

**The Correlation between Brain Dominance and
Language Learning Strategy Use of English
Preparatory School Students**

Meryem Özyel

Submitted to the
Institute of Graduate Studies and Research
in partial fulfilment of the requirements for the degree of

Master of Arts
in
English Language Teaching

Eastern Mediterranean University
June 2016
Gazimağusa, North Cyprus

Approval of the Institute of Graduate Studies and Research

Prof. Dr. Cem Tanova
Acting Director

I certify that this thesis satisfies the requirements as a thesis for the degree of Master of Arts in English Language Teaching.

Assoc. Prof. Dr. Javanshir Shibliyev
Chair, Department of English Language Teaching

We certify that we have read this thesis and that in our opinion it is fully adequate in scope and quality as a thesis for the degree of Master of Arts in English Language Teaching.

Assoc. Prof. Dr. Javanshir Shibliyev
Supervisor

Examining Committee

1. Assoc. Prof. Dr. Naciye Kunt

2. Assoc. Prof. Dr. Javanshir Shibliyev

3. Asst. Prof. Dr. Fatoş Erozan

ABSTRACT

The vitality of learning strategies is clearly evident since there are many studies and books published in this area. This study aims at investigating the correlation between brain dominance and language learning strategies used by the non-native English speakers learning English in English Preparatory School at Cyprus International University. The sample of the study consisted of 187 English preparatory school students. The participants' hemispheric dominance was determined by the "Brain Dominance Inventory" (BDI) which was re-arranged by Davis (1994) and was translated into Turkish by K k (2005). To identify the strategic preferences of the participants, "Strategy inventory for language learning" (SILL) was used. This inventory was designed by Oxford (1990) to identify the strategies that EFL learners use to improve their language learning. The inventory was translated into Turkish by Cesur and Fer (2007). Bonferroni test was used in order to investigate differences among all possible pairs of means. The study concluded that left-brained participants use social and metacognitive strategies more than right and whole-brained participants. However, no other significant differences were found between any of the pairs in the study. It is inevitable that learners with different brain dominances are present in language classrooms. In this respect, identifying learners' brain dominance is crucial since it is believed to be influential on the preference of strategy use. For effective language learning, strategies could be taught to language learners, and if it is done in accordance with brain dominance type, it is expected to be more efficient way of teaching strategies.

Keywords: Brain dominance, language learning strategies, EFL students.

ÖZ

Öğrenme stratejilerinin önemi bu alanda birçok çalışma ve kitap yayımlanmış olmasından da açıkça ortadadır. Bu çalışma Uluslararası Kıbrıs Üniversitesi'nde okuyan ve anadili İngilizce olmayan İngilizce hazırlık okulu öğrencilerinin kullandığı dil öğrenme stratejileri ve beyin baskınlığı arasındaki ilişkiyi incelemeyi amaçlamaktadır. Araştırmanın örneklemini 187 hazırlık okulu öğrencisinden oluşmaktadır. Katılımcıların beyin baskınlığı Davis (1994) tarafından düzenlenmiş ve Kök (2005) tarafından Türkçe'ye tercüme edilmiş Beyin Baskınlığı Envanteri ile belirlenmiştir. Katılımcıların strateji kullanım tercihlerini belirlemek için de "Dil Öğrenme Stratejileri Envanteri" kullanılmıştır. Bu envanter Oxford (1990) tarafından öğrencilerin yabancı dil öğrenimlerini geliştirmek için kullandıkları stratejileri belirlemek için tasarlanmıştır. Envanter Cesur ve Fer (2007) tarafından Türkçe'ye tercüme edilmiştir. Araştırmada değişkenler arasındaki farklılıkları incelemek için Bonferroni test kullanıldı. Araştırmada sol beyin baskınlığı olan katılımcıların sağ ve tüm beyin baskınlığı olan katılımcılardan daha fazla üstbilişsel ve sosyal stratejiler kullandığı sonucuna varılmıştır. Ancak, diğer çiftler arasında istatistiksel açıdan başka anlamlı bir fark görülmemiştir. Farklı beyin baskınlığı olan öğrencilerin aynı dil sınıfında mevcut olmaları kaçınılmazdır. Bu bağlamda, öğrencilerin beyin baskınlığını belirlemek, beyin baskınlığının öğrencilerin öğrenme stratejilerini kullanım tercihleri üzerinde etkisi olması açısından önemlidir. Etkili dil öğrenimi için dil öğrencilerine stratejiler öğretilir, ve bu beyin baskınlık tipine uygun olarak yapıldığı takdirde strateji öğretiminin daha etkili olması beklenmektedir.

Anahtar Kelimeler: Beyin baskınlığı, Dil öğrenme stratejileri, İngilizceyi yabancı dil olarak öğrenen öğrenciler.

To My Family

ACKNOWLEDGMENT

First of all, I would like to take the opportunity to express my sincere gratitude to my thesis supervisor, Assoc. Prof. Dr. Javanshir Shibliyev, especially for sparing his valuable time during my master's research.

I also would like to thank Assoc. Prof. Dr. Naciye Kunt and Asst. Prof. Dr. Fatoş Erozan for their constructive feedback to my thesis as members of examining committee.

I owe many thanks to my family for giving me encouragement to continue my dissertation. And, I also owe special thanks to my husband for his patience and invaluable guidance whenever I needed help.

And, I also owe huge thanks to Prof. Dr. Sabri Koç for guiding me and helping me not to lose my hope in this way. I will always remember his priceless advice and support. I can never pay my debt of gratitude to him.

TABLE OF CONTENTS

ABSTRACT.....	iii
ÖZ	iv
DEDICATION	vi
ACKNOWLEDGMENT	vii
LIST OF TABLES	xi
1 INTRODUCTION	1
1.1 Background of the Study	1
1.2 Statement of Problem	5
1.3 Purpose of the Study.....	5
1.4 Significance of the Study.....	6
1.5 Definitions of the Terms.....	7
2 LITERATURE REVIEW.....	9
2.1 Language Acquisition: Children versus Adults.....	9
2.2 Good Language Learner	14
2.3 Definitions of Language Learning Strategies	17
2.4 Taxonomies of Language Learning Strategies	20
2.4.1 Oxford's Classification of Language Learning Strategies	24
2.5 Basic Characteristics of Language Learning Strategies	27
2.6 Brain, Brain Dominance and Language Learning	31
2.7 Summary of the Chapter.....	34
3 METHODOLOGY.....	36
3.1 An Overview: Behind the Study.....	36
3.2 Research Design	37

3.3	The Context of the Study.....	38
3.4	Participants	39
3.5	Instruments	39
3.6	Data Collection Procedures	40
3.7	Data Analysis Processing	41
4	RESULTS	43
4.1	Research Questions and Findings.....	43
4.1.1	Descriptive Statistics for Direct and Indirect Strategies in Descending Orders	44
4.1.2	Brain Dominance Results	45
4.1.3	The Effects of Brain Dominance on the Strategy Use.....	45
4.1.3.1	What effect does the brain dominance have on the use of direct strategies?	46
4.1.3.1.1	Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of memory strategies?	46
4.1.3.1.2	Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of cognitive strategies? ..	47
4.1.3.1.3	Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of compensation strategies?	47
4.1.3.2	What effect does the brain dominance have on the use of indirect strategies?	48

4.1.3.2.1 Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of metacognitive strategies?	48
4.1.3.2.2 Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of affective strategies?	49
4.1.3.2.3 Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of social strategies?.....	50
4.2 Summary of the Chapter	51
5 DISCUSSION	52
5.1 Discussion of the Findings	52
5.2 Pedagogical Implications of the Study	54
5.3 Limitations of the Study	56
5.4 Suggestions for Further Research.....	58
REFERENCES.....	60
APPENDICES	71
Appendix A: Turkish Version of the Personal Background Questionnaire.....	72
Appendix B: Turkish Version of Strategy Inventory for Language Learning	73
Appendix C: Turkish Version of the Brain Dominance Inventory	76
Appendix D: English Version of the Personal Background Questionnaire	80
Appendix E: English Version of the SILL.....	81
Appendix F: English Version of the Brain Dominance Inventory	84

LIST OF TABLES

Table 1: Language Learning Strategy Definitions	17
Table 2: Rubin’s Classification of Language Learning Strategies (1975).....	21
Table 3: Rubin’s Classification of Language Learning Strategies (1981).....	21
Table 4: Naiman et al’s Classification of Language Learning Strategies (1978)	22
Table 5: O’Malley et al’s Classification of Language Learning Strategies (1978) ..	23
Table 6: Stern’s Classification of Language Learning Strategies (1992)	23
Table 7: Oxford’s Classification of Language Learning Strategies (1990).....	24
Table 8: Features of Language Learning Strategies.....	27
Table 9: Descriptive Statistics for Direct and Indirect Strategies in Descending Order	45
Table 10: Brain Dominance Inventory Results.....	45
Table 11: Multiple comparisons among left-brained, right-brained, and whole- brained learners concerning the use of memory strategies	46
Table 12: Multiple comparisons among left-brained, right-brained, and whole- brained learners concerning the use of cognitive strategies.....	47
Table 13: Multiple comparisons among left-brained, right-brained, and whole- brained learners concerning the use of compensation strategies	48
Table 14: Multiple comparisons among left-brained, right-brained, and whole- brained learners concerning the use of metacognitive strategies.....	49
Table 15: Multiple comparisons among left-brained, right-brained, and whole- brained learners concerning the use of affective strategies.....	50
Table 16: Multiple comparisons among left-brained, right-brained, and whole- brained learners concerning the use of social strategies	51

Chapter 1

INTRODUCTION

This chapter consists of some basic sections to provide background information to the study. A brief introduction and literature review regarding the earlier studies are presented. It also introduces the purpose and the research questions of the study. In addition to these, significance, assumptions, and limitations of the study are also discussed in this chapter.

1.1 Background of the Study

The vitality of learning strategies is clearly evident since there are many research studies and books published in this area (Rubin, 1975; Oxford, 1989a; O'Malley & Chamot 1990; Larsen-Freeman, 1991; Green & Oxford, 1995). When Cognitive Approach was established as a result of the emphasis on human cognition in the mid seventies, the focus of second language acquisition or learning passed from the teachers and teaching on to the learners and learning. According to Larsen-Freeman (2000, p.53), "rather than simply being responsive to stimuli in the environment, learners were seen to be much more actively responsible for their own learning". This shift was also mentioned by Cohen (1998) that the change from being a manager to a facilitator in teacher roles would also have a good effect on learners to become responsible and independent in the learning process.

In other words, the pioneering works in the mid seventies have initiated a new trend for language learners to take steps for their own learning. In this case,

language learning strategies are prominent in language learning as stated by Oxford (1990):

“Strategies are especially important for language learning because they are tools for active, self-directed involvement, which is essential for developing communicative competence. Appropriate language learning strategies result in improved proficiency and greater self-confidence” (p.1).

Rubin (1975) introduced the term language learning strategies to the field. However, when it comes to the definitions and classification schemes of language learning strategies, it can be seen that researchers have defined the term learning strategies in different ways since it is a very suitable concept to be interpreted differently. Those divergent approaches of researchers resulted in controversies in the field of language learning strategies. O’Malley et al (1985, p.22) stated that “there is considerable confusion about definition of specific strategies and about the hierarchic relationship among strategies”. Ellis (1994, p. 529) described these considerable variations of definitions as “fuzzy” when Wenden and Rubin (1987, p.7) put it as “the elusive nature of the term”. Griffiths (2007) also stated that the term language learning strategies has been difficult to define. With reference to the literature review on language learning strategies definitions, it is possible to say that the term has been defined dissimilarly in different studies in the past by the scholars and researchers. Besides various definitions of learning strategies, classification conflicts also remain in the field due to the different approaches of researchers. Therefore, it is possible to encounter different definitions and taxonomies used in second and foreign language learning by the researchers. They are presented in the following chapter in detail.

The importance of language learning strategies aside, scholars also had a tendency to understand how brain works. For this reason, studies have been conducted in the field of neuroscience to understand language acquisition in L1 and L2. Because, understanding how brain functions while acquiring or learning a language could bring lots of unknowns into light so that learning process could also be contributed in the light of these studies. As mentioned by Talukder (2001), one of the research studies conducted to investigate how brain learns a second language is by Hirsch and her colleagues. According to the findings of the study, Broca's and Wernicke's area, which will be discussed in chapter 2, showed differences regarding L1 and L2 functioning. It was found out that L1 and L2 are spatially placed apart in the Broca's area, which means that motor skills for language productions such as tongue, mouth, and palate movements are separately controlled in the Broca's area. However, unlike Broca's area, comprehension of L1 and L2 does not show much difference in separation in the Wernicke's area.

There is another interesting study conducted to investigate brain structures of monolingual and bilingual participants at different ages (Klein, Mok, Chen, and Watkins, 2014). The study revealed that if a second language is learned after becoming proficient in L1, left-brain cortex becomes thicker compared to right brain. They also mentioned the results from Hull and Vaid's study (2007, p.1987) that "those who acquired their second language after age six show left hemisphere dominance for both languages." This result is similar for individuals who learn a second language even later.

In addition, brain dominance has great impact in teaching and learning as well. How brain lateralization theory developed by the researches will be discussed in detail in chapter 2. Hemisphericity was promoted by many educators such as Madeline Hunter (1976) and Torrance (1981, 1982). They suggested that schools adapt their existing methods and assessment procedures according to the concept of hemisphericity. Hunter (1976) discussed that left-brained subjects, such as language and mathematics, and left-brain functioning activities, such as learning algebra, were dominant in education. Consequently, the discussions on this disproportionateness caused a gradual change in learning and teaching methods to whole-brained learning. The implications of brain dominance in teaching was also mentioned by Hughes (2007, para.4) as “educators can use the results to develop a ‘whole-brain’ approach to teaching by designing courses that draw on general and dominance-specific methods”. Hughes (2007) exemplified his statement to show the effectiveness of embedding brain dominance in teaching by indicating how analytical, organizational and creative skills can be blended successfully by combining lectures with detailed in-class example and problem-solving sessions followed by discussion or debate to assess understanding.

In short, it would be correct to say that language learning strategies and brain dominance separately have important roles in teaching and learning. To teach and learn more effectively, instructors and learners need to better understand and appreciate individual differences and how they can affect learning process in a positive way. In this study, the researcher will investigate if there is a correlation between brain dominance and language learning strategy preferences since it might

be useful for curriculum designing, shaping teaching methodologies, techniques, materials and tools.

