deductive reasoning
4) Practice
5) Memorization and
6) Monitoring

However, she states that monitoring is the combination of cognitive and metacognitive strategies. The other major learning strategy which has a direct effect on language learning is meta-cognitive strategies, and according to Rubin (1987) learners use meta-cognitive strategies to oversee, regulate, and self-direct learning.

Communication strategies

While the focus of learning strategies is on learning by either cognitive processes like obtaining, storing and retrieving new information or regulating these processes, communication strategies are used to participate in conversation, get the meaning across and clarify the intentions. Thus, communication strategies are indirectly related to language learning; in other words, even though the main purpose of the use of communication strategies is a better communication, they may also lead to learning. As Rubin (1987) states communication strategies help the learners enhance their language learning by allowing them to remain in the conversation, gain essential opportunities to practice what they have already learnt and test their new hypothesis.

Social strategies

Along with communication strategies, social strategies are indirectly related to language learning. As Rubin (1987) indicates, they are used by the learners to afford them opportunities to be exposed to and practice their knowledge. That is, the aim of these strategies is to provide an environment where learning is possible. Rubin (1981) studied social strategies under the category of "create opportunities for practice" and provided a list. The list includes activities like spending extra time in the language lab, initiating conversation with fellow student/teacher/native speaker, answering to self and questioning to other students, listening to TV/radio, attending movies or parties.

O'Malley and Chamot's (1990) Classification

O'Malley and Chamot (1990) criticize that Rubin's taxonomy does not have a grounding in SLA theories and studied LLS under the discipline of cognitive science because they claim that SLA is best understood as a complex cognitive skill. In their classification, they divide LLS into three main categories as cognitive, meta-cognitive and socio/affective.

Brown, et al. (1983) define meta-cognitive strategies as higher order executive skills that are used for planning, monitoring or evaluating the learning process (cited in O'Malley & Chamot, 1990). According to O'Malley and Chamot (1990), cognitive strategies work directly on incoming information and manipulate it in ways that strengthening learning. Finally, they define socio/effective strategies as a broad category involving interactions with people and control over feelings and emotions. The summary of these three types of strategies are presented in Table 2.1 below.

Table 2.1. Preliminary classification of learning strategies (O'Malley & Chamot, 1990, 46).

Generic strategy classification	Representative strategies	Definitions
Meta-cognitive strategies	Selective attention	Focusing on special aspects of learning tasks as in for planning to listen for key words and phrases
	Planning	Planning for the organization of either written or spoken discourse
	Monitoring	Reviewing attention to a task, comprehension of information that should be remembered, or production while it is occurring
	Evaluation	Checking comprehension after completion of a receptive language activity, or evaluating language production after it has taken place
Cognitive strategies	Rehearsal	Repeating the names of items or objects to be remembered
	Organization	Grouping or classifying words, terminology, or concepts according to their semantic or syntactic attributes.
	Inferencing	Using the information in text to guess meanings of new linguistic items, predict outcomes, or complete missing parts.
	Summarizing	Intermittently synthetizing what one has heard to ensure the information has been retained
	Deducing	Applying rules to the understanding of language
	Imagery	Using visual images (either generated or actual) to understand and remember new verbal information
	Transfer	Using known linguistic information to facilitate new learning task
	Elaboration	Linking ideas contained in new information, or integrating new ideas with known information
Social strategies	Cooperation	Working with peers to solve a problem, pool information, check notes, or get feedback on a learning activity
	Questioning for clarification	Eliciting from a teacher or peer additional explanation, rephrasing, or examples
	Self-Talk	Using mental redirection of thinking to assure oneself that a learning activity will be successful or to reduce anxiety about a task

Oxford's (1990) classification

Oxford (1990) divides learning strategies into two main categories as direct and indirect strategies. These two categories also consist of three subcategories. Cognitive, memory and compensation strategies constitute the direct strategies and indirect strategies include meta-cognitive, social and affective strategies.

Direct strategies

This kind of strategies involve the target language directly and require mental processes of the language. Memory, cognitive and compensation strategies belong to this group. Memory strategies have been used for many years, and as a part of LLS, Oxford (1990) further divides them into four sets; Creating Mental Linkages, Applying Images and Sounds, Reviewing Well and Employing Actions. According to Oxford (1990), cognitive strategies are necessary for language learning, and consist of four subgroups as Practicing, Receiving and Sending Messages, Analyzing and Reasoning and Creating Structure for Input and Output. Finally, compensation strategies are used to make up for lack of knowledge for the purpose of comprehension or production of the target language. Oxford (1990) states that there are 10 compensation strategies, and they are clustered into two sets; Guessing Intelligently in Listening and Reading and Overcoming Limitations in Speaking and Writing.

Indirect strategies

This kind of strategies support and manage language learning indirectly and work in parallel to the direct strategies. Meta-cognitive, affective and social strategies belong to this group. Meta-cognitive strategies are beyond the cognitive devices and used to control cognition. In addition, these strategies include three subsets as Centering Your Learning, Arranging and Planning Learning and Evaluating Your Learning. According to Oxford (1990), affective strategies are used to control emotions, attitudes and motivation. There are

ten affective strategies which are clustered into three main sets as Lowering Your Anxiety, Encouraging Yourself and Taking Your Emotional Temperature. The final group is social strategies. They are very important because as Oxford (1990) states, language means communication, and communication takes place among people; that is, it is a social behavior. Social strategies consist of three sets as Asking questions, Cooperating with Others and Emphasizing with Others. Each sets includes two specific strategies, as well. The summary of Oxford's (1990) classification of language learning strategies is shown in Figure 2.1 below.

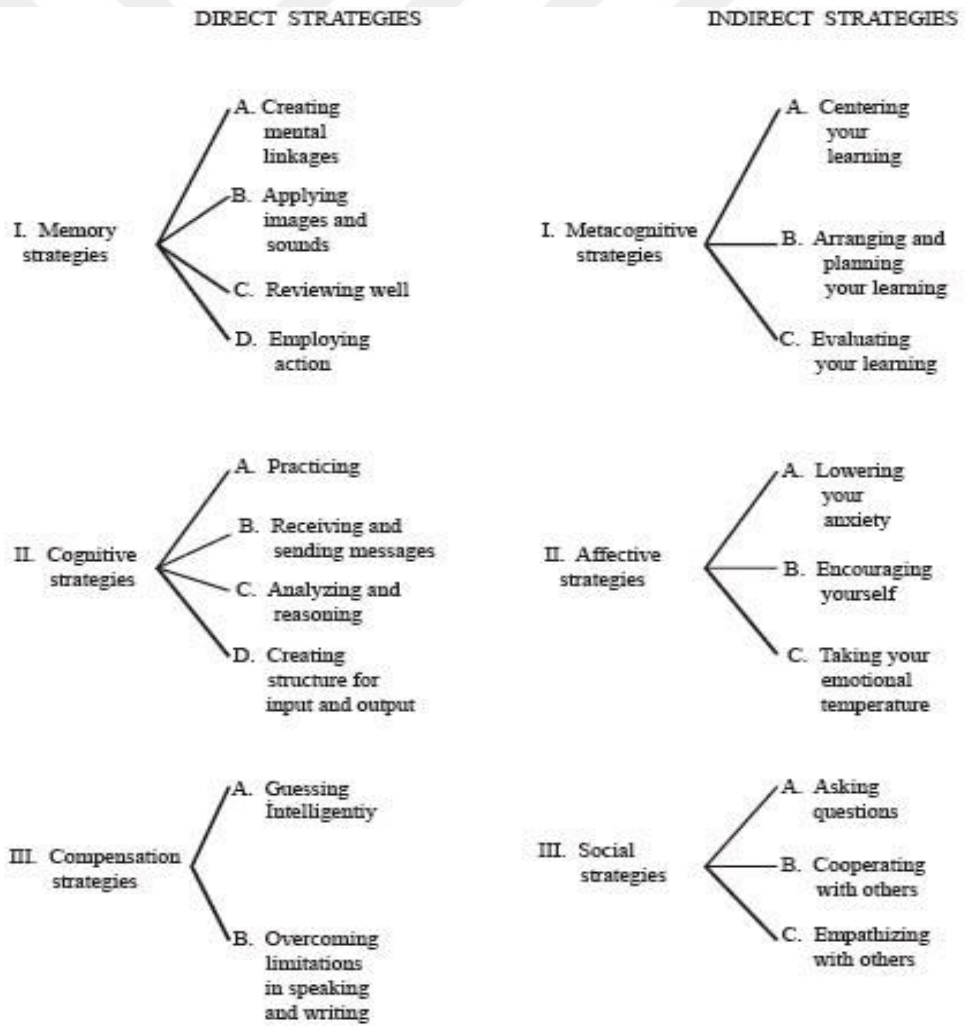

Figure 2.1. Diagram of strategy system (Oxford, 1990, 17).

2.4. Language Learning Motivation

The term "motivation" is a widely used phenomenon to describe people's behaviors. In Oxford's Online Dictionary, it is defined in two ways as "the reason or reasons one has for acting or behaving in a particular way" and "The general desire or willingness of someone to do something". According to Keller's (2010) definition, "motivation explains what goals people choose to pursue and how actively or intensely they pursue them" (p. 4). As we can understand from the definitions, motivation can explain why someone is learning a foreign language or why he is so eager to learn it. So motivation comprises a basis for learning because it determines how eager the learner will be during the long process of acquiring knowledge and apply them to the real life or future situation, his reactions to the failures or success and how much and how long he will devote himself to learning a language. In other words, if he does not want to learn, we cannot make him learn; in this situation, the only way we can help is to make him want it. As Dörnyei (1998, 2005) explains motivation has a role to initiate and maintain L2 learning process. Furthermore, Gardner and Lambert (1972) state that all the other things being equal, motivation is a factor making a difference and leading to success among students since the other things involved in SLA requires motivation to some extent (Dörnyei, 2005).

In SLA, motivation is a complex (Gardner, 2007; Lightbown & Spada, 2006) and multifaceted (Dörnyei, 1998, 2003; Gardner, 2010; Ushioda & Dörnyei, 2012; William & Burden, 1997) phenomenon; for this reason, there are many definitions and frameworks and models to explain the role motivation plays in SLA. Gardner (1985) defines motivation as "the combination of effort plus desire to achieve the goal of learning the language plus favorable attitudes towards learning the language" (p. 8) and states that none of those aspects alone reflects motivation; for the existence of a motivated behavior, three of them must occur together. In a similar way, motivation concerns the choice of a particular action, the persistence with this action and the effort expanded on it (Dörnyei 2000; 2014; Dörnyei & Ushioda, 2011; Ushioda, 2008). Williams and Burden (1997) define motivation as a state of cognitive and emotional arousal. They also state that this arousal leads to a conscious

choice of an action, then to an intellectual or physical sustained effort to attain the previously set goal as in the previously mentioned definitions above. Dörnyei and Otto (1998) urge that motivation is a dynamic state, and changes during the process of learning a foreign language; thus, based on this assumption, they define motivation as "the dynamically changing cumulative arousal in a person that initiates, directs, coordinates, amplifies, terminates, and evaluates the cognitive and motor processes whereby initial wishes and desires are selected, prioritized, operationalized, and (successfully or unsuccessfully) acted out" (p. 64).

The study of motivation in SLA field was initiated by Gardner and Lambert (1959), and as Dörnyei (1990) states, it becomes the distinguished research topic since Gardner and Lambert's (1972) publication of the summary of 13-year-long studies. Gardner's Socio-Educational model and the concept of integrativeness dominated the field more than three decades in SLA because it is well developed, tested and researched and has no real gaps and openings (Dörnyei, 1994b). Furthermore, Crookes and Schmidt (1991) express that "it was potentially so dominant that alternative concepts have not been seriously considered" (p. 501).

However, in early 90s, alternative viewpoints and constructs turned out to emerge as a result of cognitive revolution in phycology and the desire to focus on motivation in specific learning context (Dörnyei & Ushioda, 2011). Dörnyei & Csizer (1998) further explain that "One of the drives behind the reform attempts was to adopt a more pragmatic, education-centered approach to motivation research which would be consistent with the perceptions of practicing teachers and, thus more directly relevant to classroom application" (p. 204) because as Dörnyei (1990) argues differences among the success of learners cannot solely be attributable to the concept of integrativeness and affective factors related to integrative motivation are clustered in different formation in foreign language (FL) context where languages are taught as a subject matter at schools. Therefore, he added "need for achievement and attributions about past failures" components to his construct in addition to integrative and instrumental subsystems in his study.

Later, Dörnyei (1994a) proposed a three level framework of L2 motivation, and Dörnyei and Otto (1998) developed the process-oriented model. Williams and Burden (1997) studied motivation from a social constructivist perspective and proposed a dynamic model based on this perspective. Finally, Dörnyei (2005) developed a new construct called L2 Motivational Self System. By the way, Socio-Educational Model went through several changes and modifications in time, too.

2.4.1. Models and Frameworks of L2 Motivation

The characteristics of motivated individuals are that they are goal-directed, persistent, attentive to the necessary tasks, aroused, effortful and they have strong desires, expectancies about their success or failures, self-efficacy and self-confidence about their achievements, motives and finally they enjoy the activities necessary to achieve their goals (Gardner, 2006, 2007, 2010; Masgoret & Gardner, 2003). Then, based on these characteristics, Gardner draws a conclusion that motivation in SLA is not a simple construct because some characteristics are cognitive in nature, some are affective, and some are behavioral. In addition, L2 learning is not simple and it is not the same as learning any other subjects at school (Dörnyei, 2003; Gardner, 1985, 2007, 2010; Williams & Burden, 1997) since it also involves taking on the elements of L2 culture (Dörnyei, 2003; Gardner, 1985, 2007, 2010; Gardner & Lalonde, 1985). As Dörnyei (1994a) summarizes “L2 learning is more complex than simply mastering new information and knowledge; in addition to the environmental and cognitive factors normally associated with learning in current educational psychology, it involves various personality traits and social components” (p. 274). Dörnyei (2014) also points out that motivation has been considered to have both cognitive and affective components, and these two components interact with each other; for this reason a comprehensible L2 motivational construct must be eclectic (Dörnyei, 1994a).

Gardner's Socio-Educational Model

One of the most influential models of L2 motivation is Gardner's socio-educational model of second language acquisition since the element of motivation is at the heart of his model directly effecting L2 achievement. In addition, the model is simply centered around the point that learning of the cultural values of the target language community is an important part of L2 learning (Gardner, 2010). There are three main components in the model; they are integrativeness, attitudes towards the learning situation and motivation (Masgoret & Gardner, 2003). Integrativeness and attitudes towards the learning situation together with another component – instrumentality - support motivation in the model; what has a direct influence on language achievement are motivation and ability, though. The schematic representation of the model is presented in figure 2.2 below.

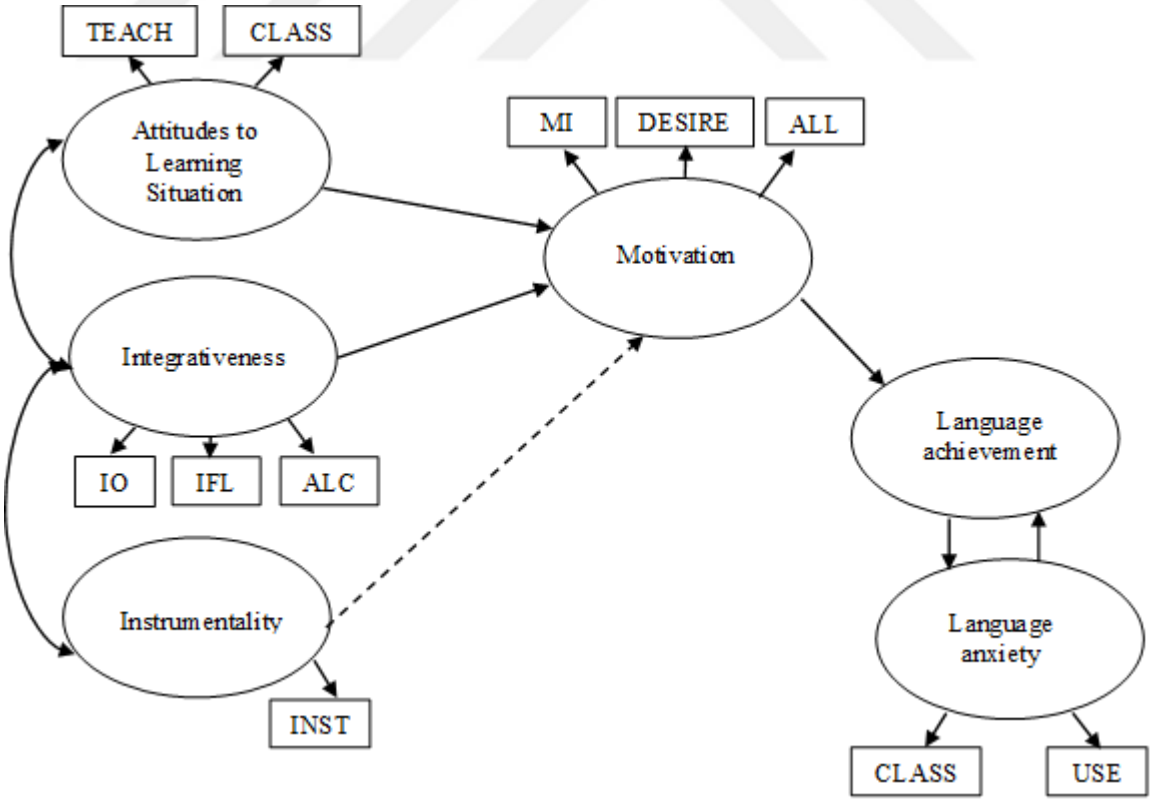

Figure 2.2. The socio-educational model (Gardner, 2006, 246).

Gardner (2010) defines integrativeness as "a genuine interest in learning the second language for the purpose of communicating with members of the other language community" (p. 88). The construct is comprised of integrative orientation (IO), interest in foreign languages (IFL) and attitudes towards the target language community (ALC). The second construct which supports motivation, attitudes towards learning situation, refers to learners' emotional reactions to any kinds of elements taking part in the L2 learning environment; such as the teacher, the course in general, his classmates, language material etc. Although it is not as stable as the first two components, instrumentality has a role in the support of motivation, too and it implies that language is learned for practical reasons. These three components are also positively correlated to one another (Gardner, 2006).

As we have stated earlier, Gardner (1985) defines motivation as the combination of effortful behavior, desire to learn the language and positive attitudes towards learning the target language and as the reflection of this definition, motivation is comprised of three elements as motivational intensity (MI), desire to learn the language and attitudes towards learning the language (ALL) in the socio-educational model. Motivation and ability – both intelligence and aptitude (Gardner, 2006) are two relatively independent individual characteristics which influence L2 achievement; that is, success of the learners in L2 depends on motivation or ability.

The last component in the model is language anxiety. The model suggests that it can be in the form of language class anxiety and language use anxiety. As Gardner (2010) expresses "it results from the language learning experience and has reciprocal effects on language achievement" (p. 91). In other words, when the L2 achievement level increases, the level of language anxiety decreases, and the decline in the level of anxiety influences the L2 achievement positively or vice versa.

Dörnyei's (1994a) Three-Level Framework of L2 Motivation

Dörnyei (1994a) states that L2 motivation is eclectic and multifaceted; therefore, he proposes a three-level framework comprised of the Language Level, the Learner Level and the Learning Situation Level. While he integrates the social psychological constructs suggested by Gardner and his associates into his framework, he also adds elements from educational perspective. The three levels in the framework reflect both the basic components of L2 learning process which are the L2, the L2 learner, and the L2 learning environment and the different aspects of the language such as the social dimension, the learner dimension and educational subject matter dimension. In his model, as Dörnyei and Ushioda (2011) explain, "each of the three levels of motivation exerts its influence independently of the others and has sufficient power to nullify the effects of the motives associated with the other two levels" (p. 53).

