T.C.
ISTANBUL AYDIN UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES

AN INVESTIGATION INTO LEARNING STYLE PREFERENCES OF ARAB AND TURKISH STUDENTS AT TERTIARY LEVEL

THESIS

Ammar ALQATTAN

Department of English Language and Literature
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Thesis advisor: Assist. Prof. Dr. Osman SABUNCUOĞLU

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DECLARATION

I hereby declare that all information in this thesis document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results, which are not original to this thesis.

Ammar ALQATTAN

DEDICATION

I dedicate this research project to my parents. To my Dad, Abdul Kader, I thank you for encouraging me to work hard. Your wise words kept enlightening my path towards success. To my mum, Amani, thank you for your prayers and support throughout my studies. Your everyday call used to provide me with peace in my mind which helped me to keep focused. Special dedication goes to my beloved wife Lina who is holding my hand in every step of the way, and my siblings for being there for me when I needed their help most. I love you all.

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ABBREVIATIONS

EFL **:** English as a foreign language
MBTI **:** Myers-Briggs Type Indicator
MI **:** Multiple Intelligences
NLP **:** Neuro-Linguistic Programming

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AN INVESTIGATION INTO LEARNING STYLE PREFERENCES OF ARAB AND TURKISH STUDENTS AT TERTIARY LEVEL

ÖZET

Öğrenme stillerinin yabancı dil öğrenme üzerinde güçlü bir etkisi vardır. Arap ve Türk öğrencilerin öğrenme tercihleri arasındaki kültürler arası ilişki hakkında henüz çok araştırma yapılmamıştır. Bu nedenle bu çalışmanın amacı, Arap ve Türk katılımcıların yükseköğretim düzeyinde tercih ettikleri birincil ve ikincil öğrenme stili tercihlerini araştırmaktı. Ayrıca bu çalışmada, öğrenme stili tercihleri ile cinsiyet arasında fark olup olmadığı da incelenmiştir. Dahası bu araştırma, İngilizce seviyesine ve yaşa bağlı olarak öğrenme stili tercihleri arasındaki ilişkiyi de tanımlamıştır. Hazırlık okullarında İngilizce öğrenimi gören 111 öğrencinin katıldığı, nicel araştırma yöntemlerinin kullanıldığı bir anket yapılmıştır. Bu ankette, görsel işitsel, kinestetik, dokunsal, grup ve bireysel kategorileri içerisinde, öğrencilerin tercih ettiği öğrenme stili tercihlerini belirlemek amaçlanmıştır. Bulgular ışığında, kinestetik öğrenme stili, Arap ve Türk öğrencilerin tercih ettiği başlıca öğrenme stili olmuştur.

Arap öğrenciler için en az tercih edilen öğrenme stili bireysel iken Türk öğrenciler için en az tercih edilen öğrenme stili grup ile öğrenmedir. Cinsiyet ve öğrenme stili tercihleri arasında büyük bir fark olmamasına rağmen, kız öğrenciler dokunsal ve grup öğrenenleri gibi görünmüşlerdir. Katılımcıların yaşları ve İngilizce düzeyleri öğrenme stilleri ile ilişkilidir. Arap ve Türk öğrenciler yaparak öğrenmeyi sevmelerine bağlı olarak denebilir ki öğrenenler, dili en iyi kullanarak ve üreterek öğreniyorlar.

Türk öğrencilerin en az tercih ettikleri çalışma yönteminin grup ile çalışma olmasına karşın Arap öğrencilerin en az tercih ettikleri çalışma yöntemi bireysel çalışmadır. Arap öğrencilerin Türk öğrencilerden daha sosyal olduğu söylenebilir.

Anahtar kelimeler: *Öğrenme stilleri, Tercihler, Yüksek Öğretim, Cinsiyet, Yaş, İngilizce Seviyesi*

AN INVESTIGATION INTO LEARNING STYLE PREFERENCES OF ARAB AND TURKISH STUDENTS AT TERTIARY LEVEL

ABSTRACT

Learning styles are a strong influence on foreign language learning. Much research on the cross-cultural relationship between Arab and Turkish students' preferences for learning has not been done yet. Therefore, the aim of this study was to investigate the minor and major learning style preferences preferred by the Arab and Turkish participants at the tertiary level. This study also examined if there was a difference between learning style preferences and gender. Moreover, it also identified the relationship between learning style preferences and ages and English level. Quantitative research methods were employed, so a questionnaire in which 111 students studying English at preparatory schools participated was conducted to collect and analyse the data. This questionnaire aimed to identify students' favoured learning style preferences categorised as visual, auditory, kinaesthetic, tactile, group and individual. In the light of the findings, the major learning style preferred by Arab and Turkish students was kinaesthetic. The least preferred learning style for Arab students was individual while it was group learning style for Turkish students. Although there was not a big difference between gender and learning style preferences, female students seemed to be tactile and group learners. The ages and English levels of the participants were related to their learning styles. Both Arab and Turkish students like to learn by doing. It can be said that learners learn best by using and producing language. Although Turkish students prefer to study in a group the least, Arab students prefer to learn individually the least. Arab students can be said to be more sociable than their Turkish peers.