1.2 Statement of Problem

The present study aims at finding out the relation between brain dominance and language learning strategy use of English preparatory students. The study is rare in the literature regarding two aspects. First of all, the study was conducted in the EFL context, and secondly, each strategy type offered by Oxford (1990) was considered one by one while analyzing the correlation between brain dominance and language learning strategies. Based on the researcher's observation, like every language learner, students studying in English Preparatory School at Cyprus International University were also using language learning strategies consciously or unconsciously in their language learning process. Without considering their success in language learning, researcher would like to investigate how learners' brain dominance and cognitive styles affect their language learning strategy preferences.

In alignment with this purpose, (a) relevant literature will be reviewed, (b) three sets of questionnaires will be administered to students who are studying at English Preparatory School at Cyprus International University, (c) responses of participants will be analyzed and, (d) in light of the findings, suggestions will be offered to language instructors, curriculum designers and language teaching institutions.

1.3 Purpose of the Study

The purpose of this research study is to investigate the relationship between brain dominance and language learning strategy use of EFL learners. To this end, the study aims at finding out answers to the following research questions:

1. What effects does the brain dominance have on the use of direct strategies?

- 1.1. Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of memory strategies?
 - 1.2. Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of cognitive strategies?
 - 1.3. Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of compensation strategies?
2. What effects does the brain dominance have on the use of indirect strategies?
 - 2.1. Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of metacognitive strategies?
 - 2.2. Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of affective strategies?
 - 2.3. Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of social strategies?

1.4 Significance of the Study

Researchers have begun to do research into neurolinguistics so as to enhance foreign language teaching. The significance of this research study is to reveal the relationship between the language learning strategies and brain dominance, and how brain dominance affects language learning strategy preference of learners. It cannot be denied that every learner possibly uses several strategies consciously or subconsciously to learn a new language. As Dülger (2012, p.1) stated, “knowledge of brain functions of learners can help teachers and curriculum designers utilize more effective teaching procedures”. To this end, this study identifies brain dominance and language strategy use of EFL learners since it is crucial to find out most frequently used strategies by language learners with different types of brain dominance.

It is thought that it might be useful for educational institutes, curriculum designers, teachers, and even for students to realize more effective ways to teach and/or learn a new language. Learning begins when learners become aware of themselves as learners and they should be interested in knowing how they learn to take control of their learning; likewise teachers should also be aware of how their students learn and process information easily and permanently; because, it is very helpful for language instructors to know their students' neurological strengths and weaknesses to be able to reach the majority of their students and to shape their teaching methodology, techniques and materials accordingly. The findings of this study will provide an answer to which language learning strategies are preferably used by learners with different brain dominance types. It is expected to suggest ideas for brain-based instruction programs which have become increasingly popular in today's education.

1.5 Definitions of the Terms

Brain Dominance: Brain or hemispheric dominance, and brain hemisphericity are used alternately in this research. The terms brain or hemispheric dominance, and brain hemisphericity mean that the learners tend to use one side of the brain more compared to the other side (Mercer, 2010). In the current study, brain dominance determines how one's brain processes new information to learn.

Left-brained, Right-brained, and Whole-Brained Learners: Learners are using every part of their brain as a whole while learning, however, it cannot be correct to say that they are right or left brain only. Mostly, human brain is either left or right brain dominant (Holbrook, 2011). In the current study, these terms are used to represent which side of the brain are used more dominantly by the participants.

Brain Dominance Inventory (BDI): BDI stands for ‘Brain Dominance Inventory’. This instrument by Davis (1994) was used in this study to determine participants’ brain dominance.

Language Learning Strategies: Language learning strategies and its abbreviation LLS are also used interchangeably in this study. Language learning strategies are considered as steps and actions which are used by learners to improve their language learning (Cohen, 1996).

Strategy Inventory for Language Learning (SILL): SILL stands for ‘Strategy Inventory for Language Learning’. This inventory, which was prepared by Oxford (1990), was used in the current study to identify participants’ strategy use preference.

Chapter 2

LITERATURE REVIEW

This chapter basically reviews the literature regarding language learning strategies and brain hemisphericity. It represents language learning strategy definitions and characteristics of good language learners, and also overviews different classifications of language learning strategies. In addition, brain and brain lateralization, and its relation to language, and how our brain functions while learning a new language are reviewed in this chapter.

2.1 Language Acquisition: Children versus Adults

It is evident that acquiring a first language as a child and learning a second language in a classroom environment as an adult learner have differences. So the question is; why are children better at language learning than adults? Making good progress to reach native-like level might be quite difficult for an adult even after spending a lot of years on language learning. According to Brown's (2000), adults have considerable advantages over children because of numerous reasons such as having the knowledge of language structure because of having mastered their first language already, having superior intellect and, abstract thinking; however, these advantages might also be an obstacle for them in their natural learning process. Despite not having the same advantages as adults, children show better success in language learning. Brown (2000, p.21) also mentioned children's success on first language acquisition by saying that "by the age of three, children can comprehend an

incredible quantity of linguistic input; their speech capacity mushrooms as they become the generators of nonstop chattering and incessant conversations.” Brown (2000) added that children continue to learn social functions of their language at school age. The advantages that children have in L1 learning can be explained by different schools of thoughts. According to the behaviouristic approach children are born with tabula rasa (blank slate) and they acquire their first language through imitation, repetition, feedback on success, and habit formation (Lightbown&Spada, 2013). As a behaviourist, Skinner (1957) also has a model/theory named as verbal behaviour, which is an extension of his operant conditioning theory and suggests rewarding the desirable behaviour to maintain it and punishing the undesirable behaviour to extinguish it. However, as a nativist Chomsky (1981) reacted to behaviourist approach by saying that children are biologically programmed for language and they come to this world with language acquisition device (LAD), an imaginary “black box”, which is thought to contain universal principles. This is considered as children’s innate natural ability to acquire a language, also known as universal grammar (UG).

Lightbown and Spada (2013, p.20) stated that “this universal grammar (UG) would prevent the child from pursuing all sorts of wrong hypotheses about how languages might work. If children are pre-equipped with UG, then what they have to learn is the ways in which the language they are acquiring makes use of these principles.”

Chomsky (1981) likens children’s language acquisition to their innate ability to walk. When the required conditions are completed, children learn to walk approximately at the same age without being taught how to do it. Chomsky (1981) claimed that language acquisition is similar. It’s the child’s biological endowment which

fundamentally needed to acquire the language. People who speak to the child make only a basic contribution to the acquisition of the language.

At this point, Critical Period Hypothesis should be discussed which was pioneered by Eric Lenneberg in 1967. He argued that LAD should be activated at a certain time to acquire a language. Lightbown and Spada (2013, p.22) stated that “beyond those critical periods, it is either difficult or impossible to acquire those abilities. Children who are not given access to language will never acquire language.”

If there is a critical period to acquire a language, how is it possible for adults to learn a language? The answer could possibly be the Fundamental Difference Hypothesis (FDH). FDH was proposed by Bley-Vroman in 1989 as opposed to nativist approaches. According to Bley-Vroman (1989), first and second language acquisition seems similar in terms of the need for a linguistic knowledge base and cognitive procedures. However, they differ from each other. In L1 acquisition, UG, which is defined as an innately specified linguistic knowledge, has an important role; contrary to this, for second language acquisition learner's first language is the linguistic knowledge base. As it was mentioned above, adult learners have superior intellect, better thinking skills, and also they have better understanding of language structure because they've experienced language learning before. Stewart (2003) explained that children acquire language within the principles and parameters of UG; however, adults do not have access to universal grammar (UG). He stated that unlike children, adult learners use problem solving skills to interpret the structure of the L2. So the inference which can be drawn from this is that, UG is for only first language acquisition. In short, even though the universal grammar and language acquisition

device are not accessible for adults, language learning still takes place; however, this should not be considered as evidence against the critical period hypothesis. Conversely, it eliminates some arguments against CPH. As fundamental difference hypothesis suggests, adult learners use their problem solving abilities to learn a second language, and this is how adults can learn a language without having access to UG. Nevertheless, it doesn't make adults better language learners than children. In parallel with this argument, Moskovsky (2001) stated that adult learners' degree of success or failure has been found in relation with social and psychological variables such as personality type, intelligence, motivation, learning goals, and learning strategies. He added that older learners are less successful than younger learners because of age-related decline in cognitive ability.

Having had discussed the hypothesis, a few examples from the literature can be mentioned like Peter, Victor, and Genie who were exposed to language after puberty. It is extremely rare to find children who cannot speak unless they are deaf, because infants are exposed to language since birth and the acquisition starts. A blog post "Children with no language" (n.d) takes a closer look at the Genie case. Genie was at the age of 13 when she was found which means she was beyond the critical period and UG access was unavailable for her, which is a similar case to Peter's and Victor's. In this case, it was questioned why Genie failed to make progress in language learning even if she was able to use her cognitive abilities like second language learners. According to the investigators, one of the reasons might be the lack of linguistic knowledge base. Unlike second language learners, Genie had not had any experience of acquiring a language before; therefore, she did not have an understanding of language structure. In addition to this, according to the Genie's

tests, the tasks in her brain were not balanced and her left hemisphere which is responsible for language tasks was not working. Her left brain had lost its language learning capacity since it had not been used before. However, there is opposition to this. Some scientists believed that Genie was a right hemisphere thinker, and that was the reason why she could not make good progress. Eventually, this case study can be taken into consideration as a strong possibility of the existence of critical period hypothesis as well.

In short, despite the lack of some advantages unlike adults, children could learn a second language more easily than adults. Putting the comparison of adult L2 learning and child L1 learning aside, there have been another questions discussed in the literature: How is it possible for some adult learners to learn a second language better than some other adult learners? For instance, Saville-Troike (2006, p.vii) gave place to three basic questions into his book which were attempted to be answered by different disciplinary perspectives such as “what exactly an L2 learner comes to know, how the learner acquires this knowledge, and most importantly why some learners are more (or less) successful than others”. Scholars were interested in finding out what successful learners were doing to learn a second language. As it was argued earlier, it is believed that having a good control of L1 could help adult language learners to achieve the acquisition of a second language with ease since they have an understanding of language structure and necessary skills. What scholars found out about successful learners, who are also described as good language learners, and also what characteristics they have will be discussed in the next section.

2.2 Good Language Learner

There has been a long history of attempts in the seventies to investigate how some learners were more successful in learning a new language. It has been almost four decades since early scholars tried to identify the characteristics of good language learners in order to teach less successful learners what successful learners do (Rubin, 1975; Stern, 1975; Naiman, Fröhlich, & Todesco, 1978; Rubin and Thompson, 1983; Chamot & Kupper, 1989; O'Malley & Chamot 1990; Hedge, 2000; Lightbown & Spada, 2013).

Whether useful or not, each language learner is possibly using several strategies to learn a new language consciously or unconsciously. Yet, unlike less successful learners, two of the distinguishing characteristics of effective language learners are that; they are aware of the strategies they use and why they use those strategies (Lavine & Oxford, 1996). Setiyadi (2009) pointed attention to his research study findings that unsuccessful language learners also employed language learning strategies, however at a lower frequency compared to successful learners. In addition to this, the other discrimination between successful and unsuccessful learners, according to Setiyadi (2009), is the types of strategies employed by them. Griffiths's (2003) study results also revealed that successful learners used more strategies more frequently than less successful learners. Grenfell (2005, p.7) also put forward some claims about language learning strategies according to the studies in the field that "good learners use strategies; and that language learning strategies are synonymous with 'good' language learning".

Comparing successful learners to less successful ones, the distinguishing characteristics of good language learners lead them to success in language learning. Early researchers believed that it would be possible to make lists of characteristics of good language learners by observing the strategies they used (Naiman, Fröhlich, & Todesco 1975; Rubin 1975). This would also be helpful to train others so that less successful language learners would also acquire a new language with ease. What scholars found out about the common characteristics of good language learners are listed below:

1. They are willing to learn and are accurate guessers (Rubin, 1975; Stern, 1975)
2. They have strong desire to communicate, or willingness to learn from communication (Rubin, 1975; Stern, 1975)
3. They are courageous learners and fearless to make mistakes so as to learn (Rubin, 1975)
4. Good language learners create or look for opportunities to practice language (Rubin, 1975; Stern, 1975; Naiman, Fröhlich, & Todesco, 1978)
5. As well as monitoring others, they are also self-monitoring in language practice. They actively participate in the language learning process (Rubin, 1975; Stern, 1975; Naiman, Fröhlich, & Todesco, 1978)
6. As well as developing L2 structure system, they also pay attention to the meaning (Rubin, 1975; Stern, 1975)
7. Considering the language skill or task, successful language learners select strategies which work well together and use them in orchestrated way (Chamot & Kupper, 1989)
8. They are conscious about what strategies they should employ and why (O'Malley & Chamot, 1990)

9. Successful learners have greater metacognitive control over their learning (O'Malley et al 1985, 1985a)

10. Good language learners use study skills, have positive attitudes towards language, build an on-going linguistic structure, and interact with other learners (Grenfell, 2005).

When the characteristics which were identified by the scholars are examined, we can see the resemblance among them. To sum up, these are the basic characteristics which are leading learners to success. Similar to the items mentioned above, McDonough and Shaw (2003, p.56) also emphasize the factors leading learners to success in language learning: “checking one’s performance in a language, being willing to guess and to ‘take risks’ with both comprehension and production, seeking out opportunities to practice, developing efficient memorizing strategies, and many others.”

There is another issue emerged as a result of these pioneering studies which have been conducted to find out the characteristics of good language learners. Researches on good language learners initiated the notion of teaching language learning strategies to less successful learners. Some scholars, such as O'Malley & Chamot (1990) and Oxford (1990) believed that underachieving language learners can be trained to gain those characteristics of good language learners. Liu (2010) also mentioned O'Malley et al's (1994) study in his paper that less successful learners may enhance their language learning skills if they were to be taught how to apply language learning strategies to language skills, tasks, and activities. Besides, Oxford et al (1990) indicated the importance of strategy training as saying that strategy

training encourages responsibility and self-direction in the learner. Griffiths (2004) interpreted an old proverb reminded by Wenden (1985) saying “give a man a fish and he eats for a day. Teach him how to fish and he eats for a lifetime” as “if students are provided with answers, the immediate problem is solved. But if they are taught the strategies to work out the answer for themselves, they may be empowered to manage their own learning”. Eventually, these developments and approaches caused various strategy training models to be emerged such as Oxford’s Model (1990) and Chamot’s Model (2005).