The Language Level

This level is related to the social and pragmatic dimensions of the L2 and consists of integrative and instrumental subsystems. While the integrative subsystem focuses on the L2 related affective dispositions such as a positive disposition to the L2 community, a desire to interact with the members of this community or interest in foreign languages, the latter is related to the pragmatic gains of L2 proficiency such as getting a better job or higher salary (Dörnyei, 1994a).

The Learner Level

This level is related to the individual characteristics of the L2 learner formed by a complex of affects and cognitions. Two main components of this level are "need for achievement and self-confidence". In addition, self-confidence involves the various aspects of language anxiety, perceived L2 competence, attributions about past experiences and self-efficacy (Dörnyei, 1994a).

The Learning Situation Level

This level consists of intrinsic and extrinsic motives and motivational conditions concerning the course-specific components, teacher-specific components and group-specific components. Course-specific components are in short related to course content and teaching method. The teacher specific components are made of affiliative drive to please the teacher, authority type (autonomy supporting or controlling), and direct socialization of student motivation (whether the teacher actively develops and stimulates learners' motivation via modelling, task presentations and feedback). Finally, the group-specific components are comprised of goal-orientedness, norm and reward system, group cohesion and group goal structure (competitive, cooperative or individualistic). The summary of the model is presented in Table 2.2 below.

Table 2.2. Components of Foreign Language Learning Motivation (Dörnyei, 1994a, 280).

LANGUAGE LEVEL	Integrative Motivational Subsystem Instrumental Motivational Subsystem
LEARNER LEVEL	Need for Achievement Self-Confidence * Language Use Anxiety * Perceived L2 Competence * Causal Attributions * Self-Efficacy
LEARNING SITUATION LEVEL	
Course-Specific Motivational Component	Interest Relevance Expectancy Satisfaction
Teacher-Specific Motivational Components	Affiliative Drive Authority Type Direct Socialization of Motivation * Modelling * Task Presentation * Feedback
Group-Specific Motivational Components	Goal-orientedness Components Norm & Reward System Group Cohesion Classroom Goal Structure

Williams and Burden's (1997) Social Constructivist Model

Another construct which reflects "the paradigm-seeking spirit of reform movement in the 1990s" (Dörnyei & Ushioda, 2011, 53) is Williams and Burden's (1997) social constructivist model. Their model is based on whole person perspective within his social interactions in the context. Williams and Burden summarize their standpoint as follows:

> "A constructivist view of motivation centers around the premise that each individual is motivated individually… However, an individual's motivation is also subject to social and contextual influences. These will include the whole culture and context and the social situation, as well as significant other people and other individual's interaction with these people. (p. 120)"

Their model consists of three stages as reasons for doing something, deciding to do something and sustaining the effort or persisting because "motivation is more than simply arousing interest" (Williams & Burden, 1997, 121). According to the model, first learners must have a reason to do something, and then they decide to act in a certain way as a consequence of the reason they have. These first two stages, as they explain, are concerned with initiating motivation; however, learners must sustain their effortful behavior or persist to achieve their goals, and this last stage contributes to the sustaining motivation. These three stages affect one another in a non-linear way, as well. The relationship among these stages is shown in Figure 2.3 below.

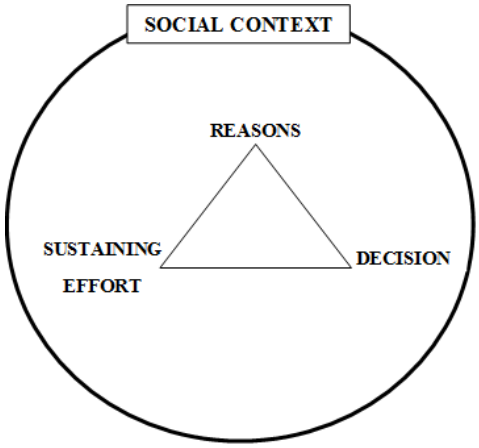

Figure 2.3. An interactive model of motivation (Williams & Burden, 1997, 122).

They further explain that there are internal and external factors influencing learners' motivation along all these stages. While internal factors are what an individual has inside himself, the effects of the social context on the learner comprise the external factors, and the relationship between them is dynamically interactive. These factors are also presented in Table 2.3 below.

Table 2.3. The list of internal and external factors (Williams & Burden, 1997, 138, 139).

Internal Factors	External Factors
Intrinsic interest of activity *arousal of curiosity *optimal degree of challenge (zone of next potential)	Significant others *parents *teachers *peers
Perceived value of activity *personal relevance *anticipated value of outcomes *intrinsic value attributed to the activity	The nature of interaction with significant other *mediating learning experiences *the nature and amount of feedback *rewards *the nature and amount of appropriate praise *punishments, sanctions
Sense of agency *locus of causality (origin or pawn) *locus of control re process and outcomes *ability to set appropriate goals	The learning environment *comfort *resources *time of year, week, day *size of class and school *class and school ethos
Mastery *feelings of competence *awareness of developing skill and mastery in a chosen area *self-efficacy	The broader context *wider family context *the local education system *conflicting interests *cultural norms *societal expectations and attitudes
Self concept *realistic awareness of personal strengths and weaknesses in skills required *personal definitions and judgements of success and failure *self-worth concern *learned helplessness	
Attitudes *to language learning in general *to the target language *to the target language community and culture	
Other affective states *confidence *anxiety, fear	
Development age and stage	
Gender	

Dörnyei and Otto's (1998) Process-Oriented Model

Dörnyei and Otto (1998) criticize that previous models of motivation did not provide all the motivational effects on students' behavior, focused mainly on the choice motivation and ignored the dynamic nature of the L2 motivation. In addition, motivation is dynamic rather than a stable construct; that is, it changes during the long process of L2 learning (Dörnyei, 2000; Dörnyei & Otto, 1998). To make up for the deficiencies in the previous models, they propose a process-oriented model which is based on the view that motivation is a dynamic process where the learners go through various stages. The schematic representation of the model is presented in Table 2.4 below.

Table 2.4. Process model of motivation (Dörnyei, 2005, 85).

Pre-actional Stage →	Actional Stage →	Post-actional Stage
CHOICE MOTIVATION	**EXECUTIVE MOTIVATION**	**MOTIVATIONAL RETROSPECTION**
Motivational Functions: • setting goals • forming intentions • launching actions **Main motivational influences:** • various goal properties (e.g. goal relevance, specificity and proximity) • values associated with the learning process itself, as well as with its outcomes and consequences • attitudes towards the L2 and its speakers • expectancy of success and perceived coping potential • learner beliefs and strategies • environmental support or hindrance	**Motivational Functions:** • generating and carrying out subtasks • ongoing appraisal (of one's achievement) • action control (self-regulation) **Main motivational influences:** • quality of the learning experience (pleasantness, need significance, coping potential, self and social image) • sense of autonomy • teachers' and parents' influence • classroom reward and goal structure (e.g. competitive or cooperative) • influence of the learner group knowledge and use of self-regulatory strategies (e.g. goal setting, learning, and self-motivating strategies)	**Motivational Functions:** • forming casual attributions elaborating standards and strategies • dismissing the intention and further planning **Main motivational influences:** • attributional factors (e.g. attributional styles and biases) • self-concept beliefs (e.g. self-confidence and self-worth) • received feedback, praise, grades

The model consists of two dimensions: actional phase and motivational influences. The actional sequence has three stages as pre-actional, actional and post-actional. The role of the motivational influences is to fuel the actional process during these three stages (Dörnyei, 2000; Dörnyei & Otto, 1998).

In pre-actional stage, first, the motivation must be generated and it is named as choice motivation. Based on this choice motivation, the initial wishes and hopes are turned into goals. Then, the intention is formed and these intentions are enacted. Furthermore, the action plan is organized in this stage. In actional stage, learners step into action and the plans are implemented, so executive motivation takes the place of choice motivation. Since the action plans are usually incomplete, first, subtasks are generated and implemented in this stage. Appraisals and action control are two other processes, as well. While the learners evaluate stimulus coming from the surrounding and their progress, they also implement some action control/self-regulatory strategies in order to keep on the action and prevent the action from being left. In short, the focus is on the implementation of the action and sustaining of motivation. In the post-actional stage, the action is finally completed or interrupted for a while and motivational retrospection takes place. Learners evaluate the outcome and compare it with the initial expectancies (Dörnyei, 2003). The dynamic evaluation of motivation, as Dörnyei (2001) summarizes, also enables us to understand the role of the learners in the affective side of L2 learning.

Dörnyei's (2005) L2 Motivational Self System

The concepts of self and identity has been dominating the L2 motivation research recently (Ushioda, 2013), and one of the consequences of these new approaches is Dörnyei's (2005) L2 Motivational Self System which integrates some SLA theories with the research findings of self in psychology. Dörnyei (2014) states that "it offers a comprehensive perspective that builds on several previous constructs and is compatible with the emphasis on motivational, cognitive, and emotional conglomerates" (p. 520). Dörnyei (2005) urges that the dynamic representations of self-system put the self in the

center of motivation and action. He further claims that possible selves provide the most powerful and versatile motivational self-mechanism. Possible selves are, as Dörnyei (2005) defines, what someone might become, what he would like to become and what he is afraid of becoming; in other words, they are "the specific representations of one's self in future states involving thoughts, images, and senses" (p. 99). As an L2 motivational concept, therefore, he prefers the terms "ideal and ought selves" proposed by Higgins (1987) (cited in Dörnyei, 2005).

Csizer and Dörnyei's (2005) comprehensive study in Hungary revealed that Gardner's original concept of integrativeness is at the crux of the motivational construct and it has an immediate relation with two different variables; instrumentality and attitudes towards L2 speakers; as a result, they claim that this relation can be conceptualized with the concept of self-system in a better way. They suggest that if our ideal language self is proficient in L2, we have an integrative disposition; moreover, it also represents the cognitive motives related to L2 mastery, so it means that it is linked to the professional competence thus to the instrumentality. They also divide instrumentality into two types on the extent of internalized extrinsic motives which constitute the concept. While internalized instrumental motives serve to the ideal self, non-internalized instrumental motives forced by the external factors are related to ought-self.

From a self-system perspective, Csizer and Dörnyei (2005) defines motivation as "the desire to achieve one's ideal language self by reducing the discrepancy between one's actual and ideal self" (p. 30), and Dörnyei (2005) offers the L2 Motivational Self System consisting of three dimensions as Ideal L2 Self, Ought to L2 Self and Language Experience. Ideal L2 self refers to the L2-specific facet of one's ideal self, and it is a powerful motivator because the person we would like to become speaks L2. Ought-to L2 self refers to the qualities that someone believes he ought to have to keep away from negative outcomes. Finally, L2 learning experience concerns the situation specific motives related to immediate learning environment and experiences.

Keller's ARCS-V Motivational Model

Although Keller's ARCS-V motivational model is not solely for L2 learning, it is worth mentioning here since it can be applicable to various learning settings and has a high validity and reliability (Uçar & Kumtepe, 2016). ARCS-V is the acronym for attention, relevance, confidence, satisfaction and volition. It was first introduced in 1984 aiming to provide probable answers to the motivational problems faced in the learning setting (Keller, 2010), and modified in 2008; that is, the fifth category - volition - was added (Keller, 2016). He also suggests three basic sub-categories for each category that the instructors can follow to accomplish these stages (Keller, 2010).

The first category, attention, is about raising curiosity and interest. The focus of the motivational concerns is to stimulate and sustain attention of the learners to the task. Perceptual arousal, inquiry arousal and variability are the sub-categories for this stage. The second stage is to build relevance; the instruction must be consistent with learners' goals, learning styles and past experiences. The suggested sub-categories for this category are goal orientation, motive matching and familiarity. Building confidence is the next stage in the model. At this stage, learners must believe that they have the ability to succeed; in addition, materials and assignments should not be too easy for them leading to the feeling that they already know the topic. Its sub-categories are learning requirements, success opportunities and personal control are. After achieving these first three motivational goals, learners must be satisfied with both the outcome and the learning process. Both intrinsic and extrinsic factors may lead to the feeling of satisfaction, as well. This stage has three sub-categories as natural consequences, positive consequences and equity, as well (Keller, 2010). These four categories provide a basis for motivation to learn. However, the role of the fifth category – volition – is to explain the difference between the persistence levels of the learners and provide motivational support strategies (Keller, 2016). Also, its sub-categories are intention, commitment and self-regulation. Moreover, volition compromises previously mentioned categories: attention, relevance and confidence, and it takes place before satisfaction (Uçar & Kumtepe, 2016). In addition, Keller (2010) explains that these

categories are related to each other; in other words, a motivational activity may affect the different categories of motivation at the same time.

2.4.2. Types of Motivation

In SLA research, there are two main dichotomies as integrative-instrumental and intrinsic-extrinsic (Rivera-Mills & Plonsky, 2007). The concept of integrative and instrumental motivation was proposed by Gardner and his colleagues to explain solely the L2 learning and constitutes the main parts of Gardner's Socio-Educational Model (Dörnyei, 2001). However, the terms, intrinsic and extrinsic motivation, proposed by Deci and Ryan are psychological terms to explain any kind of human behavior in general, and adapted to the context of SLA later. This latter forms of motivation are also the core of Self-Determination Theory (SDT).

The concept of integrative motivation was originally defined by Gardner and Lambert (1972) as "willingness to become the member of another ethnolinguistic group" (p. 12), and as the contrasting form, instrumental motivation is defined as learning L2 for the pragmatic benefits such as earning money and getting a job. Gardner and his colleagues hold a belief that integrative motivation is priori to instrumental motivation for an ultimate success in mastering L2, however. Gardner (1985) further claims that even instrumental motivation includes some integrative motivation since pragmatic reasons include willingness to interact with other ethnic groups to some extent, as well. On the other hand, Dörnyei (1990) asserts that integrative motivation consists of general attitudes towards language learning in FL context, and instrumental motivation is more important. However, it is difficult to make a distinction between ESL (English as a second language) and FL context in some areas since it is much easier for one to cross between ESL and EFL contexts both virtually and physically in today's world (Ushioda, 2013). According to Kormos and Csizer (2008), it is also problematic to separate integrativeness from instrumentality since English is considered to be a world language. Later, Ushioda and

Dörnyei (2012) also state that "a generalized international outlook" takes the place of integrative motivation since English has become a lingua franca in our globalized world; as a result of this, the focus on the target community shifted towards a global one. Besides all this discussion in the field, it is useful to indicate that the success in L2 can be attributable to both integrative and instrumental motivation while a failure can be the result of lack of either of them (Gao, 2009).

The other types of motivation, intrinsic and extrinsic, were proposed by Deci and Ryan in mid-1970's, but it was not till mid-1980's that they introduced self-determination theory (SDT) as an elaboration of these two types of motivation (Deci and Ryan, 2008). SDT is more interested in types of motivation rather than its amount (Deci & Ryan, 2008), and tries to explain the source of motivation: whether it is self-determined or externally controlled (Brown, 1987). Intrinsic motivation is defined as doing an activity for its own pleasure and satisfaction, and it is seen as the strongest instances of self-determined behavior; however, extrinsic motivation, as the contrasting form, is defined as doing an activity for instrumental reasons (Deci, et al., 1991; Ryan & Deci, 2000a; Ryan & Deci, 2000b). These types of motivation - intrinsic and extrinsic - are not bi-polar, but rather lie along a continuum of autonomous and controlled motivation, as well (Noels, Pelletier, Clement & Vallerand, 2000).

There are four types of extrinsic motivation varying in their degree of self-determinacy. These variation in extrinsic motivation, as Vansteenkiste, Lens and Deci (2006) state, shifted the focus to autonomous and controlled motivation, as well. External regulation is the least self-determined form of extrinsic motivation (Ryan & Deci, 2000b), and external rewards, punishment etc. prompt it. The second least determined form is introjected regulation which is the case that people take in a regulation but not accept it as their own (Deci et al., 1991), and do an activity to avoid shame and quilt. These two types of extrinsic motivation are also grouped under controlled motivation. The regulation through identification and integrated regulation are types of extrinsic motivation which are seen as autonomous motivation together with the intrinsic motivation. In the case of

regulation through identification, people take in and accept a regulation as their own, and in the case of integrated regulation – the most self-determined form of extrinsic motivation – the identified regulations are fully assimilated. It is also important to note that both autonomous form (intrinsic motivation, identified and integrated regulations) and controlled form of motivation (external and introjected regulations) stand opposite amotivation – the lack of intention (Deci et al., 1991; Deci & Ryan, 2008).

Both integrative and instrumental motivation display an extrinsic form of motivation because these two types indicate that the language is learned for goals other than the self-enjoyment or satisfaction (Gardner, 1985, 2010; Schmidt, Boraie & Kassabgy, 1996). The self-determination theory was first examined in SLA by Noels and her colleagues (Noels, 2001; Noels et al., 2000) and the results of her studies also revealed that instrumental motivation is highly correlated with external regulation, but integrative motivation shows a stronger correlation with the more self-determined forms of motivation, as well.

Dörnyei (2014) states that most motivational theories are comprised of cognitive and affective components in nature and affect has a cognitive aspect, too. Furthermore, although environmental factors affect the intensity of humans' needs and drives, these drives and needs are innate in general (Brown, 1987). Proceeding from here, the L2 motivation is studied under the science of cognitivism in the current MA thesis. On two variables – language learning strategies and motivation – mentioned in this section, there are many studies investigating their relationship to each other and L2 success.

2.5. International Studies on Language Learning Strategies, Motivation and Language Achievement

The main purpose of LLS research is to investigate relationship between the learners' use of LLS and success in L2 learning (Takeuchi et al., 2007). With this purpose,

Park (1997) conducted a study with 332 students in Korea by using SILL and students' TOEFL scores. The results revealed a linear relationship; that's more proficient learners used LLS more often. Similarly, Griffiths (2003) examined the relationship between course levels and the frequency of LLS use of 348 students studying at a private school in New Zealand. She found out that advanced students used LLS significantly more frequently than elementary level students. In addition, Magogwe and Oliver's (2007) study with 480 students from different education levels in Botswana revealed that more proficient learners used LLS more often. In her case study, Halbach (2000) found similar results, too. Based on the students' diaries, she found out that more successful students used LLS more frequently. These findings also parallel to the other studies previously carried out by Oxford and Nyikos (1989) and Green and Oxford (1995). On the contrary to these findings, there are also some studies which yielded different results. For example, Hong-Nam and Leawell (2006) carried out a study with 55 ESL learners from different cultures, and the findings revealed a moderate usage of LLS. They also found out a curvilinear relationship between the use of LLS and L2 proficiency; that is, intermediate level learners use strategies more often than both beginning and advanced level learners. In addition, in their case study, Vann and Abraham (1990) found out that unsuccessful learners were also active strategy users, but they used strategies inappropriately, and they lacked the meta-cognitive strategies in their repertoire. The study carried out by Oxford and Ehrman (1995) also reveal that only cognitive strategies are significantly correlated to L2 proficiency. However, these studies do not show the direction of the relationship; either the use of LLS is the cause or the result of high proficiency (Gan, 2004).

The relationship between motivation and L2 success has also been examined by the researchers. For example, Schmidt et al. (1996) conducted a large scale study with 1464 learners in Cairo by using a questionnaire they had developed. Their results suggested that there were three basic dimensions to motivation: affect, goal orientation and expectancy. They also found out that more proficient learners had higher levels of both instrumental and integrative motivation. In addition, Gardner (2007) carried out a study with 302 students in Spain. He found out that there was a positive relationship between students' grade and

motivation. The results also revealed that integrative orientation was more strongly correlated to students' grades than instrumental motivation. In their study with 128 students in Iran, Ghanea, Pisheh and Ghanea (2011) also found out that there was a significantly positive relationship between students' L2 proficiency and both integrative and instrumental motivation. Besides these studies, the results of the study conducted by Lim (2012) with 68 university students in Cambodia revealed that students had stronger instrumental motivation in the EFL setting, but neither instrumental nor integrative motivation was significantly correlated to L2 proficiency.