Keywords: *Learning styles, Preferences, Tertiary, Gender, Age, English level.*

1. INTRODUCTION

1.1 Introduction

This chapter presents the background of the study, the statement of the problem and the research questions, in addition to the significance of the study respectively. Furthermore, the definitions of the key terms are stated and explained in this chapter.

1.2 Background of the Study

Each classroom contains a mixture of students with different backgrounds, different personalities and different learning style preferences. Some of them can achieve more success if they get exposed to visual materials. While some learners understand better if they work in groups or prefer to work on their own.

Teachers need to be aware of individual differences to respond to their students well. They should get to know students to increase the quality of language instruction. Studies show that students learn in different ways and individual differences impact learning (Kumar, Kumar & Smart, 2004). One of the factors that impacts academic success in class is their learning style, which is considered to be a very important cognitive factor related to thinking. Studies show that individuals like to learn in different ways successfully and that they have personal preferences pertaining to gain and process knowledge. These personal preferences are known as learning styles (Kumar, Kumar & Smart, 2004; She, 2005).

Learning style is a characteristic which indicates how students prefer to learn as well as some other factors which influence student achievement like learning strategies and learner autonomy. Previous studies have reported that learning performance of students can be improved if suitable learning style dimensions are taken into consideration when the learning process is developed (Graf, Liu & Kinshuk, 2010).

It is important that teachers pay attention to the students' learning styles in order to nurture them to become responsible for their learning process. Teachers should put learners responsible for their learning process from the very beginning and also

create activities to respond to the needs of their students. If the activities teachers do appeal to their learning preferences, they will produce good learning outcomes.

Students approach the learning process differently, so learning styles are very effective for language success. According to Felder and Henques (1995), some students prefer to "learn by themselves at their own pace rather than in groups. Students tend to perceive information differently through viewing and listening, reflection and action, reasoning logically and intuitively, scrutinizing and visualizing" (p. 1). Likewise, Azlinda (2006) states that the "ability of the students to acquire information and respond to the learning environment is influenced by their learning styles (p. 1).

On the other hand, if cognitive factors related to thinking, such as learning styles are not taken into account or neglected, this can harm the quality of academic learning and also social-emotional learning. For example, when learning styles of the students in one class and teaching styles of the teachers mismatch one another, a number of problems can arise in class. Students may get bored and distracted in class, perform badly in tests and get disheartened about the course, the curriculum and themselves. As a result, they will probably "transfer to another program or drop out of school" (Felder & Spurlin, 2005:109). It is widely accepted that the way individuals choose or tend to deal with a learning situation has an impact on performance and learning outcomes. Thus, some researchers have emphasized that discovering the learning styles of students is highly important to both sides (Kefee,1997 & Pitchard, 2009).

Utilizing awareness of learning style within the educational background promotes more effective learning. It has improved student academic achievement. As Keefe (1997) claims, the biggest dilemma would be to know how students prefer learn so that teachers can motivate them to improve their achievement. There is a strong intuitive appeal in the idea that instructors, course designers and educational psychologists should pay closer attention to students' learning styles by diagnosing them, by encouraging learners to reflect on learning and by designing teaching and learning practices around them. When this is done, learners will become more engaged to learn by knowing their strengths and weaknesses. As instructors respond to individuals' strengths and weaknesses, retention and achievement rates in formal programs are likely to rise and 'learning to learn' skills will provide a foundation for lifelong learning. According to Pitchard, (2009), "Learning preferences refer to an

individual's preferred intellectual approach to learning, which has an important bearing on how learning proceeds for each individual, especially when considered in conjunction with what teachers expect from learners in the classroom" (p. 42).

Learning styles are varied, so they are not fixed traits that people always display or possess. Learners can adopt one or more than one learning style in different contexts by learners. Sternberg (1997) proposes that learning styles are at least in part socialized and that they can be modified. Therefore, learners' knowledge of their learning style preferences can help them optimally develop their meta-cognition involving learning how one learns, thus maximizing teaching (Sternberg, 1997).

In summary, Sternberg (1997) believes that greater awareness of learning preferences and styles helps teachers become more flexible in their teaching and utilize a wide range of classroom methodologies. Teachers should match their teaching styles to learners' preferences for learning and also help them build their skills and capacities to learn well, thus developing effective and life-long learners who can monitor their learning strategies and evaluate their outcomes or achievement. Therefore, teachers should pay attention to the choice of content, method and assessment to be able to respond to students' learning styles. Both teaching styles and learning styles go hand in hand and complement one another in language learning improvement.