2.3 Definitions of Language Learning Strategies

In the literature, there have been controversies about the definition of language learning strategies and therefore literature is full of various definitions. Shukri (2013, p.18) points out the reason for this diversity by saying “researchers constructed language learning strategy definitions using a variety of expressions and different points of view in several issues.” From the preliminary research studies in 1970s, such as Rubin (1975), scholars defined language learning strategies differently. Some statements on definitions are as follows:

Table 1: Language Learning Strategy Definitions

Researcher	Year	Definition
Rubin	1975	“Language learning strategies are the techniques or devices which a learner may use to acquire knowledge”
Bialystok	1978	“Optional methods for exploiting available information to increase the proficiency of second language learning”

Table 1 (cont.): Language Learning Strategy Definitions

Researcher	Year	Definition
Rigney	1978	“Operations or steps used by a learner that will facilitate the acquisition, storage, retrieval or use of information”
Tarone	1983	“The attempts to develop linguistic and sociolinguistic competence in the target language to incorporate these into one’s interlanguage competence”
Weinstein&Mayer	1986	"Behaviours and thoughts that a learner engages in during learning which are intended to influence the learner's encoding process"
Chamot	1987	“Techniques, approaches, or deliberate actions that students take in order to facilitate the learning and recall of both linguistics and content area information”
O'Malley&Chamot	1990	"The special thoughts or behaviours that individuals use to help them comprehend, learn, or retain new information"
Oxford	1990	“Specific actions, behaviours, steps, or techniques that students employ – often deliberately – to improve their progress in internalizing, storing, retrieving, and using the L2”

Table 1 (cont.): Language Learning Strategy Definitions

Researcher	Year	Definition
Green&Oxford	1995	“Language learning strategies are specific actions or techniques that students use, often intentionally, to improve their progress in developing L2 skills”
Anderson	2005	“Strategies are the conscious actions that learners take to improve their language learning”

The controversy over the definitions can easily be observed. As given above in Table 1, some scholars stated that strategies are “behavioural” (Oxford, 1990); on the other hand, some believed that strategies are also mental since “thoughts” are involved in as well (Weinstein & Mayer, 1986). Another major dissimilarity of the definitions is related to the awareness. According to some scholars’ point of view, strategies are “conscious”, “deliberate”, and “intentional” actions (Oxford, 1990; Green and Oxford, 1995; Anderson, 2005). However, some scholars avoided using particular terms to make sharp distinction whether strategies conscious or not (O'Malley and Chamot, 1990). According to Liang (2009), there is another group of scholars suggesting that “learners cope with new information by deploying strategies consciously and these strategies would gradually become subconscious with repeated application and self-adaptation”. Even though scholars’ views have diverged from each other, their definitions are useful to understand the nature of language learning strategies.

2.4 Taxonomies of Language Learning Strategies

There have been many studies conducted in the past decades which mostly concerned in finding out what language learning strategies are to classify them into groups. Chamot (2004) stated that language learning strategy classification schemes have generally been developed for research purposes by many researchers. It can be said that the strong desire to identify what successful learners do is one of the prominent reasons for why classifications have been needed for research purpose. A diagnostic assessment is essential in order to design an effective strategy training programme to teach less successful learners what successful learners do. However, conflicts in strategy classifications are impossible to avoid in this field. Setiyadi (2009) also emphasized the use of different classifications and of different ways of measuring language learning strategies in earlier studies such as Rubin in 1975 and O'Malley et al in 1985. Inherently, research results might indicate different results from each other. But, as Oxford says (1990, p.22) “despite problems in classifying strategies, research continues to prove that strategies help learners take control of their learning and become more proficient.”

Some of the classifications of language learning strategies from the literature are presented below. The first classification is from Rubin (1975).

Table 2: Rubin's Classification of Language Learning Strategies (1975)

Direct Strategies

Clarification / Verification

Monitoring

Memorization

Guessing / Inductive inferencing

Deductive Reasoning

Practice

Indirect Strategies

Creating opportunities for practice

Production Tricks

Communication Strategies

Source: Griffiths, 2004

After his first classification in 1975, Rubin developed another classification in 1987. As can be seen in Table 2 and 3, the division of main classes in Rubin's new taxonomy shows differences; whereas the subdivisions changed very little.

Table 3: Rubin's Classification of Language Learning Strategies (1987)

Learning Strategies

Cognitive Strategies

Clarification / Verification

Guessing / Inductive Inferencing

Deductive Reasoning

Practice

Memorization

Monitoring

Metacognitive Strategies

Communication Strategies

Social Strategies

Source: Rubin, 1987

Another classification is from Naiman et al, which has only five main classes (Lee, 2010).

Table 4: Naiman et al's Classification of Language Learning Strategies (1978)

Active task approach

Realisation of language as a system

Realisation of language as a means of communication and interaction

Management of affective demands

Monitoring L2 performance

Source: Lee, 2010

O'Malley et al (1978) had a very short classification of language learning strategies, which had only three main classes in the categorization (Griffiths, 2004).

Table 5: O'Malley et al's Classification of Language Learning Strategies (1978)

Metacognitive strategies

Cognitive strategies

Social strategies

Source: Griffiths, 2004

The last classification, which had a very broad categorization, is from Stern (1992) (Hismanoğlu, 2000).

Table 6: Stern's Classification of Language Learning Strategies (1992)

Management and Planning Strategies

decide what commitment to make to language learning

set himself reasonable goals

decide on an appropriate methodology, select appropriate resources, and monitor progress,

evaluate his achievement in the light of previously determined goals and expectation

Cognitive Strategies

Clarification / Verification

Guessing / Inductive Inferencing

Deductive Reasoning

Practice

Memorization

Monitoring

Communicative – Experiential Strategies

Interpersonal Strategies

Affective Strategies

Source: Hismanoğlu, 2000

In the following part, Oxford's (1990) classification of language learning strategies are presented in detailed since her typology and assessment inventory was used for identifying participants' strategy use in the current study.

2.4.1 Oxford's Classification of Language Learning Strategies

Oxford divided language learning strategies into two main classes: direct and indirect strategies. Subdivisions of these classes are illustrated in the table given below (Oxford, 1990, p.17):

Table 7: Oxford's Classification of Language Learning Strategies (1990)

Direct Strategies

Memory

Creating mental linkages

Applying images and sounds

Reviewing well

Employing action

Cognitive

Practising

Receiving and sending messages strategies

Analysing and reasoning

Creating structure for input and output

Compensation strategies

Guessing intelligently

Overcoming limitations in speaking and writing

Indirect Strategies

Metacognitive Strategies

Centering your learning

Arranging and planning your learning

Evaluating your learning

Affective Strategies

Lowering your anxiety

Encouraging yourself

Taking your emotional temperature

Social Strategies

Asking questions

Cooperating with others

Empathising with others

As can be seen above in Table 7, Oxford divided strategies into two main classes, six groups, and 19 sets. Oxford (1990, p.14) stated that “each strategy group is capable of connecting with and assisting every other strategy group.” Therefore, if strategies are used simultaneously, they become more effective on learning process.

Starting from the direct strategies, it can be said that these strategies are used for mental processing while learning a language, however each strategy in this group has different ways of processing (Oxford, 1990, p.37). Oxford explains how different the

strategies are from each other: According to Oxford (1990), memory strategies enable learners to store new information and retrieve when needed; cognitive strategies enable learners to understand and produce new language; and compensation strategies enable learners to comprehend or to use the target language despite lack of grammar and vocabulary knowledge.

The second category is indirect strategies in Oxford's classification. Indirect strategies require "management of learning" (Oxford, 1990, p.15). They support language learning indirectly; because they do not directly make the target language take part in the learning process. Oxford (1990) has three different groups in this strategy class, as well. First one is metacognitive strategies which allow learners to organize their own learning. The second one in this class is affective strategies. As stated by Oxford, they help learners regulate affective factors such as emotions, motivation and attitudes. The last group in the classification is social strategies. According to Oxford, this group of strategies help learners learn through interaction with others.

In this study, Oxford's (1990) strategy inventory of language learning (SILL) is used in order to identify and measure the strategy use of participants. The reason for using Oxford's classification of language strategies is due to the fact that it is more comprehensive and also more appropriate classification. Oxford (1990) has two different versions of inventories to identify and diagnose which strategies learners mostly use. One of those inventories is for English speakers who are learning a new language, and the other one is for speakers of other languages who are learning English. This study is conducted in EFL context and all the participants are the

speakers of other languages who are learning English. For this reason, the inventory, which is for the speakers of other languages, has been used to identify participants' strategy use preference. According to Oxford's point of view (1990), to design an effective strategy training programme a diagnostic assessment is essential.

2.5 Basic Characteristics of Language Learning Strategies

Oxford (1990) listed the basic characteristics of language learning strategies as a result of her studies, and discussed the features in detail. The list proposed by Oxford is given below and it consists of 12 items.

Table 8: Features of Language Learning Strategies

Language learning strategies:

1. Contribute to the main goal, communicative competence.
2. Allow learners to become more self-directed.
3. Expand the role of teachers
4. Are problem-oriented.
5. Are specific actions taken by the learner.
6. Involve many aspects of the learner, not just the cognitive.
7. Support learning both directly and indirectly.
8. Are not always observable.
9. Are often conscious.
10. Can be taught
11. Are flexible
12. Are influenced by variety of factors.

Source: Oxford (1990, p.9)

In this section, features of language learning strategies have been explained in detail. According to the detailed discussion of Oxford (1990, pp.9-14), first item, given above in Table 8, summarizes how language learning strategies develop communicative competence. Each strategy type that Oxford suggests in her classification has a role on the growth of communicative competence.

The second item on Oxford's list in Table 8 suggests that it is essential for learners to take their own responsibility gradually in order to gain confidence, involvement, and proficiency. Self-direction is crucial since students will not have their teachers around themselves outside the classroom.

The third item is about the roles for teachers. Teachers should vary their roles as much as possible. When the teachers are not only an authority figure, but also a facilitator, diagnostician, and co-communicator, they help learners to become more responsible for their own learning which leads to success. As a part of their roles, teachers should train learners to use language learning strategies as well and they should also identify which strategies their students prefer to use.

The fourth item suggests that language learner strategies are used as a tool to solve problems or to reach a goal. Oxford gave an example to make it clear, which is the process of reading a text in a foreign language. Learners, for instance, use guessing strategies as a tool to understand a passage in a foreign language.

The fifth item is stated to sum up that language learning strategies are specific actions and behaviours to improve their learning. This is how Oxford defined

language learning strategies in 1990, as well. Those actions such as note taking, self-evaluating and guessing are formed by learners' learning styles, motivation and aptitude.

The sixth feature on list was explained by Oxford (1990) that language learning strategies do not just consist of cognitive functions. Strategy use is beyond mental processing. This means that they are metacognitive functions involved in language learning such as planning, evaluating, and arranging one's own learning. Oxford (1990) also criticized that affective and social functions in language learning process have not been put forward previously by other scholars, however, apart from having cognitive and metacognitive processes, language learning is an emotional and interpersonal experience.

The seventh item in Table 8 is about how language learning is a whole process. Oxford (1990) classified language learning strategies into two major categories which are direct and indirect strategies. Each of these categories is subdivided into three groups and all six strategy groups in total are interrelated and support each other when the learning takes place.

Number eight on Oxford's features list is about the degree of observability. Even though the use of some strategies can be noticed, mental activities cannot be observable.

The ninth item in Table 8 is about the level of consciousness. If Oxford's strategy definition is referred once again, she used the word "deliberate" since she believes

that learners use the strategies consciously. However, enough practice might help learners to have automatic use of strategies. At this point, Oxford (1990) took attention to an opposite case, which is the instinctive use of strategies. It was argued that it might be the awareness of strategies which help learners to use strategies. For this reason, strategy training might be useful to train learners to choose appropriate strategies for their learning.

As it was suggested, strategy training raises the awareness. However, strategy training could be possible if language learning strategies are teachable. Oxford (1990) argued that, unlike learning styles and personality traits, strategies are easy to teach, and indisputably, strategy training is essential in language teaching. Item 10 in Table 8 suggests that, learners might become more aware of how they learn, why strategies are important, and which strategies are appropriate for them through strategy training. Trainings also support the self-direction of learners; therefore, learners become more independent in their learning process.

The eleventh item on Oxford's list suggests that language learning strategies are flexible to be used in any sequence. Learners can choose and combine strategies as they need. However, there is a fact that some tasks, like reading a passage, require a predictable sequence of strategies such as using skimming and scanning first, continuing with guessing, and finalizing with summarizing.

Last but not least, the twelfth item in Table 8 is about the factors influencing the strategy choice of learners. Those factors could be age, sex, general learning style, motivation level, personality traits, and nationality/ethnicity. All these factors could

be a subject of research to investigate how they influence language learning strategy choice. In this research, it is questioned how brain dominance influence the choice of learners' strategy use.

2.6 Brain, Brain Dominance and Language Learning

“Brain is placed under the skull and composed of almost 10 billion neurons and billions of fibres that connect the neurons” (Weisi and Khaksar, 2015, p.383, cited from Steinberg 1993). So that, it would be correct to say that brain is one of the most complex organ in human body.

Kolb and Whishaw (2009) remind the belief about human brain that we use only 10% of our brains, and our brains work as a “unified whole”. Studies proved that those beliefs are just a myth since all functions are localized on human brain. This is a theory called localization of function developed by a German anatomist Franz Josef Gall. Kolb and Whishaw (2009, p.8) explained Gall's theory as an “idea that different parts of the brain have different functions.” This means that human brain is not a whole unit, and each specific part of brain is responsible for controlling different functions and behaviour; but of course, there is connectivity among the areas, and they cooperate with each other to perceive input as a whole. This theory can be seen as a suggestion that we, as humans, use 100% of our brains and only certain parts of it work to initiate certain functions.

This theory brought along the studies on the localization of language, as well. Like visual or motor functions, speech also has an area on brain. Kolb and Whishaw (2009, p.11) argued that “speech is localized in the frontal lobes”. In the further studies, Paul Broca “located speech in the third convolution of the frontal lobe on the

left side of the brain.” This speech region, which is responsible for the production of language, is named as *Broca’s area*. As well as proving that language was localized, Broca also discovered that “functions could be localized to a side of the brain, a property that is referred to as *lateralization*” (Kolb and Whishaw, 2009, p.12). Scientists had counter arguments against Broca. One of those scientists was Carl Wernicke. Wernicke found out a relation between the functioning of hearing and speech. He demonstrated that there is another part in the temporal lobe, behind Broca’s area, which receives language input from the ear. This part, which is responsible for comprehension of language, is called *Wernicke’s area*. And, these two areas, Broca’s and Wernicke’s, interact through arcuate fasciculus. Dülger (2012) stated that inactivation of the Broca’s area causes loss in the expressive language functions; whereas inactivation of the Wernicke’s area causes receptive language dysfunction.