As Oxford and Schramm (2007) indicates, motivation is a variable which has the strongest correlation with LLS use. This idea is supported by many studies, as well. For example, Wharton (2000) carried out an extensive research on language learning strategies among 678 bi or multilingual students studying French and Japanese as a foreign language at Singaporean universities. In his study, he also analyzed the LLS's relation to motivation, gender and self-rated proficiency of the participants. He found out that there was a positive correlation between language learning strategies, motivation and self-rated proficiency; the use of LLS among more proficient and more motivated students was more frequent and had a greater variation. He also reported that motivation was the most significant variable affecting LLS use. In their study with 471 first-year university students in China, Zhang and Xiao (2006) investigated the relationship among motivation, LLS use and L2 proficiency. They found that instrumental motivation level of the learners did not differ according to their proficiency level; however, the students with high proficiency were intrinsically more motivated than intermediate level students, and students with low proficiency had the lowest level of intrinsic motivation. Furthermore, the use of LLS significantly differed according to both L2 proficiency and motivation; that is, students with higher proficiency and motivation levels used LLS more often. However, the use of cognitive strategies were not correlated to L2 proficiency, and there was a negative relationship between compensation strategies and both L2 proficiency and motivation. More recently, Xu (2011) carried out a survey with 284 Chinese graduates of non-English majors to investigate the relationship between Chinese graduates' language learning

motivation and their LLS use in Beijing. The results supported the mainstream idea; more motivated students used LLS more frequently than their less motivated counterparts. In their study with 163 university freshmen enrolled in different majors in central Taiwan, Chang and Liu (2013) found out that there was a strong and positive correlation between the frequency of strategy use and motivation; students with high motivation use learning strategies significantly more frequently than those with medium motivation. Likewise, students with medium motivation use learning strategies significantly more often than those with low motivation. They also found out that students with high proficiency level used strategies much more often than their lower level counterparts, but there was no significant difference between students in the intermediate and low level groups. In a more recent study with 206 intermediate level students studying English in private institutes in Iran, Khazaie and Mesbah (2014) found out that both intrinsic and extrinsic motivation were positively correlated with all strategy categories in SILL and in relation to these results, amotivation is strongly correlated with all strategy types in a negative way.

The relation of motivation and the use of LLS to demographic variables has also been investigated by the researchers. For example, Peacock and Ho (2003) and Su and Duo (2012) found out that female students used LLS more often than their male counterparts. Green and Oxford (1995) had similar results, too, and Oxford and Ehrman (1995) found out that female students used LLS in general more frequently, but only the use of compensation strategies was in favor of the females. Unlike these studies, in Wharton's (2000) study, males were found out to be more frequent users of LLS, and Hong-Nam and Leawell (2006) found out that female students used only affective and social strategies more frequently. The university major is another variable whose effects on LLS use is investigated. Oxford and Nyikos (1989) found out that social science students used functional practice and resourceful, independent strategies more often than science students. In their study, Politzer and McGroarty (1985) also found out that students from humanities used more individual study strategies than engineering students, and they reported that career specialization has possible effects on LLS use. Similarly, Peacock and Ho (2003) also investigated the use of LLS across eight disciplines and found that both the

type and frequency of LLS use differed among disciplines; students majoring in English were the most and those majoring in computing were the least frequent users.

In terms of the relationship between motivation and demographic variables, there are many studies, too. Shaaban and Ghaith (2000) conducted a study with 180 university students in Lebanon to investigate the motivation of learners with respect to various variables. They found that females were more motivated than males and there was no significant difference based on the majors students studied. Similarly, Mori and Gobel (2006) also found out that female students were integratively more motivated than males, and there were no other differences in other areas of motivation. However, in his study with 50 university students in Jordan, Al-Oliemat (2013) found no significant difference between male and female students' instrumental and integrative motivation. Likewise, Akram and Ghani (2013) found out that there were no gender differences in terms of motivation in Pakistani setting.

2,6. National Studies on Language Learning Strategies, Motivation and Language Achievement in Turkish Context

In terms of LLS use and achievement, there are many studies in the national context, too. For example, Altan (2003) conducted a study with 21 ELT students attending to English preparatory classes and found that more proficient learners used LLS more frequently. However, the results also revealed that only the use of compensation strategies and LLS in general were correlated with the students' achievement scores. Cephe and Yeşilbursa (2006) carried out a study with 187 university preparatory class students and found that students used LLS and its sub-categories at a medium frequency. The results also revealed that the use of LLS in general did not significantly differ between the proficiency levels; however, less proficient students used memory and meta-cognitive strategies more frequently, and more proficient students used compensation strategies more often with a significant difference. In his thesis study, on the other hand, İpek (2012) found

out that more successful students used compensation and meta-cognitive strategies more often, and the use of memory and social strategies showed no significant difference according to students' achievement levels. Çakır's (2012) thesis study also revealed a medium usage of LLS but no relationship between the LLS use and students' success. In her study with 702 university preparatory students, Demirel (2012) also found out that students used LLS at a medium level. On the other hand, the results yielded that the more frequent users of LLS were more successful than the students using LLS less often. Likewise, Özmen and Gülleroğlu (2013) conducted a study with 531 first-year students at Education Faculty. The result revealed a medium usage of LLS and a linear relationship between LLS use and achievement, too. That is, more successful learners used LLS more frequently than their less successful counterparts.

The relationship between motivation and L2 success has also been examined by the researchers in Turkish setting. For example, in her thesis study, Aydın (2007) investigated the relationship between 310 university prepar1atory school students' motivation, attitudes and perception and their academic achievement. First of all, she found that students had a high level of instrumental and moderate level of integrative motivation. She also found out that motivation was the least predictor of achievement among attitudes and perceptions of the students. Kurum (2011) investigated the relationship between motivation and L2 success among 50 students studying at Turkish military academy. He found out that there was a relationship between students' overall motivation and their L2 success, and high proficient students were significantly more motivated than low proficient ones. However, the findings revealed that the integrative motivation was not correlated to L2 success. Yılmaz (2013) conducted a study with 323 high school students and found that students had relatively high motivation levels but the instrumental motivation levels of the students were significantly higher than their integrative motivation. The results also revealed that motivation levels of the students were significantly correlated to their academic achievement.

The relation of motivation and the use of LLS to demographic variables has also been investigated by the researchers in Turkey. There are studies showing that females are more frequent users of LLS in Turkish setting (Çakır, 2012; Demirel, 2012; Özmen & Gülleroğlu, 2013); however, in his thesis study with 461 university preparatory students, Padem (2012) found that the use of LLS did not significantly differ between male and female students, but only the use of memory strategies in favor of females and compensation strategies in favor of males significantly differed. In terms of university majors and LLS use, the findings of the study carried out by Yapıcı and Bada (2004) revealed that the types of LLS favored by the basic/applied science and social science students significantly differed. While basic/applied science students used meta-cognitive and cognitive strategies more often than social science students, social science students were more frequent users of socio/affective strategies.

There are also many studies investigating the relationship between motivation and demographic variables. Many studies carried out in Turkey revealed that females had higher level of motivation to learn English than males (Aydın, 2007; Mendi, 2009; Özçalışan, 2012; Öztürk & Gürbüz, 2013; Yılmaz, 2013). In her thesis, Özçalışan (2012) also investigated the relationship between motivation and university majors, and found that only one motivational factor – enabling students' education easier in Turkey – significantly differed among university majors. More specifically, students of business administration had the highest score and students of science and letters faculty had the lowest.

Unlike international studies, there are not many studies conducted in Turkish setting, in terms of the relationship between motivation and LLS use. Only three studies could be reached, and two of these studies examined the issue from different perspectives. Mendi (2009) investigated the relationship among students' motivation, reading strategies and their reading proficiency performance in English. The results revealed that there was a positive relationship between students' motivation and reading strategy use and motivation and reading performance, but no significant relationship between students' reading strategy use and reading performance was found. In her M.A. thesis, Günak (2010) investigated the

relationship between students' motivation and learning strategies for learning German as a second foreign language and the effects of these two variables on students' achievement. The findings of the study revealed that there was a significant correlation between students' motivation and learning strategies, and they had a direct effect on students' achievement. In addition, she also found out that every student has his/her own specific learning strategy, but the source of motivation for learning German as a second foreign language is common to all students. Tilfarlıoğlu and Kurtoğlu (2015) investigated the relationship between LLS, language learning motivation and academic achievement among 520 students at higher school of foreign languages. They used motivated strategies for learning questionnaire (MSLQ) as a data collection instrument. The results revealed that students used LLS at an average frequency. In terms of motivational types, participants' scores for both intrinsic and extrinsic motivational elements are high, and their use of motivational elements are a little higher than medium level. Furthermore, both language learning motivation and LLS had a positive relation with academic achievement, and motivation is a factor contributing to the LLS use of the learners, as well.

As mentioned above, there are not many studies focusing on the learners' L2 motivation and their LLS use in Turkish setting. Although there are studies examining the relationship between L2 motivation, the use of LLS and L2 proficiency separately, a study which investigates the LLS use of the learners through SILL and compares the results with a motivation questionnaire has not been conducted. Similarly, the correlation of integrative and instrumental motivations with SILL has not been studied so far. These gaps found in the current literature have led the researcher to investigate the relationship among language learning strategies, motivation and academic achievement by using two different data collection instruments: strategy inventory for language learning (SILL) developed by Oxford (1990) and motivation/attitude questionnaire (MAQ) developed by Dörnyei (1990).

CHAPTER III

3. Methodology

The purpose of this study is to investigate the relationship between students' language learning strategies, language learning motivation and academic achievement in English. First, this chapter presents the overall design of the study. Then, the necessary information about the context of the study and the participants are provided. Afterwards, the data collection instruments and procedures are presented. Finally, the data analysis procedures are explained in detail.

3.1. Research Design

The present study is based on quantitative survey method. Cohen, Manion and Morrison (2007) explain that "Surveys gather data at a particular point in time with the intention of describing the nature of existing conditions, identifying standards against which existing conditions can be compared determining the relationships that exist between specific events" (p. 205). For surveys, the main data collection instruments are questionnaires. In this study, two self-report questionnaires, the Turkish version of Oxford's (1990) strategy inventory for language learning (SILL) translated by Cesur and Fer (2007) and the Turkish version of Dörnyei's (1990) motivation/attitudes questionnaire (MAQ) translated by Mendi (2009) were used, and data from 499 students were obtained through these questionnaires in about two days. The questionnaires were preferred to collect data since the data obtained through them can be analyzed objectively via statistical data analysis (Park, 1997). In addition, questionnaires are easy to administer to large groups and they save researchers' time and effort (Dörnyei, 2010).

The current thesis is a cross-sectional study and aims to determine the LLS use profile and integrative and instrumental motivation levels of students studying at Hakime Erciyas Foreign Language School at Düzce University. Besides, it also aims to investigate the relationship between students' integrative and instrumental motivation and their LLS use, and their possible relation to students' academic achievement in English, Data were obtained through questionnaires, one of the most frequently used instruments in educational research (Cohen, et al., 2007) and analyzed through the statistical data analysis programs, SPSS and AMOS.

3.2. Context of the Study

Students at Düzce University had to attend a one-year compulsory English preparatory class in their first year of education. Although it is compulsory, the only requirement is to attend 80% of the classes during the year; that is, students do not have to get satisfactory grades from the exams to go on their education in their departments. If they only exceed the attendance limit, 163 class hours in a year, they repeat the preparatory class. However, it is optional for mechanical engineering students; that is, these students do not neither have to attend the classes nor get satisfactory grades.

The program of the preparatory school at Düzce University starts with English courses at A1 level and ends at B2 level at the end of the year. The aim of the program is to improve students' English in four skill areas (reading, writing, listening and speaking) to the B2 level. To reach this target, students took 24 hours of English courses a week in each term from three different teachers. In fall term, Headway Elementary and Headway Pre-intermediate books were used as course materials, but Northstar Listening & Speaking 2-3 and Northstar Reading & Writing 2-3 books were also used in addition to Headway Intermediate book in spring term. In spring term, students took 10 hours of Listening & Speaking, 10 hours of Reading & Writing and 4 hours of General English course (based on Headway Intermediate).

To evaluate students' progress, 4 midterm exams, 8 quizzes, various kinds of homework and a proficiency exam at the end of the year were delivered. While the proficiency exam constituted the 40 % of total scores that the students got, the ratio of the rest of the evaluation materials delivered during the year is 60 % (20 % of midterm exams, 20 % of quizzes, 10 % of homework and 10 % of class participation). Students who had an average of 40 out of 100 during the year had the chance to take the proficiency exam. However, students were not required to get these scores to go on their departments; as we mentioned earlier, the only requirement is 80 % of attendance to all classes.

3.3. Participants

In this study, convenience sampling which is the most commonly used method in L2 research (Dörnyei, 2010) was used to reach the participants, and a total of 499 students (292 males and 207 females) studying English at Hakime Erciyas Foreign Language School at Düzce University in 2013-2014 academic year participated in the study. Students at Düzce University attended English preparatory class in their first year at university, then went on their departments in the following year. The samples of the current study consisted of 214 students from Faculty of Engineering (79 Computer Engineering, 91 Electrical Engineering, 34 Environmental Engineering and 10 Mechanical Engineering), 82 students from Faculty of Forestry (8 Forestry Industry, 37 Forestry Engineering and 37 Landscape Architecture), 113 students from Faculty of Business and 90 students from the Faculty of Tourism and Hotel Management.

3.4. Data Collection Instruments

Data in this study were collected with the following four instruments: Demographic Information Form, Turkish versions of Oxford's (1990) Strategy Inventory for Language Learning (SILL) translated into Turkish by Cesur and Fer (2007), Dörnyei's

(1990) Motivation/Attitudes Questionnaire (MAQ) translated into Turkish by Mendi (2009), and participants' achievement scores.

3.4.1 Demographic information form

This form was designed by the current researcher to reach the participants' demographic information. The form consisted of five questions concerning students' name, gender, age, department and how many hours a week they study English outside school. (See Appendix – 1).

3.4.2. Strategy inventory for language learning (SILL)

In the present study, Oxford's (1990) SILL which was translated into Turkish by Cesur and Fer (2007) was used to investigate LLS use profile of the students. SILL can be used for learners in ESL and EFL contexts (Hsiao & Oxford, 2002) and it can also be administered to students in their native language because reliability of the SILL is high in general (Oxford & Burry-Stock, 1995). Therefore, SILL is the most often used questionnaire in LLS studies (Chamot, 2004), and has been translated more than twenty languages (Oxford, 2006).

SILL consists of 50 items in total. There are two main categories as direct and indirect strategies. Each of these two categories is further divided into three sub-categories, as well. Direct strategies consist of memory, cognitive and compensation strategies, and meta-cognitive, affective and social strategies constitute the indirect strategies.

SILL is based on a 5-point Likert scale format comprised of 1 "never true of me", 2 "usually not true of me", 3 "sometimes true of me", 4 "usually true of me" and 5 "always true of me". There is no negative statement in SILL, so the higher the number, the more

frequently the strategy item is used by the respondents. Oxford (1990) explains that scores between 3.5 and 5.0 are considered to be “high usage”, scores between 2.5 and 3.4 are considered to be “medium usage” and scores below 2.4 are considered to be “low usage”.

In addition, for the present study, the validity and the reliability of SILL were also examined. For the validity analysis of the instrument, Confirmatory Factor Analysis (CFA) was conducted using AMOS 23.0. The reliability coefficients were measured through Cronbach’s alpha using SPSS 23.0.

The construct validity of SILL was examined through CFA. Error variance, factor loadings and factor correlations of the measurement model were found to be significant at the level of .05. See the results of CFA in Table 3.1 below.

Table 3.1. CFA results for SILL.

X^2	Sd	X^2/sd	GFI	RMSEA	CFI	IFI
1082.72	404	2.68	.87	.049	.85	.84

Seçer (2013) states that X^2/df must be below 4, and as shown in Table 3.1, it is (X^2/df = 2.68) below 4. GFI value indicates the degree of co-variance between the observed and latent variables (Şimşek, 2007), and as Marsh, Balla and McDonald (1988) state that values above .85 are acceptable so in this study GFI value (GFI = .87) is acceptable. RMSEA value must be below either .08 (Thompson, 1998) or .10 (Marsh, et al, 1988). For this study, this value (RMSEA = .049) is acceptable. Incremental fit indices (IFI) and comparative fit indices (CFI) values are expected to be above .90 (Hooper, Coughlan & Mullen, 2008); however, CFI and IFI values were found to be .85 and .84 in the current study respectively. However, it was stated in some studies that CFI values (Karadeniz, Büyüköztürk, Akgün, Çakmak & Demirel, 2008) and IFI values (Tertemiz & Ağıldere, 2015) above .81 can be accepted. As a conclusion, these results show that SILL consisting of 50 items of 6 sub-scales has a good model fit; therefore, we could carry out all the statistical analysis based on the original construct of SILL. (See Appendix – 8 for the CFA diagram).

The results of reliability analysis carried out for SILL and its sub-scales show that the instrument is highly reliable (α = .94). See the Cronbach's alpha coefficients of SILL and its sub-scales in Table 3.2 below.

Table 3.2. Cronbach's alpha coefficients for SILL and its sub-scales.

Memory Strategies	.79
Cognitive Strategies	.86
Compensation Strategies	.75
Meta-cognitive Strategies	.89
Affective Strategies	.69
Social Strategies	.68
Total	.94

A questionnaire and its sub-scales must at least have the reliability coefficients of .60 (Cohen, et al., 2007; Dörnyei, 2010). As shown in Table 3.2, Cronbach's alpha coefficients of SILL and its sub-scales are above .60. Cronbach's alpha coefficient for SILL is .94 and it means SILL is very highly reliable. Except for affective strategies (α = .69) and social strategies (α = .68), reliability coefficients for all sub-categories are .70 and above. However, comparatively lower Cronbach's alpha coefficients for affective and social strategies, as Dörnyei (2010) indicates, may be due to the limited number of items.

3.4.3. Motivation/Attitudes Questionnaire (MAQ)

The next instrument used to collect data is Motivation/Attitude questionnaire developed by Dörnyei (1990). The instrument was specially designed to measure motivation and attitudes of students in foreign language learning contexts. While the original questionnaire consisted of four main parts - instrumental subsystem, integrative subsystem, need for achievement and attributions about past failures – only two parts namely instrumental and integrative were used in the current study since the other two parts are not related to the aim of the current study. Dörnyei (1990) also explain that integrative motivation is multifaceted and consists of four components as "interest in foreign

languages, cultures, and people", "broaden one's view and avoid provincialism", "desire for new stimuli and challenges", and lastly the "desire to integrate into a new community" (p. 69). These parts were translated into Turkish by Mendi (2009). She did not include one item from instrumental and three items from integrative motivation sub-constructs since Dörnyei (1990) found out that these items occurred in more than one factor as a result of the factor analysis he conducted. Finally, she carried out a pilot study to test the reliability of the translated form of the instrument which consists of two sub-scales with 30 items. Cronbach Alpha reliabilities for MAQ and its sub-scales in Mendi's (2009) pilot study and thesis are presented in Table 3.3 below.

Table 3.3. Cronbach's Alpha coefficients for Mendi's (2009) pilot and main study.