1.3 Statement of the Problem

Both Arab and Turkish EFL instructors in different contexts across the world are not fully aware of how learners prefer to learn a foreign language, especially English. These two different cultures share the same type of educational philosophy: knowledge-based rather than person-based system. They do not pay attention to the education of individual. This results in low academic achievement in many aspects of education such as the teaching of a foreign language.

It is clear that teachers do not know how to implement and manage engaging motivating instruction. They do not keep abreast of the latest developments in English language teaching. This leads them to follow traditional or old-fashioned teaching styles in every context without recognizing the diversity of their learners in a typical classroom. As a result of this ineffective instruction, students get bored, lose their motivation, misbehave, distract one another, do poorly on tests and in some

worse cases they quit learning English. They do not respond to teaching because they are not in the centre of the learning process.

Learning style theories have been cited as effective means of helping teachers recognize the incredibly diverse needs learners bring into the classroom as well as helping learners discover how they learn best for optimum academic achievement. In addition, these theories provide a framework that enables teachers to gain the very best from their learners by developing a variety of instructional methodologies to benefit all learners, and more importantly helping students discover their preferred learning styles so that students can achieve better academic outcomes. It is, therefore, imperative for teachers to understand students' learning style preferences and how they relate to academic achievement.

Teachers do not take into account diversity in the language classroom because the class is made up of a rich diversity of students with different learning style preferences and other cognitive and affective differences. Teachers from these two cultures are unaware of the role which learning styles play.

1.4 Purpose of the Study

This study aims to examine the cross-cultural learning styles between Turkish and Arab learners. The relationship between the genders of learners and learning style preferences will be explored in great detail. Moreover, this research will identify the relationship between learning style preferences and the ages of learners from two different cultures. The relationship between learners' English levels and their learning style preferences will also be examined. This research will explore how Arab and Turkish university students prefer to learn and if they have favoured learning styles.

1.5 Research Questions

The study aims to answer the following major questions:

- What are the major and minor learning style preferences of Arab undergraduates studying EFL?
- What are the major and minor learning style preferences of Turkish undergraduates studying EFL?

- Is there a significant relationship between learning style preferences and gender?
- Is there a significant relationship between age and learning style preferences?
- Is there a significant relationship between English level of learners and learning style preferences?

1.6 Significance of the Study

Learning styles are very important characteristic cognitive and physiological behaviours that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment. Differences in learners' cognitive styles reflect the different ways people respond to learning situations. Therefore, learning styles can be a crucial factor in producing good learning outcomes and predicting success.

To implement and manage engaging and motivating instruction, learning styles should be considered. For engaging instruction involving a variety of activities and techniques to take place, teachers should put learners first. They should take into account how each learner learns or perceives the knowledge. The activities they prepare should involve a rich diversity of learners in class as variety and challenge can be effective.

When teachers know a lot about their students and the description of learners, they will choose to do activities which can appeal to learners. For learners to respond to teaching or interact with each other, teachers should know their students' cognitive differences. Otherwise, academic learning will never take place. In other words, students will fail to learn English successfully.

Moreover, teachers will help students discover their learning styles and develop successful and life-long learners. Furthermore, students will benefit from the knowledge and awareness of their own learning styles and therefore, can take control of regulations or direct their own learning through modifying their study habits and materials for optimum learning. According to Sternberg (1997), when learners learn in a way that suits them, improvements in the effectiveness of the learning process normally ensue.

1.7 Key Terms Definitions

- Academic Achievement: is a successful completion, through effort, of the acquisition of academic content and skills mostly determined by the grades or scores that the student gets in a test.
- Effective Learning: is learning about learning which develops understanding of learning in the changing world. Effective learning involves individuals moving beyond making connections of new ideas to old ones into restructuring their thinking radically by changing the connections among the things they already know or even discard some long-held beliefs about the world.
- Learning: is the act of acquiring new, or modifying and reinforcing, existing knowledge, behaviours, skills, values or preferences and may involve synthesizing different types of information. In other words, it is acquiring modification of existing knowledge, skills, habits or tendencies through practice or experience.
- Learning Style: is the characteristic cognitive, affective, social, and physiological behaviours that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment.

2. LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical part of the study. It summarizes the information from many different studies and articles concerned with the relationship between learning styles and academic achievement. The specific areas covered are learning styles, definition of learning styles, glimpse of the history of learning styles, types of learning styles, learning styles dimensions, learning styles and multiple intelligences, qualities of a good language learner and autonomous learning.

2.2 Learning Styles

Learning style is termed as the exclusive method used by learners when they are learning new information. Understanding and considering learners' favoured learning styles significantly influence not only their own performance but also the teachers' choices of the methods and techniques in the classroom.

Nowadays, different students who come from different cultural, instructional, and environmental backgrounds and who have different styles of learning are available in the classroom. Thus, in many cases, there are gaps between the teachers' teaching method and the learners' learning styles which have been seen as crucial educational barriers that cause implementing a different range of teaching styles and approaches to deliver a lesson (Curry, 1981).