As it is discussed above, Broca’s discovery showed that language is lateralized to the left hemisphere, and in addition to this, compared to right hemisphere, left hemisphere was affirmed to be more dominant in term of functioning not only language but also other higher cognitive function (Kolb and Whishaw, 2009, p.17).

This discovery pushed scientists to conduct some other studies on brain. A Nobel Prize winner scientist Roger W. Sperry carried out a research to investigate what happens when brain hemispheres are split up (Kolb and Whishaw, 2009). As stated by Kolb and Whishaw (2009, p.17) the results showed that “the right hemisphere was nevertheless found to comprehend words spoken aloud, read printed words [...]”. Kolb and Whishaw (2009) interpreted that even though the left hemisphere has the

language production function, the right hemisphere also seems to have some language functions. Oflaz (2011, p.1508) also stated that Sperry's study emerged the differences between the two hemispheres which are; right hemisphere can recognize the differences among shapes, read faces, copy designs, read and express emotions, understand geometric shapes, process holistically, and comprehend metaphors; on the other hand, left hemisphere is good at language skills, skilled movement, and analytical time sequence processing. Additionally, Dülger (2012) touched upon the differences among left and right brain hemispheres regarding language features. He stated that left hemisphere process semantic, syntactic and pragmatic information while right hemisphere conceives intonation and comprehend emotional and social meanings.

As it was emphasized in chapter 1, Dülger (2012) pointed out that the information gathered about brain functions could be useful for more effective teaching procedure; therefore, identifying learners' brain dominance could be an effective way to maximize the effect of language teaching. Mehrdad and Ahghar (2011) also mentioned that brain dominance drew attention of educators, because it was figured out that learners might be different from each other regarding their cognitive style or, that is to say, their dominant hemispheres.

There are many ways to identify one's brain dominance. As Dülger says (2012) Lesion, Wada, and fMRI tests can be used for that purpose. In addition to these methods, some scholars developed questionnaires to measure brain dominance. Herrmann's Brain Dominance Inventory (HBDI) developed by William Ned Herrmann, and Brain Dominance Inventory (BDI) developed by Davis et al. could be

two examples for questionnaires. These questionnaires were not developed to find out one's abilities or competences, but only to identify mental preferences or cognitive styles.

When literature is reviewed, it can be observed that there are great amount of research conducted to find out what kind of variables affect language learning. While discussing on the basic characteristics of language learning strategies, the factors which are likely to influence the preference of language learning strategy use, were mentioned. Those learner or individual related variables always drew attention of the researchers such as Cohen and Dörnyei (2002), Williams et al. (2002). And, brain dominance can be considered as one of those variables. In current study, it is questioned if individuals' hemispheric dominance affects their language learning strategy use. The researcher would like to set light to some unknowns since there is not much research conducted in the EFL context related to this subject. So that, new training programmes for language and language strategy training could be formed according to the research findings.

2.7 Summary of the Chapter

This chapter presented different perspectives on how languages have been acquired by language learners since birth, and how learners achieve second language acquisition in their adulthood. In addition, scholars' interest to find out more about good language learners was presented. In this way, the use of language learning strategies has been put forward. Controversies in the field of language acquisition regarding definitions and taxonomies have also been presented in the chapter.

Another aspect of the study was human brain. The chapter also connected second language acquisition and how human brain functions in the process of language learning.

Chapter 3

METHODOLOGY

In this chapter, a detailed description of the research methodology is provided. Research design, context of the study, objectives, participants, setting, data collection instruments and procedure are introduced.

3.1 An Overview: Behind the Study

There was a traditional understanding of the good language learners that they were successful since their inherent ability was helping them learn a new language. However, when research studies focused on the “good language learners”, especially in the mid-seventies, to understand how some learners were more successful in language learning, it was then found out that one of the differences between more efficient language learners and less efficient language learners was not their inherent abilities but mental processing as Dülger also (2012, p.5) suggested “the differences in the mental processing of experts and novices have been the base for the major discoveries in understanding cognition”. Briefly, research studies show that successful language learners have had some characteristics which include having a repertoire of language learning strategies, and these characteristics help learners become more efficient language learners.

Besides, scientific investigations have an interest in the functioning of the right and left hemispheres. Both sides of the brain reason, however they do different kinds of tasks and language learning is one of those tasks which human brain processes.

Whether a learner is left or right brain processor, he is capable of learning a new language if he is taught through instructional methods according to his hemispheric dominance.

In this case, it is pertinent to argue that knowledge about brain dominance and learners' preferences of language learning strategies are prominent for teachers and schools to achieve successful teaching and learning. Therefore, this study aims at investigating the correlation between brain dominance and language learning strategies used by the non-native English speakers learning English in English Preparatory School at Cyprus International University.

3.2 Research Design

This study was designed as a quantitative correlational research so as to investigate the correlation between brain dominance and language learning strategy use of English preparatory school learners at Cyprus International University. According to Salkind (2005, p.191), "correlational research describes the linear relationship between two or more variables without any hint of attributing the effect of one variable on another." Quantitative research method was employed throughout the study such as for data collection and data analysis procedures.

In this study, convenience sampling technique was used to select participants. Researcher was given permission from university principals to visit students during their class hours to collect data. At the beginning of the study, it was told students that they would participate in a research study and their names would be kept confidential. They were asked if there were any students who did not want to

participate, and then, the questionnaires were distributed to the volunteer participants. Participants were assigned with codes to ensure confidentiality.

In the analysis of data, SPSS, one of the modern statistical softwares, was used for descriptive and inferential statistics analysis.

3.3 The Context of the Study

The main aim of this study is to analyse the correlation of brain dominance and language learning strategies of English preparatory school students; therefore, the study was carried out in English Preparatory Department at Cyprus International University where English language is studied 25-27 hours a week.

In this private university in which the data was collected, students who are not successful in the English proficiency exam, which is administered at the beginning of academic year, have to stay in the preparatory school to improve their English. Those students have to take a placement test to have their English proficiency level measured. Afterwards, they are placed in the classes according to their levels. The data sample of this research study was collected from those students who took a placement test to start English courses at preparatory school.

Beginner and elementary level students were not included in the study because of their very low levels of English language proficiency. For that reason, the data was collected from pre-intermediate, intermediate, upper-intermediate, and advanced level students. Students vary by mother tongue, age, and language proficiency, ethnic, cultural and educational background.

3.4 Participants

The participants of the study consisted of 187 English preparatory school students at pre-intermediate, intermediate, upper-intermediate and advanced levels of English studying at Cyprus International University. As it was mentioned before, students vary by mother tongue, age, ethnic, cultural and educational background. Participants' age vary between 17 and 25. Their English level is ranged from pre-intermediate level to upper-intermediate level. Participants show differences in terms of ethnic and cultural background, and also they have different mother tongues. Turkish, Russian, and Arabic speaking students from different countries participated in the study.

3.5 Instruments

The data of the research was gathered by two different inventories; because the study aimed at investigating the correlation between two variables. In addition, the questionnaire includes one more part to gather basic information about participants such as their age, gender, and English proficiency level.

The independent variable of the research was the brain dominance of the participants. On the other hand, the dependent variables were language learning strategies used by the participants. To measure the independent variables of the research, "brain dominance inventory", which consisted of 39 multiple choice items, was used. Participants were expected to choose one of the three options, which each of the 39 item have. The instrument was re-arranged by Davis (1994) and translated and adapted into Turkish by Kök (2005). According to Kök's research study, The Cronbach Alpha reliability of the brain dominance inventory was .87.

To measure the dependent variables of the research, “strategy inventory for language learning” (SILL), which consisted of 50 items, was used. This inventory was designed by Oxford (1990) for students of English as a second or foreign language to identify strategies that learners use to improve their language learning. It has six parts from A-F with totally 50 statements about learning English. Participants were supposed to decide how much the statements reflect their language learning, and mark on the scale which was from 1 to 5. “1” means the statement is never true of them, and “5” means the statement is almost always true of them. The inventory was translated into Turkish by Cesur & Fer (2007). According to their validity and reliability study of the Turkish version of the strategy inventory of language learning, the total internal reliability was .92 reliability coefficients. Test re-test reliability for external reliability was between .67-.82.

3.6 Data Collection Procedures

In the present study, all data were collected during the first 3 weeks of the academic year in spring semester. After preparing the needed copies of questionnaires, researcher visited students in the classroom and distributed both questionnaires (Brain Dominance Inventory and Strategy Inventory for Language Learning) to volunteer participants. After participants’ consent was obtained, they were informed that they could withdraw from participation in the study at any point. An optical answer sheet was also provided for each student to put their answers on. Identification codes had already been generated on the optical sheets in order to ensure anonymity so that the students did not need to use their names. Students were reminded that there are no right or wrong answers in the questionnaires given to them, and that their responses would not affect their examination results so they were asked to respond to the items of questionnaires frankly. Turkish speaking students

were distributed Turkish version of the instruments to prevent misinterpretations of the inventory items; whereas the international students who were the speakers of other languages were given English version of the questionnaires.

Participants were explained that strategy inventory was to understand what strategies they use to learn a new language, and brain dominance inventory was to identify which side of their brain they were more likely to use. The participants were assured of confidentiality of all their information.

The data was collected approximately in a class hour. Participants were able to complete the questionnaires approximately in 50 minutes.

3.7 Data Analysis Processing

As mentioned, the aim of this study is to analyse the correlation of brain dominance and language learning strategies of English preparatory school students.

The brain dominance inventory to determine participants' brain dominance in information processing has 39 items with three multiple choice alternatives (a, b, c). The inventory also provides a scoring key to calculate students' answers accordingly. The calculation of the inventory results has been computed by the researcher on Microsoft Excel 2007 to avoid possible calculation mistakes. In order to put students into brain dominance groups, first, the total number of "A", "B", and "C" responses are counted separately. Then, the total of all "B" responses is extracted from the "A" scores (B-A). If the "C" score is 17 or higher, "B minus A" score is divided by three. If the "C" score is from 10-16, "B minus A" score is divided by two. However, if the "C" score is less than 10, the "B minus A" is the score of the test. All the obtained scores are rounded to the nearest number.

Scoring Key:

Total number of A, B, and C responses are counted

If $C > 17$, then, $(B-A)/3$

If $C: 10-16$, then $(B-A)/2$

If $C < 10$, then $(B-A)$

After this calculation, all minus (-) scores are classified under left brain; scores above zero under right brain, and those who got zero are classified under whole brain dominance groups.

The strategy inventory for language learning to determine participants' strategy use preference has six parts from A-F with totally 50 items. Participants' responses for each item were marked on the scale from 1-5. Participants' responses to each part are added up separately. Then, part A is divided by 9, part B by 14, part C by 6, part D by 9 and part E and F by 6. The obtained scores are rounded off to the nearest tenth again.

Consequently, the data collected through the inventories were then analyzed by using the Statistical Package for the Social Sciences (SPSS) 17.0 for Windows. Analysis of Variance (ANOVA) was used as a statistical method to determine whether there are any significant differences between variables. The Bonferroni test was used as a post hoc test for multiple comparisons between brain dominance groups (left, right, whole brain) in order to investigate differences among all possible pair of means. The standard of $p < .05$ was used in order to determine significance throughout the study.

Chapter 4

RESULTS

In order to see if having different brain dominance creates any differences on the use of language learning strategies, post hoc test has been done. The Bonferroni procedure has been applied to observe if any differences occurred.

This chapter consists of quantitative results of the study obtained through the data collection instruments mentioned in Chapter 3. In this chapter, research questions and findings are presented and discussed by using figures and tables in the order of research questions.

4.1 Research Questions and Findings

This study explores the correlation between brain dominance and language learning strategies. The study mainly questions what effect the brain has on the strategy use. To this end, the study aims at finding out an answer to the following questions, which are related to the research objectives:

1. What effects does the brain dominance have on the use of direct strategies?
 - 1.1. Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of memory strategies?
 - 1.2. Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of cognitive strategies?
 - 1.3. Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of compensation strategies?

2. What effects does the brain dominance have on the use of indirect strategies?
 - 2.1. Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of metacognitive strategies?
 - 2.2. Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of affective strategies?
 - 2.3. Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of social strategies?

4.1.1 Descriptive Statistics for Direct and Indirect Strategies in Descending Order

Oxford (1990, p.300) presented a scale to understand the usage level of strategies. If an average score is from 1.0 to 2.4, it indicates low use, an average score from 2.5 to 3.4 indicates medium use, and average score from 3.5 to 5 indicates high level of strategy use.

As can be seen in Table 9 below, according to the key, the participants in the sample used metacognitive strategies at a high level. And, the rest of the strategies are preferred to be used at a medium level.

When the brain groups analysed separately, the data showed that both left-brained and whole-brained participants use metacognitive strategies at a high level whereas right-brained participants prefer to use compensation strategies at a medium level.

Table 9: Descriptive Statistics for Direct and Indirect Strategies in Descending Order

	N	Mean	Standard Deviation	Variance
Metacognitive	187	3.53	.805	.648
Social	187	3.45	.784	.614
Compensation	187	3.38	.733	.537
Memory	187	3.07	.691	.478
Cognitive	187	3.02	.621	.621
Affective	187	2.89	.798	.637

4.1.2 Brain Dominance Results

Table 10 indicates the number of participants in each group. According to the brain dominance inventory findings, 74 (37.8%) of the participants are left-brain dominant, 82 (41.3%) are right-brain dominant, and 31 (20.9%) are whole-brain dominant.

Table 10: Brain Dominance Inventory Results

Participants	N	Percentages
Left-Brained	74	37.8
Right-Brained	82	41.3
Whole-Brained	31	20.9

4.1.3 The Effects of Brain Dominance on the Strategy Use

Oxford's classification has two main types of strategies which are direct and indirect strategies. The main question investigated in the current study is the effect of brain

dominance on the preference of strategy use. In the next part, all strategy types is analysed one by one in order to see the brain dominance effect on them.