	Master Thesis (Pilot Study)	Master Thesis (Main Study)
Integrative Motivation Sub-scale (21 items)	.83	.82
Instrumental Motivation Sub-scale (9 items)	.85	.83
Total	.87	.85

MAQ is based on a 5-point Likert scale format comprised of 1 "strongly disagree", 2 "disagree", 3 "undecided", 4 "agree" and 5 "strongly agree". There are two negative statements, item 5 and 7, in MAQ, but these items were reversely coded in SPSS. As a result, the higher numbers mean that students have both integratively and instrumentally higher motivation levels. In addition, as Öztürk and Gürbüz (2013) explain, scores above 4 indicate high motivation level, scores between 3 and 4 indicate moderate motivation level, and scores below 3 indicate low motivation level. Based on these scale ranges, participants were divided into three groups as students with high motivation level (4.0 - 5.0), students with moderate level of motivation (3.0 – 4.0) and students with low motivation level (below 3.0).

In addition, for the present study, the validity and the reliability analyses were also conducted for MAQ. For the validity analysis of the instrument, Confirmatory Factor

Analysis (CFA) was conducted using AMOS 23.0. The reliability coefficients were measured through Cronbach's alpha using SPSS 23.0.

The construct validity of MAQ was examined through CFA. Error variance, factor loadings and factor correlations of the measurement model were found to be significant at the level of .05. See the results of CFA in Table 3.4 below.

Table 3.4. CFA results for MAQ.

X^2	Sd	X^2/sd	GFI	RMSEA	CFI	IFI
1010,00	404	2.50	.89	.055	.92	.92

As shown in Table 3.4, X^2/sd value (2.50) is below 4. Marsh, et al. (1988) state that GFI values above .85 are acceptable, so GFI value is .89 in this study. RMSEA value must be below either .08 (Thompson, 1998) or .10 (Marsh, et al., 1988). For this study, this value (RMSEA = .055) is acceptable, too. (IFI) and (CFI) values are expected to be above .90 (Kline, 2011), so these values (CFI = .92, IFI = .92) are also acceptable for the present study. As a consequence, these results show that MAQ, consisting of 30 items of 2 subscales, has a good model fit for the present study. (See Appendix – 9 for CFA diagram).

Also, Cronbach's alpha coefficients of MAQ and its sub-scales are all above .80. See Table 3.5 for the Cronbach's alpha coefficients of MAQ and its sub-scales below. In addition, the reliability analysis shows that MAQ is highly reliable (α = .92). Furthermore, these results are even higher than Mendi's (2009) results.

Table 3.5. Cronbach Alpha Coefficients for MAQ and its sub-scales.

Integrative Motivation Sub-scale	.90
Instrumental Motivation Sub-scale	.89
Total	.92

3.4.4. Achievement Scores

Students' achievement scores were used as the determinants of their academic achievement in English in the current study. However, the scores of the final exam that the student took at the end of the academic year were not included because not all the students are eligible to take the final exam; that is, students whose grades are lower than 40 during the year cannot take this exam. Furthermore, chance factors, student's anxiety level or their daily mood can play a great role on students' performance on a single test with 40% weight; as a result, this may cause students' achievement to increase or decrease dramatically. As a result of all these considerations, students' achievement scores are comprised of the grades they took during the year; that is the average of the grades the students got from midterm exams, quizzes, homework and class participation.

Based on students' achievement scores, they were categorized as high achievers, low achievers and non-achievers. Students whose grades are 65 and above were categorized as high achievers since they have the right to take the final exam, and their average scores have already reached 65 which is the pass grade. Students whose grades are between 64.5 and 39.5 were categorized as low achievers because these students have the right to take the final exam, but their average score is still below the pass grade. The final group, non-achievers, consists of students whose grades are below 39.5 because these students do not have the right to take the final exam, and they have already failed.

3.5. Data Collection Procedures

The data were collected during the 2013-2014 Academic year at Düzce University Hakime Erciyas Foreign Language School. In the beginning of Fall term, Turkish versions of the two questionnaires, namely, SILL (Cesur & Fer, 2007) and MAQ (Mendi, 2009) together with the demographic information form were administered to students by the course teachers in normal class hours with a convenient sampling technique. For the sample

to be a representative of the whole population, all the students were requested to participate in the study except for the absent students at the application day. In addition, it was also stated that they could feel free not to participate in the current study if they did not want, but none of the students rejected to join the study. Before the students started completing the questionnaires, it was explained that there was no right or wrong answer; for this reason, they were expected to choose the most suitable options for themselves. Students were informed that all the personal information about the participants would be kept confidential, and their answers would not affect their current and future school life.

Finally, students' grades were requested from the school administration at the end of the year. After the grades were received, the grades of the students who did not participate in the study were excluded from the list. Lastly, participants of the study and their grades were matched.

3.6. Data Analysis Procedures

All the statistical analyses related to SILL (Oxford, 1990) and MAQ (Dörnyei, 1990) were conducted via SPSS and AMOS 23.0. Before these analyses, since two statements (item 5 and 7) in MAQ are negative, scores of these items were reversely coded with the help of SPSS. Second, the validity and reliability analyses were carried out. The results related to these analyses revealed that both questionnaires have a construct validity, and they are highly reliable (see data collection instrument for details). Finally, the normality of the variables were checked via Skewness and Kurtosis statistics. The skewness and kurtosis levels of a normally distributed data can range between -1.5 and +1.5 (Tabachnick & Fidell, 2013). The skewness and kurtosis analyses reveal that only two variables, instrumental and total motivation, were non-normally distributed, with the skewness of 1.83 (SE = .11) and 1.08 (SE = .22) and kurtosis of 4.20 (SE = .22) and 1.67 (SE = .22) respectively. For this reason, while non-parametric tests were used for the

analysis including these two variables, parametric tests were preferred for the analysis including the rest of the variables.

The effect size, which is considered to be as important as significant difference to report in scientific research (Cohen, et al., 2007; Larson-Hall, 2010), was calculated for each inferential analyses, as well. For parametric tests, the effect size was calculated through the following formula: mean differences of two groups (M_1 - M_2) divided by the pooled standard deviation (SD_{pooled}). For one-way ANOVA analysis, the effect size for each comparison was preferred, as well (Larson-Hall, 2010). For non-parametric tests, the effect size was calculated via the division of *Z*- value by the squared root of total number. For Kruskal Wallis analysis, the effect size for each comparison was calculated via this formula, too. For the differential analyses, the effect size below .20 represents the weak effect while the .21 and .50 range defines the modest level. The moderate effect size covers .51 and 1.00. When the effect size is above 1.00, it is interpreted as strong, as well (Cohen, et al., 2007). In addition, *r* value itself was used as the indicator of effect size for the correlational analysis (Cohen, et al., 2007). In this sense, according to Cohen, et al. (2007), correlation coefficients between .10 and .30 represent modest, between .30 and .50 moderate and between .50 and .80 a strong effect size. The coefficients above .80 indicate very strong effect, as well.

3.6.1. Data analysis procedure for research question 1 and 2

The first research question is about the participants' LLS use profile and the second research question is about their integrative, instrumental and total motivation levels. To find an answer to these questions, descriptive statistics were run. Mean, standard deviation and standard error mean were calculated through SPSS.

3.6.2. Data analysis procedure for research question 3

The second research question is about if the participants' use of LLS use and its sub-categories differ according to gender, faculty and hours of study outside the class. To find if there is a gender difference, independent samples *t*-test and to examine the homogeneity of the variables across gender, Levene's equality of variances test were run. To find if there is a difference across the independent variables, faculty and hours of study outside the class, and test the homogeneity of the dependent variables, one-way ANOVA was conducted. In addition, for the homogeneous variables, Tukey HSD and for the variable violating the test of homogeneity, Tamhane's T2 were conducted as a post – hoc test.

3.6.3. Data analysis procedure for research question 4

Research question 3 is about if the participants' level of motivation and its sub-constructs differ according to gender, faculty and hours of study outside the school. To find if there is a gender difference, independent samples *t*-test and Mann-Whitney U test were run. The homogeneity of the dependent variable, integrative motivation, was also examined via Levene's equality of variances test. To find if there is a difference across the independent variables, faculty and hours of study outside the class, one-way ANOVA and Kruskal Wallis tests were conducted. The homogeneity of the dependent variable, integrative motivation, was also examined via one-way ANOVA. For the differences of integrative motivation across faculty, Tukey HSD, and for the differences across hours of study outside the class, Tamhane's T2 were run as a post – hoc test. In addition all pairwise statistics for multiple comparisons were carried out for analysis related to the variables - instrumental and total motivation as a post – hoc test.

3.6.4. Data analysis procedure for research question 5

Research question 4 is about the relationship between the participants' achievement scores and their integrative, instrumental and total motivation levels and if these variables differ according to the participants' achievement levels. To find the relationship, both Pearson Product Momentum Correlations and Spearman's Rho were run. To find the difference across achievement levels, one-way ANOVA and Kruskal Wallis tests were conducted. The homogeneity of the dependent variable, integrative motivation, was also examined via one-way ANOVA. In addition, as a post – hoc test, Tukey HSD and all pairwise statistics for multiple comparisons were carried out.

3.6.5. Data analysis procedure for research question 6

The research question 5 is about the relationship between the participants' achievement scores and their use of LLS and its sub-categories and if these variables differ according the participants' achievement levels. To find the relationship, Pearson Product Momentum Correlations was run. To find the difference across achievement levels and test the homogeneity of the dependent variables, one-way ANOVA was carried out. In addition, as a post – hoc test, Tukey HSD and Tamhane's T2 were carried out.

3.6.6. Data analysis procedure for research question 7

The last research question is about the relationship of the participants' use of LLS and its sub-categories to their integrative, instrumental and total motivation levels and if the use of LLS and its sub-categories differ according to the participants motivation levels. To find the relationship between the variables, both Pearson Product Moment Correlations and Spearman's Rho were run. To find the difference across motivation levels and test the

homogeneity of the dependent variables, one-way ANOVA was conducted. Tukey HSD and Tamhane's T2 were carried out as a post – hoc test, as well.

CHAPTER IV

4. Results and Discussion

In this chapter, results of the current study are presented. With this purpose in mind, results relating to each research question are presented one by one in detail and discussed with the light of the relevant literature. The results are compared and contrasted with the findings of the previous studies and the possible reasons behind them are proposed.

4.1. Results for research question 1

"*What is the LLS use profile of the participants in the current study?"*

To be able to find out the LLS use profile of the participants in the current study, mean scores of the strategy use in general and its sub-categories were computed through descriptive statistics. As we stated earlier, scores above 3.5 indicate high usage, scores between 2.5 and 3.4 indicate medium usage, and scores below 2.4 indicate low usage (Oxford, 1990). As shown in Table 4.1 below, participants use meta-cognitive, compensation and social strategies most frequently (M = 3.01, 3.00 and 3.00 respectively) and affective strategies least frequently (M = 2.59). In addition, participants' scores for strategy use in general is 2.87. These scores indicate the medium usage of LLS and its sub-categories. Furthermore, even the most frequently reported strategies - meta-cognitive, social and compensation - and the least frequently reported strategy category namely, affective strategies, of the participants are between the range of medium usage.

Table 4.1. Participants' LLS use profile.

	Mean	Std. Deviation	Std. Error Mean
Memory strategies	2.88	.72197	.03232
Cognitive strategies	2.72	.72863	.03262
Compensation strategies	3.00	.85024	.03806
Meta-cognitive strategies	3.01	.87296	.03908
Affective strategies	2.59	.78297	.03505
Social strategies	3.00	.75311	.03371
Total strategy use	2.87	.61789	.02766

N = 499

4.1.1. Discussion related to research question 1

The findings of the current study are consistent with the earlier findings. The students were found to be using LLS at a moderate level in the present study as Cephe and Yeşilbursa (2006), Demirel (2012), Fazeli (2012), Özmen and Gülleroğlu (2013), Padem (2012), and Su and Duo (2012) found out in their studies. The most frequently used strategies of the participants show variance, though. For example, memory strategies were found to be among the most frequently used strategy types in Griffiths and Parr (2001) and Özmen and Gülleroğlu's (2013) studies; however, Fazeli (2012), İpek (2012), Hong-Nam and Leawell (2006), and Oxford and Ehrman (1995) found that memory strategies were the least frequently used strategy category. In the present study, participants favored compensation, meta-cognitive and social strategies most and affective strategies least. This kind of variety may be due to the contextual differences (Cohen, 2007; Oxford, et al, 2003; Parks & Raymound, 2004); the use of strategies may change according to the context, and a strategy which is considered to be useful in one context can be ignored in another situation. In the current context, students are required to get involved in pair and group work activities and speak English during the class hours. They also need to create opportunities for themselves to practice their English outside the class and set goals for improving their English. All these factors may lead to the high usage of compensation, meta-cognitive and social strategies. Moreover, the lack of have-to-be-successful situation may lower the frequency of affective strategy use since the students do not worry about failure.

4.2. Results for research question 2

"What is the level of motivation and its sub-constructs (integrative and instrumental) of the participants in the current study?"

To be able to determine the participants' level of motivation and its sub-constructs (integrative and instrumental), mean scores were computed through descriptive statistics. As we stated earlier, scores above 4 indicate high motivation level, scores between 3 and 4 indicate moderate motivation level, and scores below 3 indicate low motivation level (Öztürk and Gürbüz, 2013). The results are presented in Table 4.2 below.

Table 4.2. Participants' integrative, instrumental and total motivation levels.

	Mean	Std. Deviation	Std. Error Mean
Integrative motivation	3.46	.66	.02949
Instrumental motivation	4.16	.73	.03286
Total motivation	3.67	.61	.02746

N = 499

As seen in Table 4.2 above, participants' instrumental motivation level (M = 4.16) is higher than their integrative (M = 3.46) and total motivation (M = 3.67) levels. These results show that participants in the current study have moderate levels of integrative and total motivation but a high level of instrumental motivation.

4.2.1. Discussion related to research question 2

The participants were found to have moderate levels of integrative and total motivation but a high level of instrumental motivation. These results parallel with the studies conducted by Aydın (2007), Mendi (2009) and Öztürk and Gürbüz (2013). All these results support the idea that instrumental motivation is considered to be more important in FL context (Belmechri & Hummel, 1998; Dörnyei, 1990; Kurum, 2011; Lim, 2012;

Warden & Lin, 2000; Yılmaz, 2013) since "little or no social integration of the learner into a community using the target language takes place" (Kurum, 2011, 300). Furthermore, students do not have a low level of integrative motivation; this may be due to the fact that students can easily be exposed to English via course materials and the media in general. Thanks to technology, anyone has a chance to access international events and communicate with people from other cultures. Through these interactions, students may have developed a special interest in English, too. In addition, integrative motivation can be considered as a form of general international outlook since English is the lingua franca in all these occasions (Ushioda & Dörnyei, 2012). However, these findings cannot be generalized since the levels and kinds of motivation can change according to the context (Mahadi & Jafari, 2012).

4.3. Results for research question 3

"*Do the participants' reported use of language learning strategies and its sub-constructs (memory, cognitive, compensation, meta-cognitive, affective, social) differ according to:*

a) gender

b) faculty

c) hours of study outside class?"

a) Gender

Research question 3a examines if there is a statistically significant difference between male and female participants' reported use of LLS. In order to find out answers to this question, independent sample *t*-test was conducted. In addition, Levene's test indicated unequal variances for the use of cognitive strategies (F = 7.52, p = .006), so degrees of freedom were adjusted from 497 to 489. Results are presented in Table 4.3 below.

Table 4.3. Independent samples *t*-test results for participants' reported use of total language learning strategies and its sub-categories by gender.

	Gender	N	Mean	SD	t	Df	Sig (2-tailed)
Memory	Male	292	2.83	.73	2.031	497	.043
	Female	207	2.96	.70			
Cognitive	Male	292	2.77	.79	1.895	489	.059
	Female	207	2.66	.63			
Compensation	Male	292	3.11	.85	3.601	497	.000
	Female	207	2.83	.82			
M-cognitive	Male	292	3.05	.89	1.287	497	.199
	Female	207	2.95	.85			
Affective	Male	292	2.61	.77	.700	497	.484
	Female	207	2.56	.80			
Social	Male	292	3.02	.79	.353	497	.724
	Female	207	3.00	.71			
Total strategy	Male	292	2.90	.64	1.304	497	.193
	Female	207	2.82	.58			

Note: M-cognitive = Meta-cognitive

As shown in Table 4.3 above, male participants (M = 2.90, SD = .64) use LLS more frequently than female participants (M = 2.82, SD = .58); however, it is not at a significant level, $t(497) = 1.30$, $p = .193$. However, the analysis related to the sub-categories of LLS shows that the use of memory, $t(497) = 2.03$, $p = .043$, $d = .18$ and compensation strategies, $t(497) = 3.60$, $p \leq .000$, $d = .34$ significantly differs between male and female participants, with females using memory strategies and males using compensation strategies more frequently. On the other hand, the magnitude of the difference for the use of compensation strategies by gender is at a modest level, $d = .34$, and for the use of memory strategies, it is weak, $d = .18$. In addition, mean differences reveal that male students use cognitive, meta-cognitive, affective and social strategies more frequently than their female counterparts even though the use of them shows no significant difference, $p > .05$.

b) Faculty

In order to find out whether the participants' reported use of LLS and its sub-categories differ with respect to faculties that they study, we conducted one-way ANOVA

and as a post – hoc test, Tukey HSD and Tamhane's T2. Except for compensation, affective and total strategy use categories, we carried out Tukey HSD as a post – hoc test. For those three categories, compensation, affective and total strategy use, we conducted Tamhane's T2 post – hoc test since these categories violated the homogeneity of variance test, p = .023, .050 and .023 respectively. The results of one-way ANOVA are presented in Table 4.4 below.

Table 4.4. The results of one-way ANOVA for participants' reported use of LLS by faculties.

		Df	Sum of Squares	Mean Square	F	Sig.	Remarks
Memory strategies	Between Groups	3	16.103	2.034	3.97	.008	T > F, B
	Within Groups	495	253.478	.512			
	Total	498	259.580				
Cognitive strategies	Between Groups	3	11.289	3.763	7.36	.000	T > F, B E > B
	Within Groups	495	253.100	.511			
	Total	498	264.389				
Compensation strategies	Between Groups	3	9.719	3.240	4.58	.004	T > B E > B
	Within Groups	495	350.291	.708			
	Total	498	360.010				
Meta-cognitive strategies	Between Groups	3	25.525	8.508	11.90	.000	T > E, F, B E > F
	Within Groups	495	353.981	.715			
	Total	498	379.505				
Affective strategies	Between Groups	3	6.889	2.296	3.81	.010	T > B
	Within Groups	495	298.409	.603			
	Total	498	305.298				
Social Strategies	Between Groups	3	13.490	4.497	8.28	.000	T > E, F, B
	Within Groups	495	268.965	.543			
	Total	498	282.456				
Total strategy use	Between Groups	3	10.567	3.522	9.71	.000	T > E, F, B E > B
	Within Groups	495	179.565	.363			
	Total	498	190.132				

Note: B = Business, E = Engineering, F = Forestry, T =Tourism

As seen in Table 4.4 above, the reported use of LLS and all of its sub-categories significantly differs with respect to faculties, $p = \leq .05$. In addition, the results of post – hoc tests show that tourism students use LLS in general significantly more frequently than the engineering, forestry and business students. In addition, engineering students use LLS

significantly more frequently than business students even though there is statistically no significant difference between business and forestry students. In terms of LLS use in general, the effect sizes, further, indicate that the differences across tourism and engineering, and engineering and business students are at a modest level, but across tourism and forestry, and tourism and business are moderate. (See Appendix – 4 for all the post – hoc test results and effect sizes for the reported use of LLS with respect to faculties).