According to Lubawy (2003), the idea of applying a variety of different teaching styles for a lesson or for a course, which has been emphasized by many researchers, is just to make sure that every individual benefits from the class. It is essential that teachers select a good method or a combination of methods involving engaging techniques and activities.

Furthermore, learning styles are said to be a very important factor, particularly, at the university level. Although there is no specific method that researchers agree on, there are several classifications of different learning styles that mainly put emphasis on

characteristics, preferences and cognitive styles of learners which allow teachers to choose to do the most appropriate activities that suit almost everybody in the classroom. Besides that, numerous scholars believe that identifying different types of learning styles will help both learners and teachers to decide on the materials and activities in the classroom which result in engaging and motivating instruction (Lubawy, 2003).

2.3 Definition of Learning Styles

It is crucial to define the term "style" before going over the related literature of learning styles. The term "style" refers to a set of common qualities of intellectual performance which differ from person to person. According to Brown (2000), it is "a term that refers to consistent and rather enduring tendencies or preferences within an individual" (p. 113).

It is generally believed that there is a quite close relationship between how students realize, cooperate and react to the learning environment and their personality, affective, and cognitive factors. Felder and Brent (2005) claim that the notion of learning styles has been closely observed and evaluated the role of learners' characteristics and differences. The findings show that learning style refers to a person's typical and ideal method of learning, processing and storing new information. However, any particular learning style holds their weak and strong points (Capretz, 2006) and one cannot be considered a perfect learner if he/she adheres to only one type of learning style (Moradkhan & Mirtaheri, 2011).

A learning style is a way of learning new things. As individuals learn and process the new information differently, teachers need to adapt and practise methods which can maximize learning and which can allow learners with different learning styles to benefit from. In addition to this, learners can take full advantage of their learning through recognizing their learning style which simply means individuals learn in different ways.

Learners learn differently based on their favoured learning styles. For instance, many learners basically learn by listening to the oral instructions whereas others have to be actively engaged in the learning process to learn the same thing like role playing. In education, recently, a considerable amount of attention has been paid to the concept

of personalized way of learning and it is quite crucial that the educators, policy makers and teachers have to take this into account that everyone is different and that they learn differently so that they can apply the most appropriate method that suits everybody in the classroom.

Based on the aforementioned discussion, getting to know students will help teachers enhance the quality of the teaching and learning process. Thus, learners learn differently and these personal differences can influence learning (Kumar, Kumar & Smart, 2004). Several studies have been conducted on this topic and all the researchers have agreed that everyone learns in a different way using different abilities and that they have their own particular choices of absorbing and processing the newly-learned information, which are identified as learning styles (Kumar, Kumar & Smart, 2004; She, 2005). It goes without saying that "Learning style is the biologically and developmentally imposed set of characteristics that make the same teaching method wonderful for some and terrible for others" (Dunn & Griggs, 1988, p. 3).

Learning styles have been defined by many researchers. For example, Keefe (1979) defines learning styles as "the characteristic cognitive, affective and physiological behaviours that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment" (p. 10). Similarly, Dunn (1984) defines learning styles as "the way in which each person absorbs and retains information and/or skills; regardless of how that process is described, it is dramatically different for each person" (p. 12).

Sims & Sims (1995) define learning styles as particular ways learners use to process the information. Additionally, learning styles are defined as the general strategies and ways that learners implement to master a new skill or deal with a problematic situation (Oxford, Ehrman & Lavine, 1991). Moreover, Reid (1995) defines learning styles as the particular individual features that facilitate the learning process and the intake of the information.

Finally, according to Stewart and Felicetti (1992), learning styles are teaching and learning settings in which a learner properly learns. Consequently, learning styles have nothing to do with what students learn, but learning styles are related to how they would rather learn.

2.4 Glimpse at the History of Learning Styles

"Learning styles" refer to the different ways of how students learn. More particularly, a learning style is the way that learners can memorize and apply what they have learned correctly. To be able to understand learning styles, this topic has to be examined historically. For example, some children who learn through movement are called kinaesthetic learners. They can memorize a song just by performing its actions with the teacher. It is almost the same with adults. However, the teacher's job is to understand the different learning styles to help students succeed in language learning.

Learning style was first recognized by Aristotle in 334 BC, he thinks "Each child possesses specific talents and skills" (Reiff & National Education Association, W. D., 1992). After that, others start to form their ideas about learning styles like Lev Vygotsky, who comes up with his own theories. He believes that children first develop social interaction and their atmosphere in the place in which they grow up which affects everything else they learn later including learning styles (McLeod, 1970). On the other hand, Piaget (cited in McLeod, 1970) believes that children develop their knowledge from their own personal experiences (McLeod, 1970). After these theories, more and more theories have been formed about how children learn and what can affect their learning. For example, one of the most recent theories is developed by Gardner (1983), Fleming (2011) and Kolb (2017). They believe that learning must be assessed to reach the point of multiple intelligence. According to Gardner, each learning style utilizes different parts of the brain. Different learners learn in different ways. For instance, kinaesthetic learners learn through movement while visual learners prefer visuals to understand what they learn and some learners prefer interaction to learn. (Reiff &National Education Association, W. D., 1992). However, students can have more than one learning style (Gardner & Hatch, 1989).