4.1.3.1 What effects does the brain dominance have on the use of direct strategies?

Firstly, the findings of the correlation between brain dominance and the direct strategy use will be illustrated in the tables.

4.1.3.1.1 Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of memory strategies?

Based on the results in Table 11, the significance level is not below 0.05. Therefore, the table does not indicate any significant differences among brain dominance and the use of memory strategies.

Table 11: Multiple comparisons among left-brained, right-brained, and whole-brained learners concerning the use of memory strategies

	(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.
Bonferroni	Left- Brained	Right-Brained	,0850	,11130	1,000
		Whole- Brained	,0571	,14851	1,000
	Right- Brained	Left-Brained	-,0850	,11130	1,000
		Whole- Brained	-,0279	,14636	1,000
	Whole- Brained	Left-Brained	-,0571	,14851	1,000
		Right-Brained	,0279	,14636	1,000

4.1.3.1.2 Is there any difference among left-brain, right-brain, and whole brain learners concerning the use of cognitive strategies?

Here, correlation is significant at the .05 level, as well. However, as can be seen below in Table 12, the significance level is above the p-value (0.05). Therefore, the use of cognitive strategies does not differ significantly in terms of brain dominance.

Table 12: Multiple comparisons among left-brained, right-brained, and whole-brained learners concerning the use of cognitive strategies

	(I) BrainDom	(J) BrainDom	Mean Difference (I-J)	Std. Error	Sig.
Bonferroni	Left- Brained	Right-Brained	,0784	,10002	1,000
	Brained	Whole-Brained	-,0105	,13346	1,000
	Right- Brained	Left-Brained	-,0784	,10002	1,000
	Brained	Whole-Brained	-,0889	,13153	1,000
	Whole- Brained	Left-Brained	,0105	,13346	1,000
	Brained	Right-Brained	,0889	,13153	1,000

4.1.3.1.3 Is there any difference among left-brain, right-brain, and whole brain learners concerning the use of compensation strategies?

As shown below in Table 13, the significance level for all variables is above 0.05. It reveals that no significant differences were observed between any of the pairs.

Table 13: Multiple comparisons among left-brained, right-brained, and whole-brained learners concerning the use of compensation strategies

			Mean	Std.	
	(I) BrainDom	(J) BrainDom	Difference (I-J)	Error	Sig.
Bonferroni	Left-Brained	Right-Brained	-,0742	,11778	1,000
		Whole- Brained	,1068	,15715	1,000
	Right-Brained	Left-Brained	,0742	,11778	1,000
		Whole- Brained	,1810	,15487	,732
	Whole- Brained	Left-Brained	-,1068	,15715	1,000
		Right-Brained	-,1810	,15487	,732

4.1.3.2 What Effects does the Brain Dominance have on the Dse of Indirect Strategies?

The tables illustrated in the next sections present the findings of the correlation between brain dominance and the use of indirect strategies.

4.1.3.2.1 Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of metacognitive strategies?

As shown in Table 14, the p value is less than the chosen significance level (0.05) for some variables. So, it can be said that there is a significant difference between left-brained (Mean= 3,72) and right-brained participants (Mean=3,37) in terms of the use of metacognitive strategies, which means that left-brained participants seems to use metacognitive strategies more than right-brained participants. However, when the

significance level is observed for the whole-brained participants, it does not differ from neither right nor left-brained participants.

Table 14: Multiple comparisons among left-brained, right-brained, and whole-brained learners concerning the use of metacognitive strategies

		Mean	Std.		
(I) BrainDom	(J) BrainDom	Difference (I-J)	Error	Sig.	
Bonferroni	Left-Brained	Right-Brained	,3504*	,12720	,019
		Whole- Brained	,2001	,16973	,720
	Right-Brained	Left-Brained	-,3504*	,12720	,019
		Whole- Brained	-,1503	,16727	1,000
	Whole- Brained	Left-Brained	-,2001	,16973	,720
		Right-Brained	,1503	,16727	1,000

4.1.3.2.2 Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of affective strategies?

Based on the results below in Table 15, the significance level is not below 0.05. For this reason, no significant correlation was observed between any of the pairs again.

Table 15: Multiple comparisons among left-brained, right-brained, and whole-brained learners concerning the use of affective strategies

			Mean	Std.	
	(I) BrainDom	(J) BrainDom	Difference (I-J)	Error	Sig.
Bonferroni	Left-Brained	Right-Brained	,0165	,12848	1,000
		Whole-Brained	,1447	,17144	1,000
	Right-Brained	Left-Brained	-,0165	,12848	1,000
		Whole-Brained	,1282	,16895	1,000
	Whole-Brained	Left-Brained	-,1447	,17144	1,000
		Right-Brained	-,1282	,16895	1,000

4.1.3.2.3 Is there any difference among left-brained, right-brained, and whole-brained learners concerning the use of social strategies?

As can be seen below in Table 16, left-brained participants (Mean=3.64) and right-brained participants (Mean=3.34) approached acceptable level of significance. This reveals that left-brained participants seem to prefer using social strategies more than right-brained participants.

Table 16: Multiple comparisons among left-brained, right-brained, and whole-brained learners concerning the use of social strategies

			Mean	Std.	
	(I) BrainDom	(J) BrainDom	Difference (I-J)	Error	Sig.
Bonferroni	Left-Brained	Right-Brained	,2937	,12418	,057
		Whole-Brained	,3126	,16569	,182
	Right-Brained	Left-Brained	-,2937	,12418	,057
		Whole-Brained	,0189	,16329	1,000
	Whole-Brained	Left-Brained	-,3126	,16569	,182
		Right-Brained	-,0189	,16329	1,000

4.2 Summary of the Chapter

In this chapter, the analysis of the research questions were presented one by one, and the results revealed a significant difference between brain dominance and two of the language learning strategies, which are metacognitive and social strategies. However, the research findings did not reveal any significant difference between brain dominance and direct strategies, which are memory, cognitive and compensation strategies.

Chapter 5

DISCUSSION

In chapter 5, the findings are discussed in relation to similar studies in the literature. Limitations, pedagogical implications and suggestions for further research are also included in this chapter.

5.1 Discussion of the Findings

Brain dominance of the participants is attempted to be investigated as a part of this study. The results revealed that 43.9% of the participants are right-brained, 39.6% is left-brained, and 16.6% is whole-brained learners. Dülger's study (2012) has parallel percentages to the current study with 41.3% right brain, 37.8% left brain, and 20.9% whole brain dominant learners. However, Dülger (2012) also presented the brain dominance results of another study conducted by Saleh (2001), which has dissimilar results. Saleh's results indicated that 46.15% of the participants were whole-brained while 28.9% of them were left, and 24.94% of them were right-brained learners.

The study also involves investigation of language learning strategy preference of participants. As indicated in chapter 4, participants used metacognitive strategies (Mean=3.53) at a high level. In addition to this, the study shows correlation among brain dominance and metacognitive strategies. Left-brained and whole-brained participants (Mean=3.72, 3.52) prefer to use metacognitive strategies more than right-brained participants (Mean=3.37). As it was mentioned in the literature review, left hemisphere is responsible for language learning, and left and whole-brained

learners use metacognitive strategies at a higher level than right-brained learners. Rahimi and Katal (2011) stated that “metacognitive strategies allows students to plan, control, and evaluate their learning that eventually helps them gain higher achievement and better learning outcomes in both face to face and virtual learning environments.” Nakatani (2005) also emphasize that metacognitive strategies are believed to improve language learning.

As indicated in the results, left-brain dominance and social strategies are seen to have correlation between themselves, as well. Left-brained participants (Mean=3.64) are seen to use social strategies more than right-brained participants (Mean=3.34). However, if the results are compared to Dülger’s study (2012), whole-brained participants observed to have correlation with social strategies. As mentioned in chapter 2, left-brained individuals have better verbal abilities compared to right-brained individuals. This might be a reference to their preference to use social strategies since it requires interaction.

Results of the current study do not indicate any significant differences among brain dominance and cognitive, affective, compensation, and memory strategies. As Oxford (1990) indicated, memory strategies and affective strategies are reported to be used very rarely by language learners.

The results revealed correlation between brain dominance and two strategy types which are metacognitive and social. Undisputedly, if a similar study is conducted with larger samples, it will definitely demonstrate more about language learners. Having more informative results would be useful to raise the effectiveness of

learning since the results would suggest a lot to curriculum designers, teachers, institutions, and learners.

5.2 Pedagogical Implications of the Study

The current study revealed that there might be imbalanced percentages of learners with different cognitive styles such as being left, right or whole brain dominant learners at schools. It was suggested by Saleh (2001) that the effects of some factors on brain dominance should be studied since those factors seem to cause a difference in the use of different sides of brain. Saleh (2001) included age, cultural factors, teacher attitudes towards brain dominance, teaching methods, activities and materials used in the classroom in those influential factors. One of the things could be considered at educational institution is that learners' less dominant side of brain. It could be activated and strengthened to help learners use both sides of their brain for different skills. It should also be noted that if the brain dominance of a larger sample in EFL context is investigated, the same contribution regarding the activation of non-dominant brain hemisphere could be done to promote learning; because, considering individual differences is crucial to create equal opportunities for all types of learners. As Genesee (2000) stated, brain research cannot guide language instructors about what to teach and how to organize their teaching, but could prescribe complementary ideas for effective instruction.

The study also concluded that left-brained learners use metacognitive strategies and that the use of metacognitive strategies has useful effect on the learning process since they guide and regulate learning. Rahimi and Katal (2011, p.73) pointed out the importance of metacognitive strategies in their study by saying that "metacognitive learners who take conscious steps to understand what they are doing when they learn

tend to be the most successful learners.” However, Oxford (1990, p.138) reported that learners’ repertoire of metacognitive strategies were limited and they didn’t show success in using important metacognitive strategies like evaluating their progress and searching for practice opportunities. For this reason, learners must be trained to enrich their strategy use. And, this awareness regarding the use of variety should be raised not only for metacognitive strategies for all types of strategies.

Like metacognitive strategies, social strategies, on the other hand, are used by left-brained participants more than other types of participants. If it is considered that the language function is on the left hemisphere of the brain, then, this result shouldn’t be surprising that left-brain learners use their communicative competence to use social strategies. In this case, language instructors, curriculum designers, and schools might also want to encourage all types of learners to use social strategies.

In short, this current study summarizes that according to the analysis and findings, whole-brain approach could be considered to enable learners use both sides of their brain as much as possible.

In addition to this, researcher’s overall impression in the current study is that, integrating brain dominance to language learning strategy training would be beneficial for learners. Rahimi and Katal (2011) pointed out the importance of strategies in their study by saying that “those learners who take conscious steps to understand what they are doing and use a greater variety of strategies tend to be the most successful learners.” In this respect, raising awareness by considering the individual differences of learners could support the learning process. There are

several trainings of language learning strategies, which are pointed out by Liu (2010), such as Chamot's (2005), Cohen's (1998) and Oxford's (1990). Strategy training models could be applied in accordance with brain dominance types for more effective language learning process. If a strategy training model based on brain dominance is developed and applied, then another research could be done to investigate learners' achievement in language learning

5.3 Limitations of the Study

Some limitations of this research study must frankly be addressed for further research suggestions to be discussed in the last chapter.

The first limitation is about the language barrier. Apart from a large number of Turkish participants, other majority of the learners consisted of Russian and Arabic speaking students at preparatory school. The original versions of the questionnaires are English. Since it would be ideal to avoid misinterpretation, researcher wanted to give questionnaires to participants in the mother tongue. However, only Turkish version could be provided because of the limited time for data collection. For this reason, Turkish speaking students were distributed Turkish version of the instruments to prevent misinterpretations of the inventory items; whereas the international students who were the speakers of other languages were given English version of the questionnaires. All the participants in this study are capable of understanding the language level of the English versions. However, since the Turkish speaking students were provided the Turkish version of the questionnaires, it would have been better to create the equal condition for all participants in terms of the translation of the questionnaires.

The second concern is related to the brain dominance analysis. Mehrdad and Ahggar (2011) suggest that using evidence-based approaches such as fMRI is better for determining brain dominance. However, it was not economically feasible and practical for this research study due to the lack of necessary devices. As a consequence, brain dominance inventory was used to identify learners' brain hemisphericity instead of using fMRI.

Another limiting condition was the English proficiency level of students which also adversely affected the number of participants in the study. As it is known, preparatory students are the ones who fail English proficiency exams given by the university because they are not proficient enough in English. For this reason, participants could find it difficult to understand the language used in the questionnaires. To minimize this, the data was collected from the students whose English proficiency level was pre-intermediate and above since the difficulty level of the language used in the English versions of the data collection instruments was not appropriate for lower levels: therefore, it would have needed to be simplified for them, or the lower learners would have needed more than a class hour to be instructed to respond questionnaires which was not feasible in terms of time provided for data collection.

The forth limiting condition concerns external validity of the research study, which is relatively related to the limitation mentioned above. The population of this study consisted of 74 left brain, 82 right brain, and 31 whole brain dominant participants. The total number of participants in each group is imbalanced. The reason of this mismatch is that none of the participants were eliminated from the study to make the

total number of participants equal in each group after brain dominance analysis. After responding to the brain dominance inventory, those participants also responded to the SILL (strategy inventory for language learning) without being stratified into groups (left brain, right brain, and whole brain) proportionally. Especially, the number of whole brain participants is low in number compared to other groups. Therefore, generalizing the findings of this research study to larger populations should be done cautiously. Briefly, it can be said that the study has limited generalizability to larger populations.

5.4 Suggestions for Further Research

The current research study revealed that there is a significant difference among brain dominance and two of the language learning strategies, which are metacognitive and social strategies. Since cognitive styles of the learners might cause different information processing, then, it would be correct to say that more research on identifying the factors influencing brain dominance could bring some suggestions to how less dominant side of brain could be activated and strengthened.

As mentioned above, Oxford's (1990) mentioned about the lack of variety in the use of metacognitive strategies. The current study also presented that metacognitive strategies are used by the participants. Therefore, another analysis could be done in order to reveal what types of metacognitive strategies are used by language learners, and if they can be taught by considering the individual differences regarding brain dominance.

Also, after the strategy training based on brain dominance, learners' achievement in language learning could be analyzed to investigate the role of strategy use training on language learning achievement.