For the use of sub-categories, there are also significant differences among the students studying at different faculties. Tourism students use memory strategies significantly more often than forestry and business students. The use of these strategies shows no significant difference between other groups, though. Tourism students use cognitive strategies significantly more frequently than business and forestry students, too, but there is also a statistically significant difference between engineering and business students in favor of engineering students. Business students are the least frequent users of compensation strategies, but their usage significantly differs from only engineering and tourism students. Tourism students use meta-cognitive strategies significantly more frequently than engineering, forestry and business students, and the magnitude of the differences between tourism and engineering students is modest, but across tourism and forestry, and tourism and business is moderate. In addition, the only other statistically significant difference for the use of meta-cognitive strategies is between engineering and forestry students in favor of engineering students. For the use of affective strategies, there is a statistically significant difference between only tourism and business students with tourism students using more frequently. Finally, like the use of meta-cognitive strategies, tourism students are significantly the most frequent users of social strategies, and the magnitude of the differences across tourism and forestry, and tourism and business students is moderate while it is at a modest level between tourism and engineering students. However, no significant difference was found across other three groups. (See Appendix – 4 for all the post – hoc test results and effect sizes for the reported use of LLS sub-categories with respect to faculties).

c) Hours of study outside the class

As the last part of the research question 3, we conducted one-way ANOVA and as a post – hoc test, Tukey HSD and Tamhane's T2 to investigate the LLS use of the participants with respect to how many hours a week they spend studying English outside the class. We conducted Tukey HSD post – hoc test in order to find out the differences between groups for the use of affective and social strategies, but we carried out Tamhane's T2 post – hoc test for memory, cognitive, meta-cognitive and total strategy use categories since these variables violated the homogeneity of variance test, p = .015, .002, .047 and .001 respectively. Furthermore, we did not conduct any post – hoc test for the use of compensation strategies since the use of this sub-category shows no significant difference between any groups, F (2, 496) = 0.68, p = 507.

As shown in Table 4.5, except for compensation strategies, the use of LLS and its sub-categories significantly differs with respect to time the students spend studying English outside class, $p \leq .001$. In addition, the results of post – hoc test reveal that students studying less than one hour use LLS and its sub-categories significantly less frequently than those studying between one and five hours and studying more than five hours. Except for the use of meta-cognitive strategies, the magnitude of the differences between the students studying more than five hours and less than one hour is moderate, and for this category, it is at a strong level. In addition, the effect sizes indicate that the differences between the students studying between one and five hours and less than one hour are at a moderate level except for affective and social strategies. For these two sub-categories, the differences are at a modest level. Finally, students studying more than five hours use LLS and its sub-categories more frequently than those studying between one and five hours although no significant difference was found for the use of affective and social strategies, $p > .05$. The magnitude of the differences between these two groups is at a modest level except for meta-cognitive strategies, and for this group, it is at a moderate level. (See Appendix – 5 for all the post – hoc test results and the effect sizes for the reported use of LLS and its sub-categories with respect to time spent outside class).

Table 4.5. The results of one-way ANOVA for participants' reported use of LLS and its sub-categories with respect to time they spend studying English outside class.

		Df	Sum of Square	Mean Square	F	Sig.	Remarks
Memory strategies	Between Groups	2	31.238	15.619	33.93	.000	0-1 < 1-5 < 5+
	Within Groups	496	228.343	.460			
	Total	498	259.580				
Cognitive strategies	Between Groups	2	23.331	11.666	24.00	.000	0-1 < 1-5 < 5+
	Within Groups	496	241.058	.486			
	Total	498	264.389				
Compensation strategies	Between Groups	2	.984	.492	.68	.507	Non-significant
	Within Groups	496	359.026	.724			
	Total	498	360.010				
Meta-cognitive strategies	Between Groups	2	57.152	28.576	43.97	.000	0-1 < 1-5 < 5+
	Within Groups	496	322.354	.650			
	Total	498	379.505				
Affective strategies	Between Groups	2	20.980	10.490	18.30	.000	0-1 < 1-5, 5+
	Within Groups	496	284.319	.573			
	Total	498	305.298				
Social Strategies	Between Groups	2	19.517	9.759	18.41	.000	0-1 < 1-5, 5+
	Within Groups	496	262.939	.530			
	Total	498	282.456				
Total strategy use	Between Groups	2	21.573	10.786	31.74	.000	0-1 < 1-5 < 5+
	Within Groups	496	168.559	.340			
	Total	498	190.132				

4.3.1. Discussion related to research question 3

Research findings of the LLS use by gender is contradictory in the literature. While some findings indicate more frequent use of LLS by female (Demirel, 2012; Green & Oxford, 1995; Oxford & Ehrman, 1995; Oxford & Nyikos, 1989; Özmen & Gülleroğlu, 2013; Peacock & Ho, 2003; Su & Duo, 2012), in some studies males were found to be higher users of LLS (Wharton, 2000). However, no significant difference was found between male and female students' strategy use in general, and only the use of two sub-categories, memory and compensation strategies, significantly differ with female students using memory strategies and male students using compensation strategies more frequently. These results are similar to Hong-Nam and Leawell's (2006) and Padem's (2012) findings.

Padem (2012) found out no significant difference between male and female students' strategy use in general, but the use of memory strategies in favor of female and the use of compensation strategies in favor of male students show significant difference. Furthermore, the male students tend to use other sub-categories (cognitive, meta-cognitive, social and affective) and LLS in general more frequently than females, but it is not at a significant level. As a result, the use of LLS of the participants by gender does not provide conclusive findings (Chamot, 2004).

Politzer and McGroarty (1985) assert that career specialization has possible effects on students' LLS use, and they found out that students of humanities used more individual study strategies than the engineering students. In addition, Yapıcı and Bada (2004) found that the strategy types that the basic science and social science students use significantly differed. The study carried out by Oxford and Nyikos (1989) also yielded that social science students used functional practice and resourceful, independent strategies more frequently than science students. In addition, Peacock and Ho (2003) found out that both the type and frequency of LLS use differed among eight disciplines and students majoring in English were the most and ones majoring in computing were the least frequent users. In the current study, tourism students' strategy use was found to be significantly higher than the other three faculties (engineering, business and forestry). Furthermore, they are significantly the highest users of meta-cognitive and social strategies. This result can be interpreted as that English is very important in tourism sector and students apply variety of strategies to learn the language. In addition, the use of social strategies indicates that they are aware of the communication aspects of the language and turning the communication into a learning opportunity. They may use meta-cognitive strategies to create such kind of opportunities, therefore, plan their learning, as well. However, the fact that there is no significant difference between forestry and business students for the use of LLS in general and its sub-categories, and LLS use of engineering students significantly differs only from business students lead us to put forward that tourism students' higher report of strategy use can be directly linked to instrumental factors. Although English is considered to be

important in all areas, it is a major requirement in tourism; thus, tourism students seek ways to improve their language level by applying strategies more frequently.

Wong and Nunan (2011) concluded that more effective learners spend more time studying outside class and are more autonomous, and as Altan (2003) and Hong-Nam and Leawell (2006) state, the use of LLS facilitates autonomy. As in agreement with this, the current study revealed that students studying more outside the class use LLS more frequently except for compensation strategies. The use of compensation strategies did not show a significant difference according to time spent studying English outside class because they are not directly related to investing effort and time in studying but to making up a gap. As Tilfarlıoğlu and Kurtoğlu (2015) summarize, "Learning strategies improve learners' self-direction and problem solving characteristics which is helpful for learners as it is impossible to find the instructors around every time guiding is needed" (p. 3). In addition to these, no significant difference was found between the use of affective and social strategies by the participants studying between one and five hours and more than five hours even though the latter group's mean scores are higher. It might be due to the fact that these students might not have considered the use of such kind of strategies like encouraging oneself or starting a conversation as a part of their study since they effect the learning process indirectly.

4.4. Results for research question 4

"*Do the participants' motivation and its sub-constructs (integrative and instrumental) differ according to*

a) gender

b) faculty

c) hours of study outside class?"

To be able to answer the research 4, we had to use both parametric and non-parametric statistical tests; two variables, instrumental and total motivation, were not normally distributed, so we conducted non-parametric tests for the questions related to these two variables. On the other hand, the variable - integrative motivation – is normally distributed; as a result, we could carry out parametric test for the questions related to integrative motivation.

a) Gender

Research question 4a examines if there is a statistically significant difference between male and female participants' integrative, instrumental and total motivation levels. In order to find if there is a significant difference between male and female participants, we conducted independent samples *t*-test for integrative motivation and Mann-Whitney U test for instrumental and total motivation levels. In addition, Levene's test indicated unequal variances for the integrative motivation levels of male and female participants ($F = 10.81$, $p = .001$), so degrees of freedom were adjusted from 497 to 490 for independent samples *t*-test. The results are presented in Table 4.6 and 4.7 below.

Table 4.6. Independent samples *t*-test results for participants' integrative motivation with respect to gender.

	Gender	N	Mean	SD	T	Df	Sig. (2-tailed)
Integrative motivation	Male	292	3.40	.71	-2.689	490	.007
	Female	207	3.55	.57			

Table 4.7. Mann-Whitney U test results for participants' instrumental and total motivation with respect to gender.

	Gender	N	Mean Rank	Sum of Ranks	U	Z	Asymp.Sig. (2-tailed)
Instrumental motivation	Male	292	232.03	67752.00	24974.000	-3.31	.001
	Female	207	275.35	56998.00			
Total motivation	Male	292	236.53	69066.50	26288.500	-2.48	.013
	Female	207	269.00	55683.50			

As can be seen in Table 4.6, female participants have a significantly higher level of integrative motivation, $t(490) = -2.69$, $p = .007$, $d = .23$. In addition, Mann-Whitney U test results in Table 4.7 show that instrumental, $U = 24974.00$, $Z = 3.31$, $p \leq .001$, $r = .15$ and total motivation levels, $U = 26288.50$, $Z = 2.48$, $p = .013$, $r = .11$ of female participants are significantly higher, too. However, the magnitude of the difference for integrative motivation is at a modest level, $d = .23$ and for instrumental and total motivation, it is very weak, $r = .15$ and .11 respectively.

b) Faculty

In order to find out whether the participants' integrative, instrumental and total motivation levels differ with respect to faculties that they study, we conducted one-way ANOVA and Tukey HSD post –hoc test for the integrative motivation and Kruskal Wallis and all pairwise statistics for multiple comparisons for instrumental and total motivation levels.

As shown in Table 4.8, the integrative motivation level of the participants significantly differs by the faculties they study, $p \leq .001$. The results of Kruskal Wallis test in Table 4.9 also reveal that both instrumental and total motivation levels of the participants show significant differences with respect to faculties, $p \leq .001$. The results of Tukey HSD test reveal that tourism students ($M = 3.70$, $SD = .62$) are integratively more motivated than engineering ($M = 3.43$, $SD = .62$), $p = .006$, $d = .44$, forestry ($M = 3.33$, $SD = .77$), $p \leq .001$, $d = .53$, and business students ($M = 3.43$, $SD = .63$), $p = .015$, $d = .43$. In addition, the magnitude of the difference between tourism and forestry students is moderate, but it is modest across tourism and engineering, and tourism and business. On the other hand, there is no significant difference across engineering, forestry and business students, $p > .05$. The results of all pairwise statistics for multiple comparisons also reveal that tourism students are instrumentally more motivated than engineering, $p \leq .001$, $r = .24$, forestry, $p \leq .001$, $r = .43$, and business students, $p = .017$, $r = .21$, too. Furthermore, there is also a significant difference between forestry and business students in favor of business students, $p = .016$, r

= .22. However, the magnitude of the differences across all groups can be considered as modest although they are slightly above the weak level except for the difference between tourism and forestry students. Finally, the results of all pairwise statistics for multiple comparisons reveal a significant difference in favor of tourism students across engineering, $p \leq .001$, $r = .23$, forestry, $p \leq .001$, $r = .34$, and business students, $p = .003$, $r = .24$. However, the magnitude of the differences between the groups is modest.

Table 4.8. The results of one-way ANOVA for participants' integrative motivation with respect to faculties.

	Sum of Squares	Df	Mean Square	F	Sig.	Remarks
Between Groups	6.908	3	2.303			
Within Groups	209.209	495	.423	5.45	.001	T > E, F, B
Total	216.118	498				

Note: B = Business, E = Engineering, F = Forestry, T =Tourism

Table 4.9. The results of Kruskal Wallis test for participants' instrumental and total motivation with respect to faculties.

	Faculty	N	Mean Rank	Chi-square	Df	Asymp. Sig	Remarks
Instrumental motivation	Engineering	214	240.97	33.08	3	.000	T > E, F, B B > F
	Forestry	82	192.93				
	Business	113	255.63				
	Tourism	90	316.39				
	Total	499					
Total motivation	Engineering	214	240.48	23.73	3	.000	T > E, F, B
	Forestry	82	214.57				
	Business	113	243.00				
	Tourism	90	313.71				
	Total	499					

Note: B = Business, E = Engineering, F = Forestry, T =Tourism

c) Hours of study outside the class

As the last part of the research question 4, we conducted one-way ANOVA and as a post – hoc test, Tamhane's T2 to investigate the integrative motivation level of the participants with respect to how many hours a week they spend studying English outside

the class and Kruskal Wallis and all pairwise statistics for multiple comparisons for instrumental and total motivation levels. Results are presented in Table 4.10 and 4.11 below.

Table 4.10. The results of one-way ANOVA for participants' integrative motivation with respect to study hour outside class.

	Sum of Squares	Df	Mean Square	F	Sig.	Remarks
Between Groups	20.625	2	10.312	26.17	.000	0-1 < 1-5, 5+
Within Groups	195.493	496	.344			
Total	216.118	498				

Table 4.11. The results of Kruskal Wallis test for participants' instrumental and total motivation with respect to study hour outside class.

	Study hour outside class	N	Mean Rank	Chi-square	Df	Asymp. Sig	Remarks
Instrumental motivation	0-1	176	213.70	17.33	2	.000	0-1 < 1-5, 5+
	1-5	226	270.55				
	5+	97	267.98				
	Total	499					
Total motivation	0-1	176	194.14	43.44	2	.000	0-1 < 1-5, 5+
	1-5	226	271.94				
	5+	97	300.25				
	Total	499					

As shown in Table 4.10, participants' integrative motivation level significantly differs with respect to time they spend studying English outside the class, $p \leq .001$. In addition, the results of Kruskal Wallis test in Table 4.11 also show that there is a statistically significant difference among the participants' instrumental and total motivation levels, $p \leq .001$ with respect to the time they spend studying English outside class, too. Furthermore, the results of Tamhane's T2 reveal that students studying less than one hour (M = 3.20, SD = .74) are integratively less motivated than students studying between one and five hours (M = 3.57, SD = .56), $p \leq .001$, d = .56 and more than five hours (M = 3.70, SD = .56), $p \leq .001$, d = .76. In addition, the magnitude of the differences is moderate, as well. Instrumental motivation level of the students across the groups show a similar pattern, too. Students studying less than one hour are instrumentally less motivated than those

studying between one and five $p \leq .001$, $r = .20$ and more than five hours, $p = .009$, $r = .18$. The magnitude of the differences is weak, though. Finally, students studying less than one hour are significantly less motivated than those studying between one and five $p \leq .001$, $r = .27$ and more than five hours, $p \leq .001$, $r = .35$ with modest effect sizes, as well. However, the integrative, instrumental and total motivation levels show no significant difference between the students studying between one and five and more than five hours $p > .05$.

4.4.1. Discussion related to research question 4

As Mori and Gobel (2006) state, gender differences in motivation in SLA have not been studied systematically; for this reason, the findings of the current study can shed light on the issue. The present study reveals that female students are both instrumentally and integratively more motivated than male students; thus, females' total motivation level is higher than males', as well. While some studies found no difference between male and females' motivation levels (Akram & Ghani, 2013; Al-Oliemat, 2013), there are some studies which yielded that female learners' motivation levels were significantly higher than their male counterparts (Aydın, 2007; Mendi, 2009; Özçalışan, 2012; Öztürk & Gürbüz, 2013; Shaaban & Ghaith, 2000; Yılmaz, 2013). In addition, Mori and Gobel (2006) found out that females were integratively more motivated than males. This difference may be because females can be considered to be more socially-oriented than males (Baker & MacIntyre, 2003); as a result, they seek ways to communicate with people from other cultures and they are interested in languages. In addition, the number of the females attending to universities and working outside home was lower in the last decades so that female students are aware of that they should try hard to find a place in working life. According to the statistics of Turkish Statistics Agency (TUIK) (2016), the rate of female labor force was 30.3 in 2014, and females graduating from vocational schools and universities constituted the 71 % of it. It is half the rate of male employment, and females also earn less than their male counterparts with the same education level (TUIK, 2016). In

this sense, the former aspect is the reflection of integrative motivation while the latter one reflects females' instrumental motivation.

Integrative, instrumental and total motivation levels of tourism students were found to be significantly higher than engineering, business and forestry students. Similarly, they were found to use LLS more frequently with comparatively similar magnitude of differences, as well (see results for research question 3b for details). These results indicate that they are aware of the importance of English for themselves. Tourism sector inherently requires students to spend time with people from different countries and cultures thus be proficient at English since it is accepted as lingua franca. Therefore, this leads students to possess both high integrative and instrumental motivation. When the tourism students are considered as an exception since English is a major job requirement for them, students from other faculties show no significant difference in terms of their motivation levels as in Shaaban and Ghaith's (2000) study. This might be because these students do not have to have a high proficiency in English for their future career and spend time with people from other countries. To note that business students are instrumentally more motivated than forestry students, and this is inconsistent with general tendency among the participants. However, Özçalışan (2012) found significant differences between faculty of business and science and letters, as well.

According to Gardner (2006; 2007; 2010), a motivated learner is effortful and attentive to the necessary task. In addition, motivation is one of the main determinants of active personal involvement in SLA (Warden & Lin, 2000). In this sense, it was found out that the integrative, instrumental and total motivation levels of students studying less than one hour are significantly lower than those studying between one and five and more than five hours. Similarly, these students studying less than one hour were also found to be the least frequent users of LLS (see the results for research questions 3c for details). These results are also supported by Spratt, Humphreys and Chan's (2002) study which reported that more motivated learners were more frequently engaged in outside class activities. This suggests that studying at least one hour a week is the minimum amount of time required to

facilitate motivation and LLS use. In addition, integrative, instrumental and total motivation levels of the students studying between one and five hours and more than five do not significantly differ. This can be attributable to the fact that these two groups of students are already effortful as a result of their high motivation levels; therefore, it shows no significant difference between them.

4.5. Results for research question 5

"*Is there a relationship between participants' achievement scores in English and their motivation level and its sub-constructs (integrative and instrumental?"*

To be able to answer the research question 5, both parametric and non-parametric tests were carried out since two variables, instrumental and total motivation levels, were not normally distributed. To be able to answer if there is a relationship between participants' academic achievement scores in English and their integrative, instrumental and total motivation levels, Pearson Product Moment Correlation and its non-parametric equivalent, Spearman's Rho analysis, were conducted. Results are presented in Table 4.12 below.

Table 4.12. Correlations between participants' achievement scores in English and their motivation level and its sub-constructs.

		Integrative Motivation	Instrumental Motivation	Total Motivation
Achievement scores	R	.355**	.162**	.339**

**: $p \leq .001$; N = 499

As shown in Table 4.12 above, there is a statistically significant positive correlation between participants' achievement scores in English and their integrative, instrumental and total motivation levels. It is the integrative motivation which is most strongly correlated to achievement scores (r = .355), but correlation coefficients for the relationship between participants' achievement scores and instrumental motivation is .162

which is much weaker than integrative motivation's. These results, therefore, show that participants' integrative (r = .355) and total motivation levels (r_s = .339) are correlated to their achievement scores in English at a moderate level while indicating a weak relationship between instrumental motivation and achievement scores in English (r_s = .162), though.

Besides correlational analysis, we also conducted differential analysis to be able to have a deeper understanding of the question. Therefore, we carried out one-way ANOVA and Tukey HSD post – hoc test and its non-parametric equivalent, Kruskal Wallis and all pairwise statistics for multiple comparisons to examine if the participants' integrative, instrumental and total motivation levels significantly differ according to their academic achievement in English. The results are shown in Table 4.13 and 4.14 below.