According to Fleming (2011), learning style theory is different. For instance, visual students prefer to look at graphs and symbols or any visual method that a teacher might use to describe words. What is important to those learners is the colour and the design of the paper. Some learners are aural and oral. In other words, they prefer to listen and speak. What matters to them is group work discussions, feedback and

presentations. Kinaesthetic learners prefer movement; they prefer experiencing and practising on their own (Fleming, 2011). Fleming like the other researchers believes that not only teachers but also students and the society, in general, must understand the different learning styles and feel comfortable with them, and for this reason, he is one of the first theorists to develop a learning style questionnaire. With a set of different questions that can be used by teachers and students he has created a questionnaire after people choose their answers, they see how many "a's" "b's" "c's" and "d's" they choose and in the end, they have different instructions by Fleming that help them understand their learning style (Fleming & Mills, 1992). It is very important for teachers to set to their students' learning styles because that way they will not only understand how their class is proceeding but they also know exactly what techniques they should use to make sure that all students understand the instructions and the lesson in general (Fleming & Mills, 1992).

However, Kolb (1984), who has developed an alternative called the experiential learning cycle to learning styles, claims "Learning is the process whereby knowledge is created through the transformation of experiences" (p. 38). He believes that learners go through different stages. First he observes. Then, he creates a concept of what he observes and finally, the learner creates an active experimentation. In other words, learners have to get through new experiences and form their own ideas about those experiences, and to reflect their own ideas the situation needs to be carefully analysed. For a full experiential learning cycle, learners have to go through all the different stages of observing, analysing and reflecting on learning (Kolb, 2017). He also believes that each learner has a single learning style and it is formed according to one's social environment and educational background.

In general, learning preference is based on two different factors according to Kolb. He views those two factors as vertical axis, (from north to south) which includes the learner's feelings and how he reacts to the instructions and the horizontal axis which is (from west to east) which includes how the learner performs the task (Kolb, 2017).

Kolb (2017) has also defined each class as having four different types of learners. The first type is the divergers "who depend on experiences and observations". They know how to perform things by observing and listening to other opinions. The second type of learners is convergers, "who depend on concepts and are also experimenters." They do not only listen but they also prefer experiencing. The third

type of learners is accommodators, who depend on experiences and are also experimenters Those learners try to listen to others and look at different theories and form an idea from them. The fourth type of learners is assimilators "who depend on both abstract concepts and are also good observers". They depend on theories and logical ideas which come from different researchers or a known source (McLeod, 2013).

So, in order to create a successful educational environment, the teacher has to understand the different types of learning styles to be able to choose what is good for his/her class, because not all learners have the same learning style and there should be different instructions to let everyone get the chance to interact and feel strong in the class. Not only the teacher but also the learners should also understand the different learning styles which will help them become more successful in language learning.

2.5 Types of Learning Styles

Not everybody learns in a similar way. Every student has a particular style to learn a skill through which they feel comfortable. Thus, being aware of what type of learner one can be is a crucial step towards better learning and teaching.

Learning styles are flexible qualities. To put it another way, they are not bound to only one or two styles of learning and they are adaptable. Yet, some are preferred over the others. Moreover, in order to successfully accomplish a learning task, teachers have to adapt at least one of the main four learning styles (Honey and Mumford, 1986). On the other hand, being reluctant in adapting a specific learning style will definitely impede the effective learning process.

According to Honey-Mumford Model of learning styles, learning styles can be classified as:

- Activists,
- Reflectors,
- Theorists,
- Pragmatists.

Activists learn best by doing. In lay terms, they love being engaged in activities and being active (e.g. Working in groups) rather than doing receptive skills. These individuals are easy-going about learning, passionate and are generally tired by doing one thing over and over again.

Reflectors are good observers. Before deciding, they would like to gather enough information to help them make a better decision. Reflectors tend to decide on their background information and other people's ideas. One of the strong points of these learners is that they set meticulous goals while collecting the data and precisely analysing it later before reaching any final conclusion. The decision-making process takes a longer time for them, but when they make a decision, they usually make a good one based on a sensitive and accurate data collection.

Theorists like to put their thoughts as a framework and have a chance to notice how their thoughts are associated with each other. In addition, they put an effort into constantly adding new information into that framework. Although they are not keen on dealing with vague issues, they will not stop working on something unless they deeply understand it and are able to illuminate it in simple words. These learners are rigorous and sensible in selecting their approach and they normally choose the more rational one.

Pragmatists prefer to utilize the new opinions. They try to find out the rational execution of the new opinions prior to making any decision. One of the main strong points of pragmatists is their high level of self-esteem and their ability to integrate the new opinions into their judgement.