REFERENCES

- Anderson, N. J. (2005). L2 strategy research. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning* (pp. 757-772). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Bhattacharjee, A. (2012). *Social Science Research: Principles, Methods, and Practices* (2nd edition). Florida, Scholar Commons.
- Bialystok, E. (1978). A theoretical model of second language learning. *Language Learning*, 28, pp. 69-83
- Bley-Vroman, R.W. (1989) The Logical Problem of Second Language Learning. In Gass et al. *Linguistic Perspectives on Second Language Acquisition*. Cambridge University Press: Cambridge. pp. 41-68
- Brown, H. D. (2000) *Principles of Language Learning and Teaching* (4th Edition). New York, White Plains: Longman
- Cesur, M. O. & Fer, S. 2007. "What is the validity and reliability study of the strategy inventory of language learning?" Yüzüncü Yıl University, *The Journal of Education Faculty*, Vol: IV, No: II, 49-74.

Chamot, A.U. (2004). Issues in Language Learning Strategy Research and Teaching. *Electronic Journal of Foreign Language Teaching*. Vol.3, No.1, pp. 14-26.

Chamot, A.U. (2005). The Cognitive Academic Language Learning Approach (CALLA): An update. In P.A. Richard-Amato & M.A. Snow (Eds.), *Academic success for English language learners: Strategies for K-12 mainstream teachers* (pp. 87-101). White Plains, NY: Longman.

Chamot, A.U. (1987). The learning strategies of ESL students. In A. Wenden and J. Rubin (Eds.), *Learner Strategies in Language Learning* (pp. 71-84). Cambridge: Prentice-Hall

Chamot, A.U., & Kupper. L. (1989). Learning strategies in foreign language instruction. *Foreign Language Annals*, 22, pp.13-24.

Children with no language. (n.d). Retrieved from <http://criticalperiodhypothesis.blogspot.com.cy/p/children-with-no-language.html>

Chomsky, N. (1981) *Lectures on Government and Binding*. Berlin, Dordrecht: Foris.

Cohen, A.D. (1996). *Second Language Learning and Use Strategies: Clarifying the issues*. Minneapolis, Center for Advanced Research on Language Acquisition.

Cohen, A. D. (1998). *Strategies in learning and using a second language*. Harlow: Addison Wesley

Cohen, A. D. & Dörnyei, Z. (2002). Focus on the language learner: Motivation, Styles and Strategies. In Schmitt, N. (Ed.), *An Introduction to Applied Linguistics*. (pp. 170-190). New York: Arnold.

Corder, S.P. (1967). The Significance of Learners` Errors. *International Review of Applied Linguistics*, 5, pp.161-169.

Davis, E. C., Hafsa N. & Ruru S. A. A. (1994). Helping teachers and students understand learning styles. *Forum*, 32(13), July-September 1984, p. 12.

Dülger, O. (2012). Brain Dominance and Language Learning Strategy Usage of Turkish EFL Learners, *Cognitive Philology*, No:5.

Ellis, Rod (1994). *The study of second language acquisition*. Oxford: Oxford University Press.

Genesee, F. (2000). Brain research: Implications for second language learning. *ERIC Digest*, ED447727.

Green, J, M & Oxford, R. (1995). A closer look at learning strategies, L2 Proficiency and Gender, *TESOL Quarterly*, 29/2, pp. 261-297.

- Grenfell, M. (2005). *Language Learning Strategy Research and Modern Foreign Language Teaching and Learning in England*. Paper presented at the conference of the British Association of Applied Linguistics, Bristol.
- Griffiths, C. (2003). Patterns of language learning strategy use. *System*, 31, pp. 367-383.
- Griffiths, C. (2004). *Language learning strategies: Theory and research* (Occasional Paper No.1) Auckland: New Zealand.
- Griffiths, C. (2007). Language Learning Strategies: students' and teachers' perceptions. *ELT Journal*, 61(2), pp. 91-99.
- Hedge, T. (2000). *Teaching and Learning in the Language Classroom*. Oxford, Oxford University Press.
- Hismanoglu, M. (2000) Language learning strategies in foreign language learning and Teaching. *The Internet TESL Journal*. Vol.VI, No. 88.
- Holbrook, E. (2011, April 26). Left brain vs right brain teaching techniques. Retrieved from <http://www.funderstanding.com/brain/left-brain-vs-right-brain-teaching-techniques/>
- Hughes, M. (2007, January). Implications of the Herrmann brain dominance model for course design: in pursuit of a "whole brain" approach. Retrieved from <http://www.nottingham.ac.uk/pesl/resources/styles/implicat912/>

- Hull, R. & Vaid, J. (2007). Bilingual language lateralization: A meta-analytic tale of two hemispheres. *Neuropsychologia*, 45(9), pp. 1987-2008.
- Hunter, M. (1976). Right-brained kids in left-brained schools. *Today's Education*, 65, pp. 45-48.
- Kamarul Shukri Mat Teh. (2013). Definition Formation Process of Language Learning Strategy: Issues and Development. *Issues in Language Studies*. Vol.2, No. 2, pp. 13-23.
- Klein, D., Mok, K, Chen, J, K., & Watkins, K. E. (2014). Age of language learning shapes brain structure: a cortical thickness study of bilingual and monolingual individuals. *Brain & Language*, 131, pp. 20-24.
- Kolb, B., & Whishaw, I. Q. (2009). *Fundamentals of human neuropsychology*. New York, NY: Worth Publishers.
- Kök, İ. (2005). "An investigation into the effects of teaching based on the principles of Neurolinguistic Programming and the traditional methods on the students' attitudes towards learning English and their academic achievements." *Unpublished doctoral thesis*, Dokuz Eylül University, Institute of Education Sciences, İzmir.
- Larsen-Freeman, D. (1991). Second language acquisition research: staking out the territory, *TESOL Quarterly*, 25/2, pp. 315-350.

- Larsen-Freeman, D. (2000) *Techniques and Principles in Language Teaching*, 2nd edition. Oxford, Oxford University Press.
- Lavine, R. Z., & Oxford, R. L. (1996). Language learning diaries as a tool for research and self-awareness. In R. L. Oxford & B. L. Leaver (Eds.), *Language learning strategies: Interdisciplinary and international advances in assessment, research, and training*. Cambridge: Cambridge University Press.
- Lee, C.K. (2010). An overview of language learning strategies. *ARECLS*, 7, 132-152. Retrieved from http://research.ncl.ac.uk/ARECLS/volume7/lee_vol7.pdf
- Lenneberg, E. (1967) *The Biological Foundation of Language*. New York: John Wiley and Sons.
- Liang, T. (2009). Language Learning Strategies. The Theoretical Framework and Some Suggestions for Learner Training Practice. *The Canadian Center of Science and Education Journal – English Language Teaching*. Vol. 2, No. 4, pp. 199 – 206.
- Lightbown, P. and Spada, N. (2013) *How Languages are Learned*. 4th Edition. New York: Oxford University Press.
- Liu J. (2010). Language Learning Strategies and its Training Model. *International Education Studies*. Vol. 3, No. 3.

- Mehrdad, A. G., & Ahghar, M. (2012) Learning styles and learning strategies of left-handed EFL students. *Procedia – Social Behaviour Sciences* 31 (1), 536-545.
- Mercer, J. (2010). *Child Develeopment: Myths and Misunderstandings*. California: Sage Publications Inc.
- Moskovsky, C. (2001) The critical period hypothesis revisited. *Proceedings of the 2001 Conference of the Australian Linguistic Society*.
- Naiman, N., Fröhlich, M., & Todesco, A. (1975). The good second language learner. *TESL Talk*, 6, pp. 58–75.
- Naiman, N, Frohlich, M., Stern, H., & Todesco, A. (1978). The good language learner. *Research in Education Series No.7*. Toronto: The Ontario Institute for Studies in Education.
- Nakatani, Y. (2005). The effects of awareness-raising training on oral communication strategy use. *Modern Language Journal*, 89, i, 76-91.
- Oflaz, M. (2011). The effect of right brain and left brain dominance in language learning. *Procedia Social and Brhavioral Sciences*, 15, pp. 1507-1513.
- O'Malley, J. M., Chamot, A., Gloria Stewner-Manzanares, Lisa Kupper & Rocco P. Russo. (1985). Learning strategies used by beginning and intermediate ESL students, *Language Learning*, Vol.35, No.1, pp. 21-46.

- O'Malley, J Michael, Chamot, A.U., Stewner-Manzanares, G., Russo, R. P. & Kupper, L. (1985a). Learning strategy applications with students of English as a second language, *TESOL Quarterly*, 19/3, pp. 557-584
- O'Malley, J., & Chamot, A. (1990). *Learning strategies in second language acquisition*. Cambridge: Cambridge University Press.
- O'Malley M & A U Chamot. (1994). *The CALLA handbook: implementing the cognitive academic language learning approach*. N.J: Addison-Wesley, Reading MA. Harlow, England: Longman.
- Oxford, Rebecca L (1989a). Use of language learning strategies: a synthesis of studies with implications for strategy training, *System*, 17/2, pp. 235-247.
- Oxford, R. L. (1990). *Language Learning Strategies: What every teacher should know*. Boston: Heinle and Heinle.
- Oxford, R. L., Crookall, D., Cohen, A. Lavine, R., Nyikos, M. and Sutter, W. (1990). Strategy training for language learners: six situational case studies and a training model. *Foreign Language Annals* 22(3), pp.197-216.
- Rahimi, M. & Katal, M. (2011). Metacognitive strategies awareness and success in learning English as a foreign language: an overview. *Procedia – Social and Behavioral Sciences*, 31, pp.73-81

- Rigney, J. W. (1978). Learning strategies: A theoretical perspective. In H. F. O'Neil (Jr) (ed) pp. 165-205.
- Rubin, J (1975). What the 'good language learner' can teach us, *TESOL Quarterly*, 9, pp. 41-51.
- Rubin, J. (1987). Learner strategies: Theoretical assumptions, research history and typology. In A. Wenden & J. Rubin (Eds.), *Learner Strategies and Language Learning* (pp. 15-29). Englewood Cliffs, NJ: Prentice Hall.
- Rubin, J & Thomson, I. (1983). *How to be a successful language learner*. New York: Heinle and Heinle.
- Saleh, A. (2001). Brain hemisphericity and academic majors: A correlation study – statistical data included. *College Student Journal*, 35 (2), pp. 193-200.
- Saleh, S. A. M. (n.d.). *Language learning strategies for classroom application*. Retrieved from <http://www.abqar.com/saad/SaadArticle.htm>
- Salkind, N. J. (2005). *Exploring Research* (6th Edition). New Jersey, Pearson Prentice Hall.
- Saville-Troike, M. (2006). *Introducing Second Language Acquisition*. Cambridge. Cambridge University Press.

Setiyadi, A. (2009). Language Learning Strategies: Classification and Pedagogical Implication. *TEFLIN Journal: A publication on the teaching and learning of English*, 12(1).

Skinner, B. F. (1957). *Verbal behavior*. Englewood Cliffs, NJ: Prentice-Hall.

Steinberg, D. (1993). *An Introduction to Psycholinguistics*. New York: University Press.

Stern, H. H. (March 1975). "What Can We Learn from the Good Language Learner?". *Canadian Modern Language Review* 31 (4), pp. 304–318.

Stewart, J. M. (2003). Proceedings of the 6th Generative Approaches to Second Language Acquisition Conference (GASLA 2002), eds. Juana M. Liceras, Helmut Zobl, and, Helen Goodluck, pp. 308-314. Somerville, MA: Cascadilla Proceedings Project

Talukder, G. (2001, January 27). Retrieved from <http://brainconnection.brainhq.com/2001/01/27/how-the-brain-learns-a-second-language/>

Tarone, E. (1983). Some thoughts on the notion of ‘communication strategy’. In C. Faerch and G. Kasper (Eds.), *Strategies in interlanguage communication* (pp. 61-74). London: Longman.

Torrance, E. P. (1981). Implications of whole-brained theories of learning and thinking for computer-based instruction. *Journal of Computer-Based Instruction*, 7, pp. 99-105.

Torrance, E. P. (1982). Hemisphericity and creative functioning. *Journal of Research and Development in Education*, 15, pp. 29-37.

Weisi, H. & Khaksar, Z. (2015). The effects of hemispheric dominance on Iranian EFL Learner's Creativity in Writing. *International Journal of English and Education*, 4/2, pp. 383-397

Weinstein, C., & Mayer, R. (1986). The teaching of learning strategies. In M.C. Wittrock (Ed.), *Handbook of Research on Teaching*, 3rd Edition (pp. 315-327). New York: Macmillan

Wenden, A. L. (1985). Learner Strategies, *TESOL Newsletter*, 19(5), pp. 1-7.

Williams, W. M., Blythe, T., White, N., Li, J., Gardner H. & Sternberg, R. J. (2002). Practical Intelligence for School: Developing Metacognitive Sources of Achievement in Adolescence. *Developmental Review*, 22, pp. 162-210.

APPENDICES

Appendix A: Turkish Version of the Personal Background

Questionnaire

Öğrenci Anketi

Bu anket İngilizce Hazırlık Okulu öğrencilerinin kişisel bilgi ve altyapısını, İngilizce öğrenirken kullandıkları stratejileri ve öğrenirken ağırlıklı olarak beynin sol yarısını mı yoksa sağ yarısını mı daha çok kullandıklarını tespit etmek için tasarlanmıştır. Verilen cevapların doğruluğu çalışma için son derece yararlı olacaktır. Bu anketin sonuçları araştıma amaçlı kullanılacak ve kesinlikle gizli tutulacaktır.

Katkılarınız ve anketi tamamlamak için zaman ayırdığınız için teşekkür ederim.

Meryem Özyel
Yüksek Lisans Öğrencisi
İngilizce Dili Eğitimi

A. Ön Bilgiler

Bu bölümde, kişisel bilgilerinizi içeren bir dizi soru vardır. Sizin için doğru olan şıkkı işaretleyin ya da boşlukları doldurunuz.