Table 4.13. The results of one-way ANOVA for the participants' integrative motivation by academic achievement in English.

	Df	Sum of Squares	Mean Square	F	Sig.	Remarks
Between Groups	2	21.134	10.567			
Within Groups	496	194.984	.393	26.88	.000	HA > LA > NA
Total	498	216.118				

Note: HA = High Achievers, LA = Low achievers, NA = Non-achievers

Table 4.14. The results of Kruskal Wallis test for instrumental and total motivation by academic achievement in English.

	Achievement	N	Mean Rank	Chi-square	Df	Asymp. Sig	Remarks
Instrumental motivation	Non-achievers	180	217.80	14.50	2	.001	NA < LA, HA
	Low achievers	213	264.60				
	high achievers	106	275.35				
	Total	499					
Total motivation	Non-achievers	180	194.68	49.63	2	.001	HA > LA > NA
	Low achievers	213	264.95				
	high achievers	106	313.91				
	Total	499					

Note: HA = High Achievers, LA = Low achievers, NA = Non-achievers

As seen in Table 4.13 above, participants' integrative motivation level significantly differs according to their academic achievement in English, $p \leq .001$.

Likewise, as seen in Table 4.14, participants' instrumental and total motivation levels significantly differ according to their academic achievement in English, $p \leq .001$, too. Furthermore, Tukey HSD test results reveal that high achievers (M = 3.75, SD = .61) are integratively more motivated than both non-achievers (M = 3.21, SD = .68), $p \leq .001$, d = .84 and low achievers (M = 3.53, SD = .59), p = .013, d = .37. While the difference between high and non-achievers is moderate but close to the strong level, it is at a modest level between the high and low achievers. Furthermore, low achievers are integratively more motivated than non-achievers, $p \leq .001$ with a modest difference but just below the moderate level, d = .50, as well. In addition, the results of all pairwise statistics for multiple comparisons also reveal that non-achievers are instrumentally less motivated than both low, p = .004, r = .16 and high achievers, p = .003, r = .20. However, the magnitude of the differences is weak. On the other hand, there is significantly no significant difference between low and high achievers, $p > .05$. Finally, high achievers are significantly more motivated than both non-achievers, $p \leq .001$, r = .40 and low achievers, $p \leq .001$, r = .16. However, the magnitude of the differences between high and non-achievers is modest, and weak between low and high achievers. In terms of total motivation level, there is a significant difference between low and non-achievers, p = .013 with a modest difference, r = .24, as well.

4.5.1. Discussion related to research question 5

The results of the current study reveal that motivation has a significant positive correlation with achievement scores, and more proficient students have a higher level of motivation. These results are in parallel to the previous studies (Gardner, 2007; Ghanea et al., 2011; Kurum, 2011; Schmidt et al., 1996; Yılmaz, 2013), too. Dörnyei (2014) also supports these findings by explaining that "In a long-term learning process such as the mastery of a second language, the learner's ultimate success always depends on the level of motivation" (p. 520).

On the other hand, students in general were found to have a high level of instrumental motivation, but it has a much weaker correlation with achievement scores than integrative. In addition, the magnitude of the differences between groups in terms of instrumental motivation is also very weak compared to integrative motivation. Shaaban and Ghaith (2000) explain that the existence of instrumental motivation does not necessarily mean that students spend more effort. While expectations of higher income and better job opportunities and career orientations are powerful examples of instrumental motivators that the students cannot deny, such kind of motives can be seen far beyond the students' vision because they are in their first year at university. Moreover, passing an exam is one of the most important instrumental motivational orientations for many students, but students do not have such worries in the current context. Therefore, the lack of such kind of immediate instrumental orientations may be cause for the weaker correlation of instrumental motivation to achievement. From Keller's (2010) ARCS-V model, it may also mean that the exams or other evaluation measures are not relevant to students; thus, they do not pay attention or feel satisfied. Furthermore, another interesting finding is that instrumental motivation does not show significant difference between high and low achievers while integrative and total motivation levels of the students significantly differs among all three – non-achievers, low achievers and high achievers. Mendi's (2009) study yielded similar results, too. This can be the result of instrumental motivation' weak relation to achievement scores, as well. Besides, it can also be explained by the fact that instrumental motivation can make a difference to some extent, but integrative motivation is needed for a much higher attainment (Dörnyei, 1990).

Some researchers claim that motivation has no direct relation to achievement since it only leads people to get involved in a certain action, but it is not a predictor of how successful they will be (Bonney, Cortina, Smith-Darden & Fiori, 2008; Csizer & Dörnyei, 2005). In parallel to this claim, the findings of Lim's (2012) study revealed no correlation between L2 proficiency and motivation, and Zhang and Xiao (2006) found that instrumental motivation did not differ according to learners' L2 proficiency. For the current study, the relationship between motivation and achievement scores and the magnitude of

the differences across achievement levels were found to be weaker than the correlations and differences between LLS use and achievement (see results for research question 6 for details). This indicates that it is not easy for the learners to succeed more no matter how high their motivation is, they should also apply appropriate LLS for themselves and their learning context

4.6. Results for research question 6

"Is there a relationship between participants' achievement scores in English and their reported use of language learning strategies and its sub-categories (memory, cognitive, compensation, meta-cognitive, affective, social)?"

To answer the research question 6, Pearson Product Moment Correlation Analysis was conducted. The results are presented in Table 4.15 below.

Table 4.15. Correlations between participants' achievement scores in English and their strategy use and its sub-categories

		Memory strategies	Cognitive strategies	Comp. strategies	M.-cog. Strategies	Affective strategies	Social strategies	Strategy total
Achievement scores	R	.327**	.468**	.296**	.433**	.253**	.353**	.451**

**: $p \leq .001$; N = 499

Note: Comp. = Compensation, M.-cog. = Meta-cognitive

As seen in Table 4.15, there is a statistically significant positive correlation between participants' achievement scores and their total strategy use and its all sub-categories. Cognitive strategies have the strongest correlation (r = .468), and affective strategies have the weakest (r = .253) among all categories. Moreover, correlation coefficients for total strategy use and achievement scores in English is .451. These results show a moderate level of relationship between participants' use of memory, cognitive,

meta-cognitive, social and LLS in general and their achievement in English but a modest level of correlation for affective and compensation. However, as can be seen in Table 4.15, the relation of compensation strategies (r = .296) is very close to .30 - cut-off point of moderate level and cognitive (r = .468) and LLS in general (r = .451) is close to .50 – cut-off point of strong level of correlation.

Besides correlational analysis, we also conducted differential analysis to be able to have a deeper understanding of the question. Therefore, we carried out one-way ANOVA and as a post - hoc test, Tukey HSD and Tamhane's T2 to examine if the participants' reported use of language learning strategies and its sub-categories significantly differs according to their academic achievement in English. While Tukey HSD post – hoc test was carried out to find out the differences for the use of compensation, meta-cognitive, affective and social strategies between the groups, we had to conduct Tamhane's T2 post – hoc test for memory, cognitive and total strategy use categories since these variables failed the homogeneity of variance test, p = .033, .011 and .009 respectively.

As shown in Table 4.16, the use of all strategy categories and strategy use in general significantly differs among participants with different achievement levels, $p \leq .001$. Post – hoc test results also reveal that the non-achievers use LLS and its sub-categories significantly less frequently than both low and high achievers. Furthermore, the effect sizes indicate that the differences between low and non-achievers are all at a moderate level except for the use of compensation strategies, and for this strategy category, it is at a modest level. The magnitude of differences between high and non-achievers is also moderate except for the use of LLS in general, cognitive and meta-cognitive strategies. For the use of these three categories, the differences are at a strong level. In addition, high achievers use LLS and its sub-categories more frequently than low achievers even though the differences for the use of memory, affective and social strategies are not statistically significant, p = .066, .609 and .900 respectively, and the effect sizes indicate that the significant differences are at a modest level except for cognitive strategies. For the use of this strategy category, the magnitude of the difference is moderate. (See Appendix – 6 for

all the post – hoc test results and effect sizes for the reported use of LLS and its sub-categories with respect to participants' achievement levels).

Table 4.16. The results of one-way ANOVA for the participants' reported use of strategy use and its sub-categories with respect to their academic achievement in English.

		Sum of Squares	Df	Mean Square	F	Sig.	Remarks
Memory Strategies	Between Groups	23.650	2	11.825	24.86	.000	NA < LA, HA
	Within Groups	235.930	496	.476			
	Total	259.580	498				
Cognitive strategies	Between Groups	48.274	2	24.137	55.40	.000	NA < LA < HA
	Within Groups	216.116	496	.436			
	Total	264.389	498				
Compensation strategies	Between Groups	26.557	2	13.278	19.75	.000	NA < LA < HA
	Within Groups	333.453	496	.672			
	Total	360.010	498				
Meta-cognitive strategies	Between Groups	63.564	2	31.782	49.90	.000	NA < LA < HA
	Within Groups	315.942	496	.637			
	Total	379.505	498				
Affective Strategies	Between Groups	22.378	2	11.189	19.62	.000	NA < LA, HA
	Within Groups	282.921	496	.570			
	Total	305.298	498				
Social Strategies	Between Groups	37.623	2	18.811	38.11	.000	NA < LA, HA
	Within Groups	244.833	496	.494			
	Total	282.456	498				
Total strategy use	Between Groups	34.809	2	17.404	55.58	.000	NA < LA < HA
	Within Groups	155.323	496	.313			
	Total	190.132	498				

Note: HA = High Achievers, LA = Low achievers, NA = Non-achievers

4.6.1. Discussion related to research question 6

LLS is mainly mediated by the goal of investigating the relation of LLS to success (Takeuchi et al., 2007), and the researchers put forward that the use of LLS is directly proportional to learners' achievement levels; that is, more successful learners use LLS more frequently. Although there are some exceptions like Hong-Nam and Leawell (2006) and Çakır's (2012) studies, this idea was supported by many studies (Altan, 2003; Demirel,

2012; Green & Oxford, 1995; Griffiths, 2003; Halbach, 2000; Magogwe & Oliver, 2007; Oxford & Nyikos, 1989; Park, 1997; Wharton, 2000). These findings are also in line with the mainstream; there is a positive relationship between learners' success and their LLS use, and more successful learners use LLS more often.

Vann and Abraham (1990) found no significant difference between successful and unsuccessful learners' frequency of strategy use, therefore, concluded that unsuccessful learners are not inactive; however, non-achievers were found to be using LLS and its all sub-categories significantly less frequently than low and high achievers in the current study. This might be because non-achievers do not care about being successful since they can go on their education in the departments as long as they attend the 80 % of classes during the year. In addition, high achievers use LLS significantly more frequently than low achievers, but there are three sub-categories – memory, affective and social – that high achievers use more frequently but show no significant difference. It was found out that anxiety has a negative relation to achievement (Gardner, 2001; 2007), and low proficiency causes anxiety (Altunay, 2014). Affective strategies are, on the other hand, used for the regulation of emotions, motivation and attitudes, for example, lowering anxiety (Cohen, 1995). However, the use of affective strategies does not significantly differ between low and high achievers as these strategies were found to be the least frequently used strategy type (see results for research question 1 for details) and have the weakest correlation with the students' academic achievement scores. Yet, their purpose can be different; low achievers may use them to lower anxiety since their grades are not high enough to be successful at the end of the year while high achievers' usage might be to motivate themselves not to abandon their effortful studies with a relief that their grades are high enough to be successful. The students are expected to be involved in pair-work activities in many situations during the year, and interaction between learners is a part of social strategies (Cohen, 1995). Therefore, students are intensively exposed to the use of social strategies, and these results indicate that non-achievers are not active in such activities while low and high achievers almost equally benefit from these. The use of memory strategies may help learners to improve their English, but the frequency of such strategies

may not significantly differ after certain achievement levels; since simply the memorization of L2 related items etc. are one of the basic level strategy types (Rodgers, 2001), they can easily be automated even by low achievers.

The two sub-categories, cognitive and meta-cognitive strategies, are high level strategy types (Rodgers, 2001), and they were found to have the strongest correlation with academic achievement scores. Therefore, the frequent use of these sub-categories can be the factors making a real difference between low and high achievers. In addition, high achievers are significantly more frequent users of compensation strategies than low achievers; this indicates that these students have sufficient knowledge and skills to be able make up the gap which the others cannot. Finally, these findings unfortunately do not show the direction between LLS and success; either the use of LLS increases the achievement or vice versa (Gan, 2004), and as Griffiths (2003) summarizes, "This age-old chicken-and-the-egg question is not easy to answer" (p. 381).

4.7. Results for research question 7

"*Is there a relationship between participants' motivation level and its sub-constructs (integrative and instrumental) and their total strategy use and its sub-categories (memory, cognitive, compensation, meta-cognitive, affective, social)?*"

To be able to answer the research question 7, both parametric and non-parametric tests were carried out since two variables, instrumental and total motivation levels, were not normally distributed. Therefore, both Pearson Product Moment Correlation and its non-parametric equivalent, Spearman's Rho analysis, were conducted to examine if there is a relationship between participants' motivation level and its sub-constructs (integrative and instrumental) and their total strategy use and its sub-categories (memory, cognitive, compensation, meta-cognitive, affective, social). Results are shown in Table 4.17 below.

Table 4.17. Correlations between participants' integrative, instrumental and total motivation and their strategy use and its sub-categories.

		Memory strategies	Cognitive strategies	Comp. strategies	M.- cog. Strategies	Affective strategies	Social strategies	Strategy total
Integrative motivation	R	.478**	.552**	.233**	.586**	.383**	.443**	.564**
Instrumental motivation	R	.295**	.259**	.225**	.356**	.259**	.294**	.362**
Total motivation	R	.455**	.521**	.266**	.571**	.361**	.437**	.556**

**: $p \leq .001$; N = 499

Note: Comp. = Compensation, M.-cognitive = Meta-cognitive

As seen in Table 4.17 above, the relationship between participants' reported use of LLS and its sub-categories and their total motivation level and its sub-constructs (integrative and instrumental) is statistically significant among all variables, $p \leq .001$. There is a positive strong correlation between participants' total motivation level and their LLS use, r_s = .556. While the meta-cognitive strategies have the strongest correlation with participants' total motivation level r_s = .571, compensation strategies have the weakest, r_s = .266. As can be seen in Table 4.17, participants' use of cognitive (r = .552) meta-cognitive (r = .584) and LLS in general (r = .564) are strongly correlated to integrative motivation, and the relationship between participants' integrative motivation and their use of memory (r = .478) and affective strategies (r = .383) is at a moderate level. The use of compensation strategies are correlated to integrative motivation at a modest level (r = 233), as it has the weakest relationship with the participants' total motivation level. Results also show that the use of all sub-categories are correlated to participants' instrumental motivation at a modest level except for meta-cognitive strategies (r_s = .10 and .30). The relationship between participants' instrumental motivation and their use of meta-cognitive (r_s = .356) and LLS in general (r_s = 352) is at a moderate level, though. The results clearly show that the relationship between participants' integrative motivation and their use of LLS and its sub-categories is much stronger than the relationship between participants' instrumental motivation and their use of LLS and its sub-categories.

We also carried out differential analysis in order to have a better understanding of the question. Therefore, we conducted one-way ANOVA and as a post - hoc test, Tukey HSD and Tamhane's T2 to examine if the participants' reported use of language learning strategies and its sub-categories significantly differs according to their motivation levels. Except for the compensation strategies, we carried out Tukey HSD as a post – hoc test for all categories, and for compensation strategies, Tamhane's T2 since it failed the homogeneity of variance test, $p = .024$.

As shown in Table 4.18 below, the use of LLS and its sub-categories significantly differs among all motivation levels, $p \leq .001$. Post – hoc test results also reveal that students with high motivation levels use LLS and its subcategories significantly more often than the students with low and moderate level of motivation. Except for compensation strategies, students with moderate level of motivation use LLS and its sub-categories significantly more frequently than students with low motivation, too. Effect sizes further indicate that differences between the students with high and low motivation levels are at a strong level except for the use of compensation strategies; for this category, the magnitude of the difference is moderate. On the other hand, the magnitude of the differences between the students with high and moderate level of motivation is moderate except for the use of meta-cognitive strategies. For the use of this sub-category, the magnitude of the difference is strong, though. Furthermore, the differences for the use of LLS in general ($d = 1.00$) and cognitive strategies ($d = .91$) between the students with high and moderate level of motivation are very close to the strong level. Finally, the magnitude of all the differences is moderate between the students with low and moderate level of motivation. However, the magnitude of the difference for the use of meta-cognitive strategies is very close to the strong level. (See Appendix – 7 for all the post – hoc test results and effect sizes for the reported use of LLS and its sub-categories with respect to participants' motivation levels).

Table 4.18. The results of one-way ANOVA for the participants' reported use of strategy use and its sub-categories with respect to their motivation levels

		Sum of Squares	Df	Mean Square	F	Sig.	Remarks
Memory strategies	Between Groups	47.881	2	23.941	56.10	.000	SHM>SMM>SLM
	Within Groups	211.699	496	.427			
	Total	259.580	498				
Cognitive strategies	Between Groups	61.559	2	30.779	75.27	.000	SHM>SMM>SLM
	Within Groups	202.831	496	.409			
	Total	264.389	498				
Compensation strategies	Between Groups	23.482	2	11.741	17.31	.000	SHM > SMM, SLM
	Within Groups	336.528	496	.678			
	Total	360.010	498				
Meta-cognitive strategies	Between Groups	114.603	2	57.302	107.29	.000	SHM>SMM>SLM
	Within Groups	264.902	496	.534			
	Total	379.505	498				
Affective strategies	Between Groups	39.938	2	19.969	37.33	.000	SHM>SMM>SLM
	Within Groups	265.360	496	.535			
	Total	305.298	498				
Social Strategies	Between Groups	46.207	2	23.104	48.51	.000	SHM>SMM>SLM
	Within Groups	236.248	496	.476			
	Total	282.456	498				
Total strategy use	Between Groups	51.629	2	25.814	92.45	.000	SHM>SMM>SLM
	Within Groups	138.503	496	.279			
	Total	190.132	498				

Note: SHM = Students with High Motivation, SMM = Students with Moderate level of Motivation, SLM = Students with Low Motivation

4.7.1. Discussion related to research question 7

A learner's using LLS shows that s/he is motivated (Dörnyei, 2001; Dörnyei & Otto, 1998) since expanding effort is one of the core components of motivation (Gardner, 1985). The effectiveness of LLS depends on learners' motivation (Gardner, 2001), and according to Oxford and Shearin (1994), motivation effects the frequency of LLS use. There are studies supporting this common idea in literature; for example, Chang and Liu (2013), Oxford and Nyikos (1989), and Xu (2011) found out that students with higher motivation use LLS more frequently than their less motivated counterparts, and Wharton's

(2000) study revealed that motivation had the strongest influence on LLS use. Likewise, amotivation was found to be negatively correlated with LLS use (Khazaie & Mesbah, 2014). The findings of the present study are also similar, thus, support the idea that motivation and LLS use are positively correlated to each other.

Unlike Dörnyei (1990) and Oxford and Shearin's (1994) claim that instrumental factors play a more crucial role in FL context, instrumental motivation was found to have a much weaker correlation with both achievement (see results for research question 5 for details) and the use of LLS than integrative motivation in the current study although students' instrumental level in general was found to be higher than their integrative motivation. Shaaban and Ghaith (2000) explain that instrumentally motivated students do not always spend more effort. As we stated earlier, expectations of higher income and better job opportunities and career orientations which are strongly associated with instrumental motivation are not ignored by the students; however, such kind of motives can be seen far beyond the participants' vision because they are in their first year at university. Therefore, instrumental motivation does not trigger students' LLS use as strongly as integrative motivation even though it might towards the end of the school.