Based on the previous discussion regarding the four dimensions of learning styles, learners are categorized into active, reflective, theoretical and practical. Most of the learners are not only one type, but they also possess features of all four. A learning style inventory developed by Honey and Mumford (1986) intends to help learners to discover their dominant type of learning style. The inventory consists of 80 yes/no questions. Twenty of the questions are about the four types of learning style. A kite would be shaped when the learner is done answering all the questions just like the Figure 2.1.

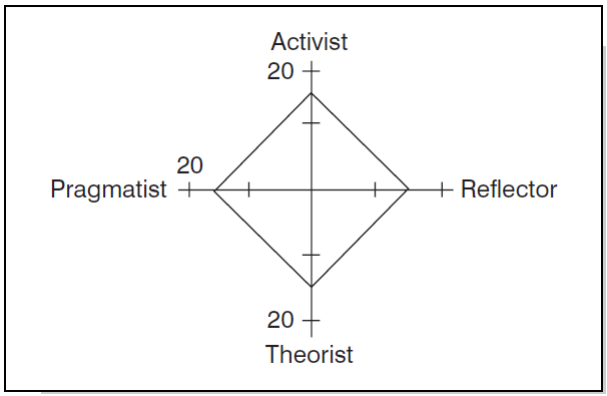

Figure 2.1: A Typical Honey and Mumford 'kite' Honey and Mumford (1986)

The outline in the figure illustrates a normal guide on how a learner is able to adapt any of those learning styles.

2.5.1 Neuro-linguistic programming

According to Pitchards (2009), neuro-linguistic programming (NLP) is another source of learning styles based on the people communication. NLP has to do with communication and its influence on learning. After conducting numerous research and observing how people communicate, three specific learning styles have been identified: visual, auditory and kinaesthetic.

2.5.1.1 Visual learners

Visual learners learn best when they get the information through their eyes which basically means they acquire better through seeing. These learners want the information to be delivered through visual stimuli, such as pictures, graphs, charts, images and videos, etc. While remembering and explaining the learned information, they tend to move their hands and look up.

2.5.1.2 Auditory learners

These learners learn best through listening. Hence, they can make the most of the information when it is presented in the form of talks, lectures, podcasts, discussions and debates. Auditory learners are really keen on repetition, drilling, summarizing and sequencing.

2.5.1.3 Kinaesthetic learners

Kinaesthetic learners learn best when they are physically engaged in the task. They love doing the task to learn it. These learners are good at associating physical

practices with memory and they cannot stand being immobile, but they are keen on having physical mobility and doing any practical activity that involves movement.

There are countless individuals who somewhat are able to integrate all these learning styles while some others merely depend on one type which is believed to be restricting and hindering the learning process in several circumstances.

2.5.2 V-A-R-K system

Fleming (2001) has extended the NLP and developed a new version called V-A-R-K system which evaluates the learners' preferred dependence on visual, auditory, reading and/or kinaesthetic. Students mainly utilize all our senses to collect the required data to learn something new from their environment though some people only over-rely on one sense over the rest (Fleming, 2001).

2.5.3 MBTI system

Another system of determining the learners' profile which was developed by Myers and Briggs (1975) is called the Myers-Briggs type indicator (MBTI). The MBTI labels eight personality traits that are said to be essential for teachers and are closely related with the learning styles (Pitchard, 2009).

Based on this model, students might be:

- Extroverts,
- Introverts,
- Sensors,
- Intuitive,
- Thinkers,
- Feelers,
- Judgers,
- Perceivers.

2.5.3.1 Extrovert learners

These types of students enjoy interacting with others, learn and obtain the new knowledge through talking to others. They not only like team-work and group projects, but they also like to ask other people's ideas if they face a situation that impedes their learning which is one of their strengths.

2.5.3.2 Introvert learners

Unlike the previous type, these students prefer to explore on their own, take their time and go through the learning process in private. Their main characteristic is studying alone in a peaceful and calm place and they prefer personalized learning when they can establish a connection between what they study and their real life.

2.5.3.3 Sensing learners

These learners are keen on setting vivid goals and concern themselves with the specifics. After setting up and taking notice, they start putting everything in practice and act step by step. On top of that, they uniquely remember the facts. They are basically characterized by seeing, hearing and touching what they learn. Thus, they learn better through using a computer, watching movies and/or listening to audio programs.

2.5.3.4 Intuitive learners

Reading and listening are the intuitive students' best activity and they love using their imagination to solve problems. Besides that, they prefer to see the big picture rather than going into details.

2.5.3.5 Thinking learners

These are students who like to be behaved impartially and are quite sensible toward their accomplishments and the new things they learn. They would like to be given rational instructions and think analytically to figure out the difficulties. The thinking individuals work even better when there is a limited time to finish the activity. In addition, they like putting the new knowledge in a logical sequence which is meaningful to them. They thrive when using their background knowledge to create a solid connection with what they are learning now.