1. İsim: _____

2. Cinsiyet: a. Kadın b. erkek

3. Yaş: _____

4. Anadil: a. Türkçe b. İngilizce c. Diğer: _____

5. Hazırlık okulunda İngilizce seviyeniz nedir?

- a. Pre-intermediate (Orta Altı)
- b. Intermediate (Orta)
- c. Upper-intermediate (Orta Üstü)
- d. Advanced (İleri)

Appendix B: Turkish Version of Strategy Inventory for Language

Learning

Dil Öğrenme Stratejileri					
<p>Dil Öğrenme Stratejileri Envanteri İngilizce'yi Yabancı Dil olarak öğrenenler için hazırlanmıştır. Bu envantere 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 yazınız. Verilen ifadenin, nasıl yapmanız gerektiği ya da başkalarının neler yaptığı değil, sadece sizin yaptıklarınızı ne kadar tasvir ettiğini işaretleyiniz. Maddeler üzerinde çok fazla düşünmeyiniz. Maddeleri yapabildiğiniz kadar hızlı şekilde, çok zaman harcamadan ve dikkatlice işaretleyip bir sonraki maddeye geçiniz. Anketi cevaplandırmak yaklaşık 20-30 dk. alır. Eğer herhangi bir sorunuz olursa, öğretmeninize danışın.</p>	1 = Hiçbir zaman doğru değil	2 = Nadiren doğru	3 = Bazen doğru	4 = Sık sık doğru	5 = Her zaman doğru

Bölüm A					
1. İngilizce'de bildiklerimle yeni öğrendiklerim arasında ilişki kurarım.	1	2	3	4	5
2. Yeni öğrendiğim kelimeleri hatırlamak için bir cümlede kullanırım.	1	2	3	4	5
3. Yeni öğrendiğim kelimeleri akılda tutmak için kelimenin telaffuzuyla aklıma getirdiği bir resim ya da şekil arasında bağlantı kurarım.	1	2	3	4	5
4. Yeni bir kelimeyi o sözcüğün kullanılabileceği bir sahneyi ya da durumu aklımda canlandırarak, hatırlarım.	1	2	3	4	5
5. Yeni kelimeleri aklımda tutmak için, onları ses benzerliği olan kelimelerle ilişkilendiririm.	1	2	3	4	5
6. Yeni öğrendiğim kelimeleri aklımda tutmak için küçük kartlara yazarım.	1	2	3	4	5
7. Yeni kelimeleri vücut dili kullanarak zihnimde canlandırırım.	1	2	3	4	5
8. İngilizce derslerinde öğrendiklerimi sık sık tekrar ederim.	1	2	3	4	5
9. Yeni kelime ve kelime gruplarını ilk karşılaştığım yerleri (kitap, tahta ya da herhangi bir işaret levhasını) aklıma getirerek, hatırlarım.	1	2	3	4	5

Bölüm B					
10. Yeni sözcükleri birkaç kez yazarak, ya da söyleyerek, tekrarlarım.	1	2	3	4	5
11. Anadili İngilizce olan kişiler gibi konuşmaya çalışırım.	1	2	3	4	5
12. Anadilimde bulunmayan İngilizce'deki "th /θ / hw " gibi sesleri çıkararak, telaffuz alıştırmaları yaparım.	1	2	3	4	5
13. Bildiğim kelimeleri cümlelerde farklı şekillerde kullanırım.	1	2	3	4	5
14. İngilizce sohbetleri ben başlatırım.	1	2	3	4	5
15. T.V. 'de İngilizce programlar ya da İngilizce filmler izlerim.	1	2	3	4	5
16. İngilizce okumaktan hoşlanırım.	1	2	3	4	5
17. İngilizce mesaj, mektup veya rapor yazarım.	1	2	3	4	5
18. İngilizce bir metne ilk başta bir göz atarım, daha sonra metnin tamamını dikkatlice okurum.	1	2	3	4	5
19. Yeni öğrendiğim İngilizce kelimelerin benzerlerini Türkçe'de ararım.	1	2	3	4	5
20. İngilizce'de tekrarlanan kalıplar bulmaya çalışırım.	1	2	3	4	5
21. İngilizce bir kelimenin, bildiğim kök ve eklerine ayırarak anlamını çıkarırım.	1	2	3	4	5
22. Kelimesi kelimesine çeviri yapmamaya çalışırım.	1	2	3	4	5
23. Dinlediğim ya da okuduğum metnin özetini çıkarırım.	1	2	3	4	5

Bölüm C					
24. Bilmediğim İngilizce kelimelerin anlamını, tahmin ederek bulmaya çalışırım.	1	2	3	4	5
25. İngilizce konuşurken bir sözcük aklıma gelmediğinde, el kol hareketleriyle anlatmaya çalışırım.	1	2	3	4	5
26. Uygun ve doğru kelimeyi bilmediğim durumlarda kafamdan yeni sözcükler uydururum.	1	2	3	4	5
27. Okurken her bilmediğim kelimeye sözlükten bakmadan, okumayı sürdürürüm.	1	2	3	4	5
28. Konuşma sırasında karşımdakinin söyleyeceği bir sonraki cümleyi tahmin etmeye çalışırım.	1	2	3	4	5
29. Herhangi bir kelimeyi hatırlayamadığımda, aynı anlamı taşıyan başka bir kelime ya da ifade kullanırım.	1	2	3	4	5

Bölüm D					
30. İngilizce'yi kullanmak için her fırsatı değerlendiririm.	1	2	3	4	5
31. Yaptığım yanlışların farkına varır ve bunlardan daha doğru İngilizce kullanmak için faydalanırım.	1	2	3	4	5
32. İngilizce konuşan bir kişi duyduğumda dikkatimi ona veririm.	1	2	3	4	5
33. "İngilizce'yi daha iyi nasıl öğrenirim?" sorusunun yanıtını araştırırım.	1	2	3	4	5
34. İngilizce çalışmaya yeterli zaman ayırmak için zamanımı planlarım.	1	2	3	4	5
35. İngilizce konuşabileceğim kişilerle tanışmak için fırsat kollarım.	1	2	3	4	5

36. İngilizce okumak için, elimden geldiği kadar fırsat yaratırım.	1	2	3	4	5
37. İngilizce’de becerilerimi nasıl geliştireceğim konusunda hedeflerim var.	1	2	3	4	5
38. İngilizce’mi ne kadar ilerlettiğimi değerlendiririm.	1	2	3	4	5

Bölüm E

39. İngilizce’mi kullanırken tedirgin ve kaygılı olduğum anlar rahatlamaya çalışırım.	1	2	3	4	5
40. Yanlış yaparım diye kaygılandığımda bile İngilizce konuşmaya gayret ederim.	1	2	3	4	5
41. İngilizce’de başarılı olduğum zamanlar kendimi ödüllendiririm.	1	2	3	4	5
42. İngilizce çalışırken ya da kullanırken gergin ve kaygılı isem, bunun farkına varırım.	1	2	3	4	5
43. Dil öğrenirken yaşadığım duyguları bir yere yazarım.	1	2	3	4	5
44. İngilizce çalışırken nasıl ya da neler hissettiğimi başka birine anlatırım.	1	2	3	4	5

Bölüm F

45. Herhangi bir şeyi anlamadığımda, karşımdaki kişiden daha yavaş konuşmasını ya da söylediklerini tekrar etmesini isterim.	1	2	3	4	5
46. Konuşurken karşımdakinin yanlışlarımı düzeltmesini isterim.	1	2	3	4	5
47. Okulda arkadaşlarımla İngilizce konuşurum.	1	2	3	4	5
48. İhtiyaç duyduğumda İngilizce konuşan kişilerden yardım isterim.	1	2	3	4	5
49. Derste İngilizce sorular sormaya gayret ederim.	1	2	3	4	5
50. İngilizce konuşanların kültürü hakkında bilgi edinmeye çalışırım.	1	2	3	4	5

Appendix C: Turkish Version of the Brain Dominance Inventory

Beyin Baskınlığı

Aşağıdaki test öğrenirken ağırlıklı olarak beyninizin sol yarısını mı yoksa sağ yarısını mı daha çok kullandığınızı tespit etmek için tasarlanmıştır. Bazı kişilerin her iki beyin lobunu da eşit kullandığı düşünülürse bir bölüm öğrencinin sol ve sağ beyin kullanma oranları birbirine yakın olarak çıkabilir.

Yönerge: Aşağıdaki soruları dikkatlice okuyunuz ve sizce doğru olan seçeneği işaretleyiniz. Sizin tutum ve davranışınızı en iyi anlatan seçeneği bulunuz ve karşılığı olan harfi cevap kağıdınızda işaretleyiniz.

1. Etkin öğrenebilmek için, daha çok _____ sınıfları tercih ederim.
 - a. konusunda bilgili bir öğretmeni dinleyebileceğim
 - b. rahatça dolaşabileceğim ve istediğimi yapabileceğim
 - c. öğretmeni dinleyebileceğim ve aynı zamanda istediğimi yapabileceğim
2. İçinizden gelen sesler davranışlarınızı nasıl etkiler?
 - a. Önemli kararlar alırken içimden gelen seslere güvenmemeye (olumsuz) çalışırım.
 - b. Sıklıkla içimden gelen seslere güvenirim.
 - c. Karar almadan önce zaman zaman içimden beni yönlendiren sesler gelir ancak çoğunlukla bilinçli olarak beni etkilemesine izin vermem.
3. Benim için genellikle herşeyin yeri bellidir. Bilgiyi ve eşyayı düzene koymada başarılıyımdır.
 - a. Evet.
 - b. Hayır.
 - c. Bazı durumlarda evet, bazense hayır.
4. Yönümü, ya da bir ismi veya duyduğum bir haberi hatırlayabilmek için genelde _____:
 - a. Not alırım.
 - b. Bilgiyi kafamda tutmaya çalışırım.
 - c. bir çok farklı şekilde daha önceden edindiğim bilgi ile bağlantı kurmaya çalışırım.
5. Not alırken yazımın okunaklı olmasına _____.
 - a. hiç dikkat etmem.
 - b. çoğunlukla dikkat ederim.
 - c. bazen dikkat ederim.
6. Ne tür dersleri yeğlersiniz.
 - a. Bir işi bitirmeden diğerine başlanmayanı
 - b. Aynı anda birden fazla iş yapabildiğimi
 - c. Fart etmez.
7. Bir şeyi anımsamam ya da düşünmem gerektiğinde, genellikle _____.
 - a. sözcükler daha yararlı olur.
 - b. resim ya da şekil daha yararlı olur.
 - c. hem sözcükler, hem de resimler ya da şekiller aynı derecede yararlı olur.
8. Açıklamaları gözden geçirirken _____.
 - a. bir şeyi nasıl yapabileceğimin anlatılmasını tercih ederim.
 - b. bir şeyi nasıl yapabileceğimin gösterilmesini tercih ederim.
 - c. belirli bir tercih şeklim yok.

9. Evcil hayvan olarak _____.
- kedileri tercih ederim.
 - köpekleri tercih ederim.
 - fark etmez. (ikisini de severim ya da sevmem)
10. Ne kadar unutkanısınız?
- Neredeyse hiç unutkan değilimdir.
 - Genellikle unutkanımdır.
 - Bazen unutkanımdır.
11. Bir bilginin doğru olup olmadığına sezgisel mi yoksa bilgiye dayanarak mı karar verirsiniz?
- Bilgiye dayanarak.
 - İçgüdüsel olarak.
 - Her ikisinden de yararlanma eğilimim vardır.
12. Ruh haliniz ne kadar sıklıkla değişir?
- Neredeyse hiç değişmez.
 - Sıklıkla değişir.
 - Bazen değişir.
13. Yönünüzü bulabilmenizle ilgili hangi yargı sizi en iyi anlatır?
- Çok çabuk yönümü kaybederim. Özellikle orada daha önce bulunmadıysam.
 - Orada daha önce bulunmuş olmasam da yolumu bulmak konusunda çok iyiyim.
 - Yönümü bulmada ne çok iyi ne de çok kötüyümdür.
14. Otobüs ya da gemiyle seyahat ederken mideniz bulanır mı?
- Hemen hemen hiç midem bulanmaz.
 - Çokça midem bulanır.
 - Bazen midem bulanır.
15. Zamanı ne kadar iyi kullanıyorsunuz?
- Genellikle herşeyi zamanında bitiririm.
 - Zamanı iyi kullanmam.
 - Zamanı bazen iyi kullanırım.
16. Öğrenirken _____.
- ayrıntılara ve belirli konulara önem veririm.
 - bütünden parçaya doğru gitmeyi, önce resmin tümünü görmeyi yeğlerim.
 - hem ayrıntılara ve özel konulara, hem de bütüne önem veririm.
17. Hangi tür öğretmenlerden daha iyi öğrenirsiniz?
- Sözlü anlatım yapanlardan
 - Gösteri yoluyla ya da hareketlerle anlatanlardan
 - Hem sözlü anlatan hem de gösteri ve hareket yoluyla anlatanlardan
18. Bir şeyi _____ açıklamada iyiyimdir.
- genelde sözcüklerle
 - vücut diliyle ve hareketlerle
 - hem sözcüklerle hem de vücut dili ve hareketlerle
19. Sorunları hangi yolla çözmeyi tercih edersiniz?
- Mantığımla
 - Sezgilerimle
 - Mantığımla hem de sezgilerimle

20. Ne tür soruları çözmeyi tercih edersiniz?
a. Basit problemleri ve her defasında bir tanesini
b. Daha karmaşık problemleri ve her defasında birden fazlasını
c. Her ikisini de
21. Hayal kurmak _____.
a. zaman kaybıdır.
b. geleceğimi planlamam için yararlı bir yöntemdir.
c. eğlenceli ve dinlendiricidir.
22. Hangi tür dersleri tercih edersiniz?
a. Gelecekte kullanabileceğim bilgiler edindiklerimi.
b. Hemen kullanabileceğim bilgiler edindiklerimi.
c. Hem gelecekte hem de hemen kullanabileceğim bilgiler edindiklerimi
23. Aşağıdaki ifadelerden hangisi sizi en iyi anlatır?
a. Vücut diline bilinçli olarak dikkat etmem, daha çok insanların söyledikleri şeyleri dinlemeyi tercih ederim.
b. Vücut dilini anlamada iyiyim.
c. Hem insanların söylediklerini hem de vücut dillerini anlamada iyiyim.
24. Hangi dersi daha çok seversiniz?
a. Matematiği
b. Geometriyi
c. Her ikisini de seviyorum/ sevmiyorum.
25. Kendinizi parçalara ayrılmış bir bisikleti monte etmek gibi yeni ve zor bir işe hazırlıyor olsaydınız, aşağıdakilerden hangisini yaparsınız?
a. Tüm parçaları yere koyar, onları sayar, gerekli aletleri bulur ve tarife göre monte etmeye çalışırdım.
b. Monte şemasına bakar, elimde var olan aletlerle parçaları takmaya çalışırdım.
c. Benzeri durumlardaki daha önceki deneyimlerimi hatırlamaya çalışır ona göre parçaları takmaya çalışırdım.
26. İnsanlarla iletişim kurarken, _____ rahat hissederim.
a. konuşan ben isem daha
b. dinleyen ben isem daha
c. konuşan ya da dinleyen olmam fark etmez her iki durumda da kendimi
27. Saate bakmadan, saatin kaç olduğunu tahmin edebilir misiniz?
a. Evet
b. Hayır
c. Bazen
28. Derslerin ya da yapılacak işin _____.
a. planlı olmasını isterim, çünkü ne yapacağımı bilmeliyim.
b. ilerledikçe değişikliklere açık olmasını tercih ederim.
c. hem planlı hem değişikliğe açık olmasını isterim.
29. Ne tür tür sınavları tercih edersiniz?
a. Dört ya da beş seçenektan birini işaretleyeceğim çoktan seçmeli sınavları
b. Cevapları kendim yazacağım sorulardan oluşan sınavları
c. Hem çoktan seçmeli hem de cevapları benim yazacağım sınavları
30. Okurken hangi yolu izlersiniz?
a. Bölüm bölüm okuyarak, hem bölüm üzerinde ayrı düşünürüm.
b. Tüm metni bütün olarak ele alır, sonuç çıkarmaya çalışırım.
c. Her ikisini de yaparım.