The use of compensation strategies does not significantly differ between students with moderate and high motivation levels. As in Chang and Liu's (2013) study, it was also found out to have the weakest correlation with motivation. These results can be attributable to the fact that students with higher motivation study so hard that they do not have a gap in their English knowledge to make up or they think that the use of such kind of strategies indicates the lack of effort expanded. In other words, these students are so motivated that instead of straightforwardly compensating the gap, they prefer other more effortful actions.

CHAPTER V

5. Conclusion

This section presents the summary of the findings related to the each research question. Then, the overall results are discussed in a conclusive way and implications for practice are suggested. Finally, limitations and suggestions for further research are provided.

5.1. Summary of the findings

First, the study reveal that participants use LLS and its all sub-categories at a moderate level. Three sub-categories, meta-cognitive, compensation, and social strategies, are the most frequently used groups and affective strategies the least. In terms of motivation, the participants have moderate levels of integrative and total motivation, but their instrumental motivation level is at a high level.

Analyses related to the demographic variables show that the use of LLS in general does not significantly differ by gender. However, female students use memory strategies significantly more frequently than male students, and male students use compensation strategies significantly more often than their female counterparts. However, the level of motivation and its sub-constructs (integrative and instrumental) significantly differs with respect to gender in favor of female students.

Then, it was found out that tourism students use LLS significantly more frequently than the engineering, forestry, and business students. The only other significant difference for the use of LLS is between engineering and forestry students in favor of the former

group. Furthermore, tourism students use meta-cognitive and social strategies significantly more frequently than the students from other three faculties. In addition, they use memory and cognitive strategies significantly more frequently than forestry and business students and compensation and affective strategies significantly more often than only business students. Moreover, engineering students use two sub-categories, cognitive and compensation strategies, and LLS in general significantly more often than business students, and meta-cognitive strategies more frequently than forestry students. However, there is no significant difference between forestry and business students for the use of LLS and its sub-categories. The analyses also reveal that the integrative, instrumental and total motivation levels of tourism students are significantly higher than the students' of the other three faculties. Furthermore, the integrative and total motivation levels of engineering, forestry and business students do not significantly differ among one another; however, the instrumental motivation level of forestry and business students shows a significant difference in favor of business students.

Lastly, it was found out that students studying less than one hour are significantly the least frequent users of LLS and its sub-categories. In addition, students studying more than five hours use LLS and its sub-categories more frequently than those studying between one and five hours, but no significant difference was found for the use of affective and social strategies between these two groups. In addition, integrative, instrumental and total motivation levels of the students studying less than one hour are significantly lower than the students studying between one and five hours and studying more than five hours a week. It was also found out that there is statistically no significant difference between the students who study between one and five hours and more than five hours a week in terms of their motivation levels.

In terms of achievement, the analyses reveal that more successful students have higher levels of motivation. More specifically, non-achievers have significantly lower integrative, instrumental and total motivation levels than both low and high achievers. Also, the high achievers have significantly higher integrative and total motivation levels than

low-achievers; on the other hand, the instrumental motivation levels of low and high achievers do not significantly differ. As for the motivation levels of the students, the non-achievers use LLS and its sub-categories significantly less frequently than both low and high achievers. In addition, high achievers use LLS and its sub-categories more frequently than low achievers even though the difference for the use of memory, affective and social strategies is not statistically significant. Furthermore, the magnitude of the differences and the correlation coefficients for the use of LLS among achievement levels are stronger than the ones for the motivation levels of the students.

Finally, it was found out that highly motivated students use LLS and its sub-categories significantly more often than the students with low and moderate level of motivation. In addition, except for compensation strategies, the use of LLS and its sub-categories significantly differs between the students with low and moderate level of motivation in favor of the latter group. Furthermore, the analyses reveal that the compensation strategies have the weakest correlation with the participants' integrative, instrumental and total motivation levels. Also, the relationship between the students' instrumental motivation and their use of LLS and its sub-categories is weaker than the participants' integrative and total motivation levels'.

5.2. Conclusion and implications for practice

One of the interesting findings of the study is that there are no certain differences for the use of LLS between male and female students although females have a higher level of motivation. Antecedents behind the higher motivation levels of females can be attributable to their social-orientedness and desire to gain a place among their male rivals in the future. As discussed earlier, females earn less than males and the rate of female employment is the half of males'. However, these antecedents do not seem to be strong enough to affect their use of LLS to learn English. For this reason, teachers who wish to

help their students to increase their frequency of LLS use and motivation levels do not necessarily have to take the gender differences into consideration.

The frequency of LLS use and motivation level of tourism students are higher than the students from other faculties. This might be because English is one of the major job requirements in tourism since people in this field spend their time with the people from different communities. As this situation is apparent to all, tourism students are distinct from other students. In order to be motivated, students need to have a goal to orient to. Tourism students have an obvious goal – to interact with tourists in English. Therefore, the engineering, forestry and business students need to have a concrete achievement goal. Then, what teachers should do is to present more powerful and specific directions to the students from other faculties to increase their motivation levels; thus, lead them to use LLS more frequently to increase their success in a smarter way. Teachers can also observe the LLS used by the tourism students and help the students from other faculties tailor them for their own specific learning goals and find their own learning strategies appropriate for themselves.

It is clear from the results of the study that studying at least between one and five hours a week is a strong facilitator of motivation and LLS use, and studying less than one hour is not enough. For this reason, teachers should explain the importance of regular outside class activities to the students. Students can also use the time they spend studying English outside the class as a monitor both for their progress and their willingness to succeed so that they feel responsible for their own learning. As a result, students can spend this time not only doing the homework assigned by the teachers but also do some more extra practice such as watching movies in English, keeping a journal etc. which facilitates a more autonomous learning.

The relationship between motivation and achievement is weaker than the one between LLS use and achievement. This shows that unless the motivation is turned into an effortful behavior which helps students' L2 learning easier, faster and more fun, it does not

have a great effect on success. For this reason, teachers can help less successful students who wish to achieve higher in the classroom to study in more effective ways by teaching them certain learning strategies which have higher correlations with achievement. However, what teachers should do for the ones who do not have such worries like failure or success is to motivate them by explaining the importance of English in terms of both instrumental and integrative perspectives. On the other hand, instrumental factors may play a greater role towards the end of the students' university lives as making professional and academic career is one of the primary goals for them at that time. For this reason, teachers should be careful about that more emphasis on integrative elements such as raising interest in foreign languages and cultures and communicating with people all around the world can also increase the success rate among the students who are in their first year at university. In addition, teachers who wish to increase their students' either integrative or instrumental motivation levels should also take the ARCS-V motivational model into consideration while designing the program or more specifically the courses. ARCS-V model proposes five components of motivation (attention, relevance, confidence, satisfaction and volition) which explain the motivation to learn and suggests strategies to accomplish each stage (Keller, 2010). Whether an activity appeals students in terms of either integrative or instrumental motivational orientations, it should raise students' attention and be relevant to them, and students should feel confident and satisfied at the end.

Students' use of LLS is positively correlated to their motivation levels. However, as for achievement levels, instrumental motivation shows a weaker correlation. Since the factors, such as LLS use, require motivation to some extent (Dörnyei, 2005), students should first have motivation to use LLS during their L2 learning process. Teachers, as a result, should spend equal amounts of time and effort both to increase the students' motivation levels and make them use LLS even though the use of LLS has a stronger relation to achievement. In addition, teachers should not forget that when the students want to learn, they will automatically seek ways, and at that point, they should guide the students to the right way going to success.

Finally, motivation and LLS are the two intensely investigated factors in individual differences research, and their significance for success in L2 learning cannot be denied. These two factors do not only show difference according to achievement but also effect each other in a positive way. The study reveals that students, in general, use LLS and its sub-categories at a moderate level and have moderate levels of integrative and total motivation but high instrumental motivation. However, integrative motivation shows a stronger correlation with both achievement and LLS use; for this reason, teachers should not ignore the importance of integrative factors and try to increase students' integrative motivation to high levels, as well. In this sense, teachers can benefit from empirical research such as Dörnyei and Csizer (1998) on motivating students. For this matter, Dörnyei (2003) also proposes "motivational strategies" for teachers and "self-motivating strategies" for learners themselves that can be used to generate and maintain motivation (p. 23). Cohen (1998) explains that students readily use LLS to some extent, but to enhance their LLS use, he proposes strategy-based instruction. Teachers can use such kind of instructions or techniques to increase the frequency of LLS use from moderate levels to higher levels so that the success rate can increase. Furthermore, teachers can survey the strategies used by successful students and help less successful ones to model these strategies which already prove their effectiveness in the current context.

5.3. Limitations of the study and suggestions for further research

There are two main limitations of the present study. First of all, the study is based on only quantitative data obtained through two questionnaires; however, a qualitative data obtained via interviews etc. could be useful to be able to analyze the participants' responses to the statements in the questionnaires more deeply. The use of mixed methods is also recommended by the researchers. The second limitation of the study is that the setting in which the study was conducted is not the case anymore; with the regulations implemented by the Council of Higher Education (YÖK), universities which cannot offer 30 % of the courses in the departments in English cannot deliver compulsory English preparatory

classes to their students since the beginning of 2015-2016 academic year but only voluntary-based preparatory classes which the students have the option to attend the classes or not and even drop in a half year.

To be able to eliminate the limitations mentioned above, the current study can be replicated in the current setting with the inclusion of qualitative data. The types of motivation are not restricted to integrative and instrumental motivation, so via interviews or open-ended questionnaires, the more complex patterns of students' motivation can be formed in detail, as well. Furthermore, the study can also be conducted in the departments where the students take two or four hours of English in a week to understand their use of LLS and motivation levels. In addition, a study with the last year students, who officially do not take English courses, is recommended to examine their motivation level and if the instrumental factors play a greater role for achievement and use of LLS; since finding a job and starting a professional career is of premier interest for them.

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APPENDIX – 1. Demographic Information Form

Ad: ……. **Soyadı:** ……. **Sınıf:** …….

Aşağıdaki bölümde sizin için uygun olan şıkkı işaretleyiniz.

Cinsiyet: A) Bay
B) Bayan

Fakülte: A) Mühendislik Fakültesi
B) Orman Fakültesi
C) İşletme Fakültesi
D) Turizm ve Otel İşletmeciliği Fakültesi

Okul saatleri dışında haftada kaç saat İngilizce çalışıyorsunuz?

A) 0-1 saat B) 1-5 saat C) 5 saatten fazla

APPENDIX – 2. Turkish version of Motivation/Attitudes Questionnaire (MAQ)

MOTIVASYON VE TUTUM ANKETI					
Aşağıdaki ifadeler **İngilizce ve Yabancı dil öğrenme** motivasyonunuzla ilgilidir. Lütfen ifadeleri dikkatlice okuyup size uygun olanı işaretleyiniz. Hiçbir madde için doğru ya da yanlış cevap olmadığını unutmayınız.	**1= Kesinlikle katılmıyorum.**	**2= Katılmıyorum.**	**3 =Kararsızım.**	**4 = Katılıyorum.**	**5 = Kesinlikle katılıyorum.**
1. Yurt dışında uzun bir süre yaşamam gerekseydi, İngilizce bilmem yeterli olsa bile bulunduğum ülkede kullanılan ana dili öğrenmeye çalışırdım.					
2. Mümkün olduğunca çok yabancı dil öğrenmek istiyorum.					
3. İngilizce öğrendikten sonra farklı bir dil öğrenmek istiyorum.					
4. Benim için yabancı dil öğrenmek bir hobidir.					
5. Bazen yabancı dil öğrenmenin fazladan bir yük olduğunu düşünürüm.					
6. Yabancı dil öğrenmek heyecan vericidir.					
7. Yabancı dil öğrenmeyi sevmiyorum ve sadece ihtiyacım olduğu için öğreniyorum.					
8. Yabancı dil öğrenmek bana başarı hissi veriyor.					
9. Yabancı dil öğrenmek beni mutlu ediyor.					
10. Farklı bir zihinsel çalışma olduğu için İngilizce öğrenmek benim için önemlidir.					
11. İngilizce yeterliliğe sahip olmak genel kültürün bir parçasıdır.					
12. Daha eğitimli olmak için İngilizce öğreniyorum.					
13. İngilizce bilmek benim için önemlidir çünkü dünyadaki güncel entelektüel akımlar hakkında bilgi sahibi olmamı sağlıyor ve böylece bakış açımı genişletiyor.					
14. Kaliteli bir yaşam sürebilmek için Türklerin mutlaka İngilizce yeterliliğe sahip olmaları gerekir.					

	1= Kesinlikle katılmıyorum.	2= Katılmıyorum.	3 =Kararsızım.	4 = Katılıyorum.	5 = Kesinlikle katılıyorum.
15. Türkiye'de herkesin en azından orta seviye İngilizce bilmesi / öğrenmesi gerekir.					
16. İngiliz ve Amerikalılar hakkında bir şeyler öğrendikçe, onları daha fazla seviyorum.					
17. Sevdiğim sanatçıların çoğu (aktör, müzisyen vb.) İngiliz veya Amerikalı.					
18. İngiltere ve Amerika dünyanın en heyecan verici ülkelerindendir.					
19. İngiliz ve Amerikan kültürü şu günlerde dünyada büyük öneme sahiptir.					
20. İngilizce konuşursam, daha iyi bir iş bulabilirim.					
21. İngilizce konuşursam, daha fazla iş seyahatine çıkabilirim.					
22. İngilizce bilmek bana maddi açıdan fayda sağlar.					
23. Gelecekte iş arkadaşlarım yabancı bir dili en azından orta seviyede konuşuyor olacak.					
24. Gelecekte patronum benim İngilizce bilmemi bekleyecek.					
25. Gelecekte işimde terfi edebilmek için İngilizce biliyor olmam gerekecek.					
26. Benim meslek grubumdaki önemli kişiler en azından orta seviyede İngilizce konuşabiliyor.					
27. Gelecekte uluslararası bir itibara sahip olabilmek için İngilizce bilmek benim için önemlidir.					
28. Çeşitli kültürleri ve insanları tanımamı sağlayacağı için İngilizce yeterliliğe sahip olmanın önemli olduğunu düşünüyorum.					
29. Hayatıma anlam katan bir zorluk oluşturduğu için İngilizce öğrenmek benim için önemlidir, böyle olmasaydı hayatım biraz monoton olurdu.					
30. Belirli bir amaca ulaşmak için (diploma ya da burs alabilme vb.) kesinlikle devletin yaptığı yabancı dil sınavına girmem gerekiyor.					

APPENDIX – 3. Turkish version of Strategy Inventory for Language Learning (SILL)

DİL ÖĞRENME STRATEJİLERİ					
Dil Öğrenme Stratejileri Envanteri İngilizce' yi Yabancı Dil olarak öğrenenler için hazırlanmıştır. Bu envanterde İngilizce öğrenmeye ilişkin ifadeler okuyacaksınız. Her ifadenin sizin için ne kadar doğru ya da geçerli olduğunu, derecelendirmeye bakarak, 1, 2, 3, 4, 5' ten birini işaretleyiniz. Verilen ifadenin, nasıl yapmanız gerektiği ya da başkalarının neler yaptığı değil, sadece sizin yaptıklarınızı ne kadar tasvir ettiğini işaretleyiniz.	**1= Hiçbir zaman doğru değil**	**2= Nadiren doğru**	**3= Bazen doğru**	**4= Sık sık doğru**	**5= Her zaman doğru**
1. İngilizce' de bildiklerimle yeni öğrendiklerim arasında ilişki kurarım.					
2. Yeni öğrendiğim kelimeleri hatırlamak için bir cümlede kullanırım.					
3. Yeni öğrendiğim kelimeleri akılda tutmak için kelimenin telaffuzuyla aklıma getirdiği bir resim ya da şekil arasında bağlantı kurarım.					
4. Yeni bir kelimeyi o sözcüğün kullanılabileceği bir sahneyi ya da durumu aklımda canlandırarak, hatırlarım.					
5. Yeni kelimeleri aklımda tutmak için, onları ses benzerliği olan kelimelerle ilişkilendiririm.					
6. Yeni öğrendiğim kelimeleri aklımda tutmak için küçük kartlara yazarım.					
7. Yeni kelimeleri vücut dili kullanarak zihnimde canlandırırım.					
8. İngilizce derslerinde öğrendiklerimi sık sık tekrar ederim.					
9. Yeni kelime ve kelime gruplarını ilk karşılaştığım yerleri (kitap, tahta ya da herhangi bir işaret levhasını) aklıma getirerek, hatırlarım.					
10. Yeni sözcükleri birkaç kez yazarak, ya da söyleyerek, tekrarlarım.					
11. Anadili İngilizce olan kişiler gibi konuşmaya çalışırım.					
12. Anadilimde bulunmayan İngilizce' deki **"th /θ / hw "** gibi sesleri çıkararak, telaffuz alıştırması yaparım.					
13. Bildiğim kelimeleri cümlelerde farklı şekillerde kullanırım.					
14. İngilizce sohbetleri ben başlatırım.					
15. T.V' de İngilizce programlar ya da İngilizce filmler izlerim.					
16. İngilizce okumaktan hoşlanırım.					

	1= Hiçbir zaman doğru değil	2= Nadiren doğru	3= Bazen doğru	4= Sık sık doğru	5= Her zaman doğru
18. İngilizce bir metne ilk başta bir göz atarım, daha sonra metnin tamamını dikkatlice okurum.					
19. Yeni öğrendiğim İngilizce kelimelerin benzerlerini Türkçe' de ararım.					
20. İngilizce' de tekrarlanan kalıplar bulmaya çalışırım.					
21. İngilizce bir kelimenin, bildiğim kök ve eklerine ayırarak anlamını çıkarırım.					
22. Kelimesi kelimesine çeviri **yapmamaya** çalışırım.					
23. Dinlediğim ya da okuduğum metnin özetini çıkarırım.					
24. Bilmediğim İngilizce kelimelerin anlamını, tahmin ederek bulmaya çalışırım.					
25. İngilizce konuşurken bir sözcük aklıma gelmediğinde, el kol hareketleriyle anlatmaya çalışırım.					
26. Uygun ve doğru kelimeyi bilmediğim durumlarda kafamdan yeni sözcükler uydururum.					
27. Okurken her bilmediğim kelimeye sözlükten bakmadan, okumayı sürdürürüm.					
28. Konuşma sırasında karşımdakinin söyleyeceği bir sonraki cümleyi tahmin etmeye çalışırım.					
29. Herhangi bir kelimeyi hatırlayamadığımda, aynı anlamı taşıyan başka bir kelime ya da ifade kullanırım.					
30. İngilizce' mi kullanmak için her fırsatı değerlendiririm.					
31. Yaptığım yanlışların farkına varır ve bunlardan daha doğru İngilizce kullanmak için faydalanırım.					
32. İngilizce konuşan bir kişi duyduğumda dikkatimi ona veririm.					
33. "İngilizce' yi daha iyi nasıl öğrenirim? " sorusunun yanıtını araştırırım.					
34. İngilizce çalışmaya yeterli zaman ayırmak için zamanımı planlarım.					
35. İngilizce konuşabileceğim kişilerle tanışmak için fırsat kollarım.					
36. İngilizce okumak için, elimden geldiği kadar fırsat yaratırım.					