2.5.3.6 Feeling learners

Those who are feeling learners would like to establish a warm rapport with the teacher and are keen on learning through assisting others. They are quite easy-going and are able to get on well with their classmates. On top of that, they like group work better than individual work. These learners are emotional and like learning in a friendly environment where they have a chance to select and work on issues they concern about.

2.5.3.7 Judging learners

Those learners want to follow structured orders and stick to pre-planned schedule. They are thoughtful about what they do and do not give up until they complete a given task. They feel quite comfortable understanding what is demanded from them. These learners can provide an action-plan and are keen on knowing the teacher's expectations to know what precisely they are supposed to do.

2.5.3.8 Perceiving learners

Learners, who are willing to discover and learn new things, become engaged in the decision-making process, like having fun learning and are adaptable, are called perceiving learners. These learners are innovative and prefer to do the typical tasks in a new way. Furthermore, they like doing open-ended assignments.

2.5.4 Kolb's Model

Kolb's learning style model is another system that categorizes learners into two main branches:

- Concrete experience or abstract conceptualization modes;
- Active experimentation and reflective observation modes.

In accordance with the two categories, Kolb indicates four types of learning styles (see Figure 2.2).

2.5.4.1 Diverging (concrete, reflective)

This type of students tends to ask 'why' questions a lot and will positively react to topics which are linked to their real-life experiences. Brainstorming and data collecting activities appeal to these individuals since they are creative and delicate.

2.5.4.2 Assimilator (abstract, reflective)

This type of learners tends to ask 'what' question and will confidently react when the lessons are presented in an organized and rational style. They are keen on classifying the information in a short rational sequence and employing thoughtful evaluation.

2.5.4.3 Converging (abstract, active)

This type of learners usually asks the question 'how' and clearly reacts well when an opportunity to be engaged in the learning process is given. They learn best when they

feel secure and comfortable making mistakes. These individuals are good problem-solvers and prefer to do practical activities.

2.5.4.4 Accommodator (concrete, active)

'What if' is the type of question that accommodators normally ask. They positively reflect on the lessons through which they have a chance to implement the newly learned information to solve the problems in the real-life situations. These individuals are proactive, practical, and depend on emotions rather than rationality.

Figure 2.2 demonstrates a vivid illustration of the Kolb's model.

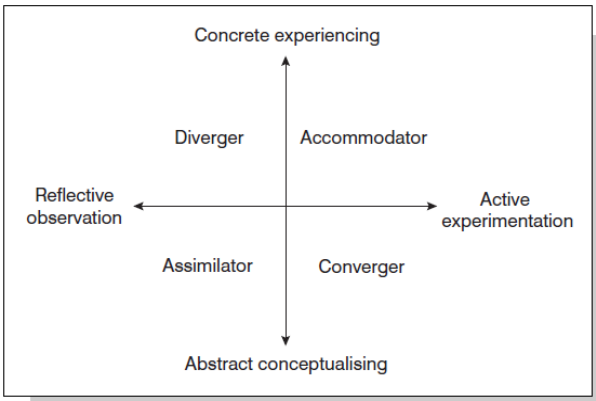

Figure 2.2: Kolb's Dimensions (Kolb, 2017)

2.5.5 Felder-Silverman model

Learning style has also been described by the Felder-Silverman Learning Style Model. It is quite similar to the classifications of other systems, however. In this model, learning styles have been categorized as **sensing**, **intuitive**, **visual**, **inductive** i.e. from specific to general, **deductive** i.e. from general to specific, **active**, **sequential** (like to follow sequences and steps), **global** (like to be given a holistic idea).

2.6 Learning Styles Dimensions

Quite a number of dimensions of learning styles developed by Keefe (1979) are considered to be important by the educators in order to enhance the learning process and the learning outcome. Those dimensions are listed as the following: field independence versus field dependence (Witkin, Oltmann,, Raskin & Karp, 1971); perceptual modality preferences (Price, Dunn & Dunn, 1978); conceptual tempo

(Kagan, 1966); levelling versus sharpening (Holzman & Klein, 1954); conceptual level (Hunt, 1977; Hunt, Butler, Noy & Rosser, 1978; Price, Dunn & Dunn, 1978); locus of control (Rotter, 1971); achievement motivation (McClelland, 1971); social motivation (Hill & Nunnery, 1973); and masculine – feminine behaviour (MacCoby & Jacklin, 1974).

2.6.1 Field Independent vs. Field Dependent

According to Keefe (1979) and Woodridge (1995), one of the dimensions of learning styles that potentially can better the learning process is the field independent versus field dependent dimension created by Herman Witkin (1962). This dimension considers the individual differences as interpersonal tendency, concentration extent, competitiveness, and the comfort with the learning atmosphere. Field independent (analytical) students prefer to analyze the new data and independently resolve the problems instead of depending on the environment, for instance. They would rather formal education and they are self-motivated, active and autonomous. Moreover, field-independent students can be described as objective, detached, competitive, and goal-oriented (Witkin et al., 1971; Witkin, Moore, Goodenough & Cox, 1977; Witkin & Goodenough, 1981).