31. Okurken neye dikkat edersiniz?
 - a. Belirli detaylara ve gerçeklere
 - b. Ana düşüncelere
 - c. Hem detaylara hem de ana düşüncelere
32. Hangisinden hoşlanırsınız?
 - a. Konuşmaktan ve yazmaktan
 - b. Çizmekten ve el becerisi gereken işlerden
 - c. Her ikisinden de
33. Sizin için hangisi daha heyecan vericidir?
 - a. Bir şeyi geliştirmek
 - b. Yeni bir şey icat etmek
 - c. Hem bir şeyi değiştirmek hem de yeni bir şey icat etmek
34. Hangisinde daha beceriklisiniz?
 - a. Düşünceleri mantıklı bir sıraya koymada
 - b. Düşünceler arasında ilişki kurmada
 - c. Hem düşünceleri mantıklı bir sıraya koymada hem de onlar arasında mantıklı bir ilişki kurmada
35. Hangisini daha kolay hatırlarsınız?
 - a. İsimleri ve tarihleri
 - b. Şekilleri ve haritaları
 - c. Her ikisini de
36. Gördüğüm yüzleri kolaylıkla hatırlarım.
 - a. Hayır
 - b. Evet
 - c. Bazen
37. Okurken ve çalışırken, _____.
 - a. tam sessizliği tercih ederim.
 - b. müzik dinlemeyi tercih ederim.
 - c. ders çalışırken değil ama sadece zevk için okurken geri planda çalan müziği dinlerim.
38. Spor yaparken ya da dans ederken bir hareketi en iyi _____ öğrenirim.
 - a. hareketi sözel dinleyerek ve zihnimden tekrarlayarak
 - b. seyrederek ve sonra da yapmaya çalışarak
 - c. seyrederek, sonra taklit ederek ve hareketin nasıl yapılacağını konuşarak
39. Rahat bir pozisyonda oturun ve ellerinizi, parmaklarınız birbirine girecek şekilde birleştirin. Hangi başparmağınız üstte?
 - a. Sol
 - b. Sağ
 - c. İkisi de paralel

Appendix D: English Version of the Personal Background

Questionnaire

Student Questionnaire

I am a graduate student doing my MA in the Department of English Language Teaching. I am conducting a survey to find out your background information, language learning strategies for learning English, and your brain dominance on learning as part of my MA thesis study. It will be extremely useful for the study if you respond to the items frankly and realistically. The results of this questionnaire will only be used for research purposes and kept strictly confidential.

Thank you for participating and taking time to complete the questionnaire.

Meryem Özyel
MA Student
Department of ELT

A. Background Information

In this section, there are a number of questions that contains personal information. Please choose the one that is right for you or fill in the blanks.

1.Name: _____

2.Gender: a. Female b. Male

3.Age: _____

4.Mother tongue: a. Turkish b. English c. Other: _____

5.What is your level of English at preparatory school? Please choose the one that is right for you.

- a. Pre-intermediate
- b. Intermediate
- c. Upper-intermediate
- d. Advanced

Appendix E: English Version of the Strategy Inventory for Language Learning

Language Learning Strategies						
<p>This form of the Strategy Inventory For Language Learning (SILL) is for students of English as a second or foreign language. Write the response (1, 2, 3, 4 or 5) that tells how true of you the statement is. Answer in terms of how well the statement describes YOU. Do not answer how you think you should be, or what other people do. There are no right or wrong answers to these statements. Work as quickly as you can without being careless. This usually takes about 20-30 minutes to complete. If you have any questions, let the teacher know immediately.</p>	1 =	Never or almost never true of me	2 =	Usually not true of me	3 =	Somewhat true of me
	4 =	Usually true of me	5 =	Always or almost always true of me		

Part A					
1. I think of relationships between what I already know and new things I learn in English.	1	2	3	4	5
2. I use new English words in a sentence so I can remember them.	1	2	3	4	5
3. I connect the sound of a new English word and an image or picture of the word to help remember the word.	1	2	3	4	5
4. I remember a new English word by making a mental picture of a situation in which the word might be used.	1	2	3	4	5
5. I use rhymes to remember new English words.	1	2	3	4	5
6. I use flashcards to remember new English words.	1	2	3	4	5
7. I physically act out new English words.	1	2	3	4	5
8. I review English lessons often.	1	2	3	4	5
9. I remember new English words or phrases by remembering their location on the page, on the board, or on a street sign.	1	2	3	4	5
Part B					
10. I say or write new English words several times.	1	2	3	4	5
11. I try to talk like native English speakers.	1	2	3	4	5
12. I practice the sounds of English.	1	2	3	4	5
13. I use the English words I know in different ways.	1	2	3	4	5
14. I start conversations in English.	1	2	3	4	5
15. I watch English language TV shows spoken in English or go to movies spoken in English.	1	2	3	4	5
16. I read for pleasure in English.	1	2	3	4	5
17. I write notes, messages, letters, or reports in English.	1	2	3	4	5

18. I first skim an English passage (read over the passage quickly) then go back and read carefully.	1	2	3	4	5
19. I look for words in my own language that are similar to new words in English.	1	2	3	4	5
20. I try to find patterns in English.	1	2	3	4	5
21. I find the meaning of an English word by dividing it into parts that I understand.	1	2	3	4	5
22. I try not to translate word-for-word.	1	2	3	4	5
23. I make summaries of information that I hear or read in English.	1	2	3	4	5

Part C

24. To understand unfamiliar English words, I make guesses.	1	2	3	4	5
25. When I can't think of a word during a conversation in English, I use gestures.	1	2	3	4	5
26. I make up new words if I do not know the right ones in English.	1	2	3	4	5
27. I read English without looking up every new word.	1	2	3	4	5
28. I try to guess what the other person will say next in English.	1	2	3	4	5
29. If I can't think of an English word, I use a word or phrase that means the same thing.	1	2	3	4	5

Part D

30. I try to find as many ways as I can to use my English.	1	2	3	4	5
31. I notice my English mistakes and use that information to help me do better.	1	2	3	4	5
32. I pay attention when someone is speaking English.	1	2	3	4	5
33. I try to find out how to be a better learner of English.	1	2	3	4	5
34. I plan my schedule so I will have enough time to study English.	1	2	3	4	5
35. I look for people I can talk to in English.	1	2	3	4	5
36. I look for opportunities to read as much as possible in English.	1	2	3	4	5
37. I have clear goals for improving my English skills.	1	2	3	4	5
38. I think about my progress in learning English.	1	2	3	4	5

Part E

39. I try to relax whenever I feel afraid of using English.	1	2	3	4	5
40. I encourage myself to speak English even when I am afraid of making a mistake.	1	2	3	4	5
41. I give myself a reward or treat when I do well in English.	1	2	3	4	5
42. I notice if I am tense or nervous when I am studying or using English.	1	2	3	4	5
43. I write down my feelings in a language learning diary.	1	2	3	4	5
44. I talk to someone else about how I feel when I am learning English.	1	2	3	4	5

Part F

45. If I do not understand something in English, I ask the other person to slow down or say it again.	1	2	3	4	5
46. I ask English speakers to correct me when I talk.	1	2	3	4	5

47. I practice English with other students.	1	2	3	4	5
48. I ask for help from English speakers.	1	2	3	4	5
49. I ask questions in English.	1	2	3	4	5
50. I try to learn about the culture of English speakers.	1	2	3	4	5

Appendix F: English Version of the Brain Dominance Inventory

Brain Dominance

This inventory will help determine if you are primarily a left-brain or right-brain learner, or if you are bilateral (using both about equally).

Directions: Answer the questions carefully, checking the answer that is correct for you. Select the one that most closely represents your attitude or behavior.

1. I prefer the kind of classes.
 - a. where I listen to an authority.
 - b. in which I move around and do things.
 - c. where I listen and also do things.
2. Concerning hunches:
 - a. I would rather not rely on them to help me make important decisions.
 - b. I frequently have strong ones and follow them.
 - c. I occasionally have strong hunches but usually I do not place much faith in them or consciously follow them.
3. I usually have a place for things, a way of doing things, and an ability to organize information and materials.
 - a. Yes.
 - b. No.
 - c. In some areas of my life, but not in others.
4. When I want to remember directions, a name, or a news item, I usually:
 - a. write notes.
 - b. visualize the information.
 - c. associate it with previous information in several different ways.
5. In notetaking, I print:
 - a. never.
 - b. frequently.
 - c. sometimes.
6. I prefer the kind of classes
 - a. where there is one assignment at a time, and I can complete it before beginning the next one.
 - b. where I work on many things at once.
 - c. I like both kinds about equally.
7. When remembering things or thinking about things, I do so best with:
 - a. words.
 - b. pictures and images.
 - c. both equally well.
8. In reviewing instructions, I prefer:
 - a. to be told how to do something.
 - b. to be shown how.
 - c. no real preference for demonstration over oral instruction.

9. I prefer:
 - a. dogs.
 - b. cats
 - c. no preference for dogs over cats or vice versa.
10. I am:
 - a. almost never absentminded.
 - b. frequently absentminded.
 - c. occasionally absentminded.
11. Do you instinctively feel an issue is right or correct, or do you decide on the basis of information?
 - a. decide on the basis of information.
 - b. instinctively feel it is right or correct.
 - c. I tend to use a combination of both.
12. I have
 - a. no or almost no mood changes.
 - b. frequent mood changes.
 - c. occasional mood changes.
13. I am:
 - a. easily lost in finding directions, especially if I have never been to that place before.
 - b. good at finding my way, even when I have never been in that area.
 - c. not bad in finding directions, but not really good either.
14. I get motion sickness in cars and boats:
 - a. hardly ever.
 - b. a lot.
 - c. sometimes.
15. I generally:
 - a. use time to organize work and personal activities.
 - b. have difficulty in pacing personal activities to time limits.
 - c. usually am able to pace personal activities to time limits with ease.
16. I prefer to learn:
 - a. details and specific facts.
 - b. from a general overview of things, and to look at the whole picture.
 - c. both ways about equally.
17. I learn best from teachers who:
 - a. are good at explaining things with words.
 - b. are good at explaining things with demonstration, movement, and/or action.
 - c. do both.
18. I am good at:
 - a. explaining things mainly with words.
 - b. explaining things with hand movements and action.
 - c. doing both equally well.
19. I prefer to solve problems with:
 - a. logic.
 - b. my gut feelings.
 - c. both logic and gut feelings.

20. I prefer:
 - a. simple problems and solving one thing at a time.
 - b. more complicated problems, more than one thing.
 - c. both kinds of problems.
21. Daydreaming is:
 - a. a waste of time.
 - b. a usable tool for planning my future.
 - c. amusing and relaxing.
22. I prefer classes in which I am expected:
 - a. to learn things I can use in the future.
 - b. to learn things I can use right away.
 - c. I like both kinds of classes equally.
23. I am:
 - a. not very conscious of body language. I prefer to listen to what people say.
 - b. good at interpreting body language.
 - c. good at understanding what people say and also in interpreting body language.
24. In school, I preferred:
 - a. algebra.
 - b. geometry.
 - c. I had no real preference of one over the other.
25. In preparing myself for a new or difficult task, such as assembling a bicycle, I would most likely:
 - a. lay out all the parts, count them, gather the necessary tools, and follow the directions.
 - b. glance at the diagram and begin with whatever tools were there, sensing how the parts fit.
 - c. recall past experiences in similar situations.
26. In communicating with others, I am more comfortable being the:
 - a. talker.
 - b. listener.
 - c. I m usually equally comfortable with both.
27. I can tell fairly accurately how much time has passed without looking at a clock.
 - a. Yes.
 - b. No
 - c. Sometimes.
28. I like my classes or work to be:
 - a. planned so that I know exactly what to do.
 - b. open with opportunities for change as I go along.
 - c. both planned and open to change.
29. I prefer:
 - a. multiple-choice tests.
 - b. essay tests.
 - c. I like both kinds of tests equally.
30. In reading, I prefer:
 - a. taking ideas apart and thinking about them separately.
 - b. putting a lot of ideas together before applying them to my life.
 - c. both equally.

31. When I read, I prefer to look for:
 - a. specific details and facts.
 - b. main ideas.
 - c. both about equally.
32. I enjoy:
 - a. talking and writing.
 - b. drawing and handling things.
 - c. both equally.
33. It is more exciting to:
 - a. improve something.
 - b. invent something.
 - c. both are exciting to me.
34. I am skilled in:
 - a. putting ideas in a logical order.
 - b. showing relationships among ideas.
 - c. both equally.
35. I am good at:
 - a. recalling verbal material (names, dates).
 - b. recalling visual material (diagrams, maps).
 - c. equally good at both.
36. I remember faces easily.
 - a. No.
 - b. Yes
 - c. Sometimes.
37. When reading or studying, I:
 - a. prefer total quiet.
 - b. prefer music.
 - c. I listen to background music only when reading for enjoyment, not while studying.
38. I like to learn a movement in sports or a dance step better by:
 - a. hearing a verbal explanation and repeating the action or step mentally.
 - b. watching and then trying to do it.
 - c. watching and then imitating and talking about it.
39. Sit in a relaxed position and clasp your hands comfortably in your lap. Which thumb is on top?
 - a. Left.
 - b. Right.
 - c. Both are parallel.