	1= Hiçbir zaman doğru değil	2= Nadiren doğru	3= Bazen doğru	4= Sık sık doğru	5= Her zaman doğru
37. İngilizce' de becerilerimi nasıl geliştireceğim konusunda hedeflerim var.					
38. İngilizce' mi ne kadar ilerlettiğimi değerlendiririm.					
39. İngilizce' mi kullanırken tedirgin ve kaygılı olduğum anlar rahatlamaya çalışırım.					
40. Yanlış yaparım diye kaygılandığımda bile İngilizce konuşmaya gayret ederim.					
41. İngilizce' de başarılı olduğum zamanlar kendimi ödüllendiririm.					
42. İngilizce çalışırken ya da kullanırken gergin ve kaygılı isem, bunun farkına varırım.					
43. Dil öğrenirken yaşadığım duyguları bir yere yazarım.					
44. İngilizce çalışırken nasıl ya da neler hissettiğimi başka birine anlatırım.					
45. Herhangi bir şeyi anlamadığımda, karşımdaki kişiden daha yavaş konuşmasını ya da söylediklerini tekrar etmesini isterim.					
46. Konuşurken karşımdakinin yanlışlarımı düzeltmesini isterim.					
47. Okulda arkadaşlarımla İngilizce konuşurum.					
48. İhtiyaç duyduğumda İngilizce konuşan kişilerden yardım isterim.					
49. Derste İngilizce sorular sormaya gayret ederim.					
50. İngilizce konuşanların kültürü hakkında bilgi edinmeye çalışırım.					

APPENDIX – 4. Post-hoc test results for the reported use of total strategy use and all the sub-categories with respect to faculties

Dependent Variable		(I) faculty	(J) faculty	Mean Difference (I-J)	Std. Error	Sig.	*d*
Memory strategies	Tukey HSD	Engineering	Forestry	.21122	.09294	.106	…
			Business	.15169	.08321	.264	…
			Tourism	-.10875	.08990	.621	…
		Forestry	Engineering	-.21122	.09294	.106	…
			Business	-.05953	.10381	.940	…
			Tourism	-.31997*	.10925	.019	.45
		Business	Engineering	-.15169	.08321	.264	…
			Forestry	.05953	.10381	.940	…
			Tourism	-.26044	.10110	.050	.39
		Tourism	Engineering	10875	.08990	.621	…
			Forestry	.31997*	.10925	.019	.45
			Business	.26044	.10110	.050	.39
Cognitive strategies	Tukey HSD	Engineering	Forestry	.23524	.09287	.056	…
			Business	.28631*	.08315	.003	.41
			Tourism	-.10687	.08984	.634	…
		Forestry	Engineering	-.23524	.09287	.056	…
			Business	.05107	.10373	.961	…
			Tourism	-.34211*	.10916	.010	.46
		Business	Engineering	-.28631*	.08315	.003	.41
			Forestry	-.05107	.10373	.961	…
			Tourism	-.39318*	.10103	.001	.56
		Tourism	Engineering	.10687	.08984	.634	…
			Forestry	.34211*	.10916	.010	.46
			Business	.39318*	.10103	.001	.56
Compensation Strategies	Tamhane's T2	Engineering	Forestry	.22892	.12014	.305	…
			Business	.28254*	.09761	.025	.34
			Tourism	-.06685	.09372	.979	…
		Forestry	Engineering	-.22892	.12014	.305	…
			Business	.05362	.13044	.999	…
			Tourism	-.29577	.12756	.124	…
		Business	Engineering	-.28254*	.09761	.025	.34
			Forestry	-.05362	.13044	.999	…
			Tourism	-.34938*	.10661	.007	.46
		Tourism	Engineering	.06685	.09372	.979	…
			Forestry	.29577	.12756	.124	…
			Business	.34938*	.10661	.007	.46

Continued

Dependent Variable		(I) faculty	(J) faculty	Mean Difference (I-J)	Std. Error	Sig.	*d*
Meta-cognitive strategies	Tukey HSD	Engineering	Forestry	.38009*	.10983	.003	.44
			Business	.22777	.09834	.096	…
			Tourism	-.32269*	.10624	.013	.39
		Forestry	Engineering	-.38009*	.10983	.003	.44
			Business	-.15233	.12268	.601	…
			Tourism	-.70278*	.12910	.000	.80
		Business	Engineering	-.22777	.09834	.096	…
			Forestry	.15233	.12268	.601	…
			Tourism	-.55046*	.11947	.000	.65
		Tourism	Engineering	.32269*	.10624	.013	.39
			Forestry	.70278*	.12910	.000	.80
			Business	.55046*	.11947	.000	.65
Affective strategies	Tamhane's T2	Engineering	Forestry	.07125	.10925	.987	…
			Business	.13174	.08851	.590	…
			Tourism	-.22390	.09624	.121	…
		Forestry	Engineering	-.07125	.10925	.987	…
			Business	.06049	.12147	.997	…
			Tourism	-.29515	.12721	.123	…
		Business	Engineering	-.13174	.08851	.590	…
			Forestry	-.06049	.12147	.997	…
			Tourism	-.35564*	.10992	.009	.45
		Tourism	Engineering	.22390	.09624	.121	…
			Forestry	.29515	.12721	.123	…
			Business	.35564*	.10992	.009	.45
Social strategies	Tukey HSD	Engineering	Forestry	.15893	.09574	.346	…
			Business	.10441	.08572	.616	…
			Tourism	-.33745*	.09261	.002	.45
		Forestry	Engineering	-.15893	.09574	.346	…
			Business	-.05452	.10693	.957	…
			Tourism	-.49638*	.11253	.000	.67
		Business	Engineering	-.10441	.08572	.616	…
			Forestry	.05452	.10693	.957	…
			Tourism	-.44186*	.10414	.000	.58
		Tourism	Engineering	.33745*	.09261	.002	.45
			Forestry	.49638*	.11253	.000	.67
			Business	.44186*	.10414	.000	.58

Continued

Dependent Variable		(I) faculty	(J) faculty	Mean Difference (I-J)	Std. Error	Sig	*d*
Total strategy use	Tamhane's T2	Engineering	Forestry	.21428*	.08809	.095	…
			Business	.19741*	.06825	.025	.34
			Tourism	-.19442	.07155	.043	.35
		Forestry	Engineering	-.21428*	.08809	.095	…
			Business	-.01687	.09668	1.000	…
			Tourism	-.40869*	.09903	.000	.64
		Business	Engineering	-.19741*	.06825	.025	.34
			Forestry	.01687	.09668	1.000	…
			Tourism	-.39183*	.08189	.000	.69
		Tourism	Engineering	.19442	.07155	.043	.35
			Forestry	.40869*	.09903	.000	.64
			Business	.39183*	.08189	.000	.69

APPENDIX – 5. Post-hoc test results for the reported use of total strategy use and all the sub-categories with respect to time spent outside class

Dependent Variable		(I) study hour outside class	(J) study hour outside class	Mean Difference (I-J)	Std. Error	Sig.	*d*
Memory strategies	Tamhane's T2	0-1	1-5	-.44463*	.07081	.000	.63
			5+	-.63651*	.08333	.000	.93
		1-5	0-1	.44463*	.07081	.000	.63
			5+	-.19188*	.07576	.036	.30
		5+	0-1	.63651*	.08333	.000	.93
			1-5	.19188*	.07576	.036	.30
Cognitive strategies	Tamhane's T2	0-1	1-5	-.37615*	.07359	.000	.52
			5+	-.55703*	.08302	.000	.82
		1-5	0-1	.37615*	.07359	.000	.52
			5+	-.18088*	.07482	.049	.28
		5+	0-1	.55703*	.08302	.000	.82
			1-5	.18088*	.07482	.049	.28
Meta-cognitive strategies	Tamhane's T2	0-1	1-5	-.52789*	.08451	.000	.63
			5+	-.91201*	.09450	.000	1.19
		1-5	0-1	.52789*	.08451	.000	.63
			5+	-.38412*	.08733	.000	.52
		5+	0-1	.91201*	.09450	.000	1.19
			1-5	.38412*	.08733	.000	.52
Affective strategies	Tukey HSD	0-1	1-5	-.33585*	.07611	.000	.44
			5+	-.54328*	.09574	.000	.77
		1-5	0-1	.33585*	.07611	.000	.44
			5+	-.20743	.09190	.063	…
		5+	0-1	.54328*	.09574	.000	.77
			1-5	.20743	.09190	.063	…
Social strategies	Tukey HSD	0-1	1-5	-.36999*	.07320	.000	.49
			5+	-.48445*	.09207	.000	.67
		1-5	0-1	.36999*	.07320	.000	.49
			5+	-.11445	.08838	.399	…
		5+	0-1	.48445*	.09207	.000	.67
			1-5	.11445	.08838	.399	…

Continued

Dependent Variable		(I) study hour outside class	(J) study hour outside class	Mean Difference (I-J)	Std. Error	Sig.	*d*
Total strategy use	Tamhane's T2	0-1	1-5	-.35704*	.06210	.000	.58
			5+	-.53933*	.06653	.000	.98
		1-5	0-1	.35704*	.06210	.000	.58
			5+	-.18229*	.06001	.008	.34
		5+	0-1	.53933*	.06653	.000	.98
			1-5	.18229*	.06001	.008	.34

APPENDIX – 6. Post-hoc test results for the reported use of total strategy use and all the sub-categories with respect to the participants' academic achievement levels

Dependent Variable		(I) achievement	(J) achievement	Mean Difference (I-J)	Std. Error	Sig.	*d*
Memory strategies	Tamhane's T2	Non-achievers	Low achievers	-.36947*	.07102	.000	.52
			High achievers	-.55206*	.08692	.000	.77
		Low achievers	Non-achievers	.36947*	.07102	.000	.52
			High achievers	-.18259	.07931	.066	…
		High achievers	Non-achievers	.55206*	.08692	.000	.77
			Low achievers	.18259	.07931	.066	…
Cognitive Strategies	Tamhane's T2	Non-achievers	Low achievers	-.47239*	.06744	.000	.71
			High achievers	-.81948*	.08552	.000	1.16
		Low achievers	Non-achievers	.47239*	.06744	.000	.71
			High achievers	-.34709*	.07738	.000	.55
		High achievers	Non-achievers	.81948*	.08552	.000	1.16
			Low achievers	.34709*	.07738	.000	.55
Compensation strategies	Tukey HSD	Non-achievers	Low achievers	-.32643*	.08301	.000	.44
			High achievers	-.61691*	.10039	.000	.72
		Low achievers	Non-achievers	.32643*	.08301	.000	.44
			High achievers	-.29047*	.09746	.008	.31
		High achievers	Non-achievers	.61691*	.10039	.000	.72
			Low achievers	.29047*	.09746	.008	.31
Meta-cognitive strategies	Tukey HSD	Non-achievers	Low achievers	-.61395*	.08080	.000	.75
			High achievers	-.89925*	.09771	.000	1.10
		Low achievers	Non-achievers	.61395*	.08080	.000	.75
			High achievers	-.28530*	.09487	.008	.38
		High achievers	Non-achievers	.89925*	.09771	.000	1.10
			Low achievers	.28530*	.09487	.008	.38
Affective strategies	Tukey HSD	Non-achievers	Low achievers	-.40756*	.07646	.000	.55
			High achievers	-.49282*	.09247	.000	.64
		Low achievers	Non-achievers	.40756*	.07646	.000	.55
			High achievers	-.08526	.08977	.609	…
		High achievers	Non-achievers	.49282*	.09247	.000	.64
			Low achievers	.08526	.08977	.609	…

Continued

Dependent Variable		(I) achievement	(J) achievement	Mean Difference (I-J)	Std. Error	Sig.	*d*
Social strategies	Tukey HSD	Non-achievers	Low achievers	-.55896*	.07113	.000	.78
			High achievers	-.59546*	.08602	.000	.85
		Low achievers	Non-achievers	.55896*	.07113	.000	.78
			High achievers	-.03650	.08351	.900	…
		High achievers	Non-achievers	.59546*	.08602	.000	.85
			Low achievers	.03650	.08351	.900	…
Total strategy use	Tamhane's T2	Non-achievers	Low achievers	-.45812*	.05833	.000	.80
			High achievers	-.66266*	.07084	.000	1.11
		Low achievers	Non-achievers	.45812*	.05833	.000	.80
			High achievers	-.20454*	.06260	.004	.38
		High achievers	Non-achievers	.66266*	.07084	.000	1.11
			Low achievers	.20454*	.06260	.004	.38

APPENDIX – 7. Post-hoc test results for the reported use of total strategy use and all the sub-categories with respect to participants' motivation levels

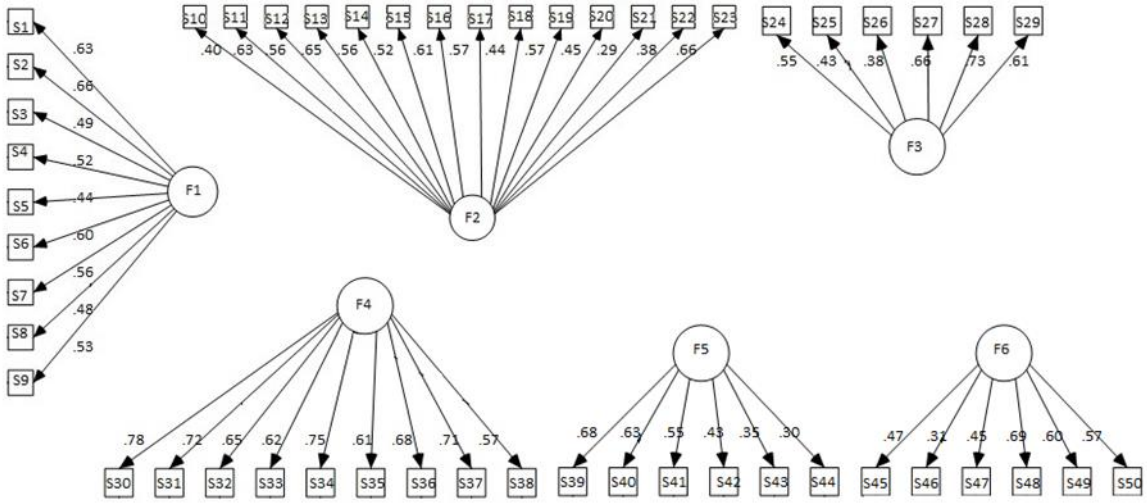
Dependent Variable		(I) motivation level	(J) motivation level	Mean Difference (I-J)	Std. Error	Sig.	*d*
Memory strategies	Tukey HSD	SLM	SMM	-.56492*	.09116	.000	.83
			SHM	-1.00060*	.09735	.000	1.50
		SMM	SLM	.56492*	.09116	.000	.83
			SHM	-.43568*	.06509	.000	.62
		SHM	SLM	1.00060*	.09735	.000	1.50
			SMM	.43568*	.06509	.000	.62
Cognitive strategies	Tukey HSD	SLM	SMM	-.49090*	.08923	.000	.75
			SHM	-1.07512*	.09528	.000	1.62
		SMM	SLM	.49090*	.08923	.000	.75
			SHM	-.58422*	.06371	.000	.91
		SHM	SLM	1.07512*	.09528	.000	1.62
			SMM	.58422*	.06371	.000	.91
Compensation Strategies	Tamhane's T2	SLM	SMM	-.12706	.13534	.726	…
			SHM	-.56163*	.13918	.000	.64
		SMM	SLM	.12706	.13534	.726	…
			SHM	-.43457*	.07702	.000	.56
		SHM	SLM	.56163*	.13918	.000	.64
			SMM	.43457*	.07702	.000	.56
Meta-cognitive strategies	Tukey HSD	SLM	SMM	-.76416*	.10197	.000	.96
			SHM	-1.50822*	.10889	.000	2.03
		SMM	SLM	.76416*	.10197	.000	.96
			SHM	-.74406*	.07281	.000	1.11
		SHM	SLM	1.50822*	.10889	.000	2.03
			SMM	.74406*	.07281	.000	1.11
Affective strategies	Tukey HSD	SLM	SMM	-.46276*	.10206	.000	.64
			SHM	-.89498*	.10899	.000	1.30
		SMM	SLM	.46276*	.10206	.000	.64
			SHM	-.43222*	.07287	.000	.65
		SHM	SLM	.89498*	.10899	.000	1.30
			SMM	.43222*	.07287	.000	.65
Social strategies	Tukey HSD	SLM	SMM	-.51053*	.09630	.000	.75
			SHM	-.96755*	.10283	.000	1.44
		SMM	SLM	.51053*	.09630	.000	.75
			SHM	-.45702*	.06876	.000	.65
		SHM	SLM	.96755*	.10283	.000	1.44
			SMM	.45702*	.06876	.000	.65

Continued

Dependent Variable		(I) motivation level	(J) motivation level	Mean Difference (I-J)	Std. Error	Sig.	*d*
Total strategy use	Tukey HSD	SLM	SMM	-.48672*	.07374	.000	.87
			SHM	-1.00135*	.07874	.000	1.86
		SMM	SLM	.48672*	.07374	.000	.87
			SHM	-.51463*	.05265	.000	1.00
		SHM	SLM	1.00135*	.07874	.000	1.86
			SMM	.51463*	.05265	.000	1.00

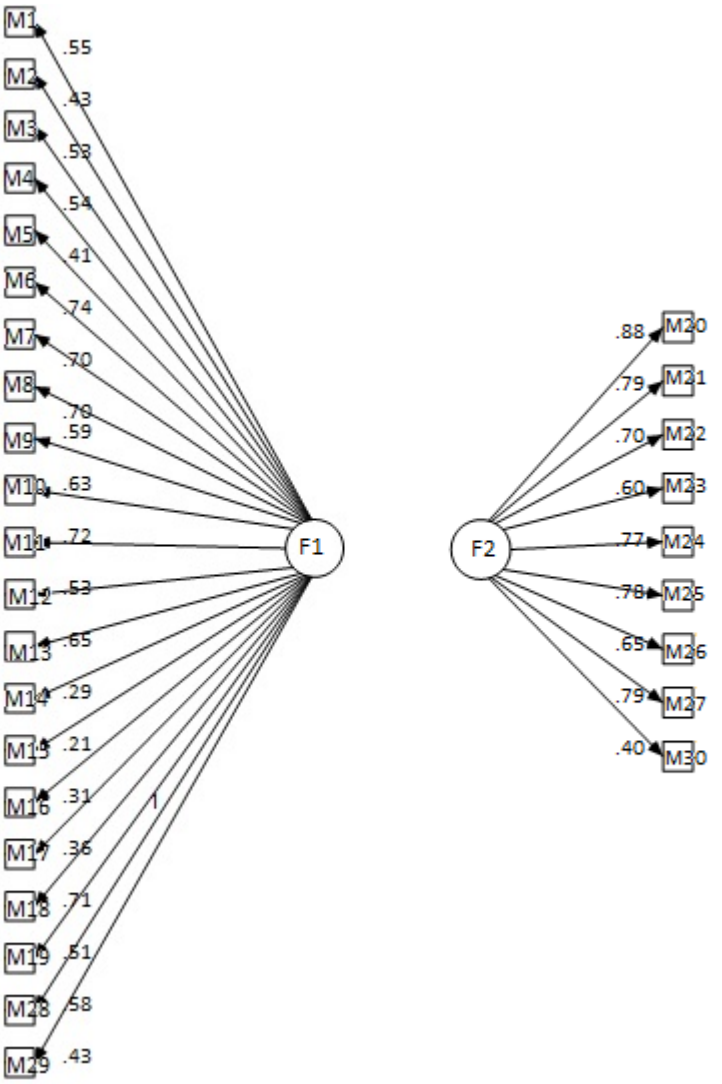
Note: SLM = Students with Low Motivation, SMM = Students with Moderate level Motivation, SHM = Students with High Motivation

APPENDIX – 8. CFA diagram for SILL



Chi-square=1082.72, df= 404, P-value= 0.00000, RMSEA= 0.049

APPENDIX – 9. CFA diagram for MAQ



Chi-square=1010.00, df= 404, P-value= 0.00000, RMSEA= 0.055

AUTOBIOGRAPHY

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Education

2003	Gebze Anatolian High School
2008	B.A. ELT department at Abant İzzet Baysal University

Work experiences

2008-2009	English teacher at Yunus Emre Primary School in Sason/Batman
2009…	English instructor at Düzce University

Courses delivered

Basic English courses from A1 to B1 levels

Reading & Writing course from A2 to B2 levels

Professional English courses in Machinery, Metallurgy, Electric and Electronics, Logistics, and Social Service in B2 levels