The field-dependent students' perception is controlled by the structure of the learning environment. Those learners who are field-dependent basically are contingent on the surrounding field as external stimuli and view the teacher as an individual.

2.6.2 Perceptual modality preferences

According to Keefe (1979), perceptual modality preferences evaluate students' ideal means of comprehending and noticing information depending on the application of a specific mode of sensory. In order to notice and observe the learning setting, students can make use of various sensual means, such as visual, aural, kinaesthetic, tactile, print, interactive and olfactory.

2.6.2.1 Visual learners

Visual learners would like to conceive the learning environment through their visual sensual mode. These types of learners learn best through watching and seeing. In other words, they learn via visual stimuli best like images, pictures, videos, PPT, and etc. As for the learning style hypothesis, looking, watching, and writing down will

noticeably help a visual learner to maximize his/her learning (Dunn, 1993; Zapalska & Dabb, 2002).

2.6.2.2 Auditory learners

These students prefer to listen and learn rather than make use of their visual sensory or be engaged in a physical activity to learn. These learners are super-active listeners and good at verbal lessons like lectures since they are more likely to remember the information when it is heard (Dunn, 1993; Zapalska & Dabb, 2002).

2.6.2.3 Kinaesthetic learners

Kinaesthetic learners would be able to maximize their learning via being involved in the physical learning process. These learners love to make use of their bodies and move around and learn the new information. In fact, they learn best by doing. They are not very keen on processing information which is presented by visual and aural stimuli, however (Dunn, 1993; Zapalska & Dabb, 2002).

Wooldridge (1995) believes that within the realm of this modality, there are learners who opt to touch and feel learning new things through their hands; thus, it would be advantageous for them to do hands-on activities, such as artwork, painting, tracing words and images, drawing and taking notes. In lay term, they are keen on having their hands busy.

2.6.2.4 Print modality preference

There are numerous learners who desire to be exposed to the new information via written format. In other words, they have a deep comprehension and would rather read printed data.

2.6.2.5 Interactive modality

Learners who prefer the interactive modality acquire the information via verbal instruction. A question-and-answer session would appeal to these learners and they enjoy having discussions.

2.6.2.6 Olfactory learners

Olfactory learners learn best by integrating the smell and taste senses. Although this modality has crucial influences on the learning process, there is not enough

information about it. This type of learners learns best through linking smells to particular memories. Hence, scientific subjects like chemistry, botany, and biology are learned better by them.

2.6.3 Conceptual tempo

Individuals learn differently. Consequently, everyone perceives and processes knowledge at various rates as per their particular aptitudes. Conceptual tempo is a cognitive reflective-impulsive construct. Those students who implement impulsive are keen on working rapidly and decide swiftly. Characteristically, they hurry while working and seem thoughtless. Working at a fast pace regularly ends up in imperfectly completed tasks (Cruickshank, Metcalf & Jenkins, 2008). On the other hand, the ones who implement reflective approach tend to consider and inquire various options prior to their concluding choice. Impulsive students typically go with their first response which crosses their mind while reflective learners usually hand over rational, precise answers (Keefe, 1979).

2.6.4 Levelling vs. Sharpening cognitive style

Students are categorized into two main categories. They are categorized into sharpener and leveller based on their performance of cognitive tasks (Klein, 1951). Sharpener cognitive style learners are capable of diagnosing the gaps between stimuli and high-level of exactness. Levellers, in contrast, emphasize the similarities between stimuli rather and alterations. Unlike sharpeners, who rely only on a small number of selected past memories which lead them to an over-discrimination, levellers often opt for numerous previous experiences that simply lead them to an overgeneralization (Keefe, 1979).

The findings from Klein's research illustrate that students' cognitive style of learning significantly influences their learning outcome because of the exclusive method employed by them while obtaining the new information. Cognitive style has also been referred to as perceptual attitudes, patterns, predispositions, cognitive attitudes, modes of responses, or cognitive system principles (Gardner, Holzman, Klein, Linton, & Spence, 1959; Holzman & Klein, 1954).

2.6.5 Conceptual level

This dimension of learning style indicates the degree of structure a learner needs for an ideal learning. The conceptual level is said to be the foundation of the learning process in order to boost the quality of education (Hunt, 1977). Research shows that learners with high conceptual level react differently rather than those of low conceptual level when two types of different data are presented. The latter ones are more influenced by what they have experienced. On the other hand, the high conceptual level learners exhibit better accuracy in their own conception (Hunt, 1971; Hunt et al., 1978). Some other elements concerning conceptual level can be listed as the learners' ability to go through learning process with no or very little guardianship of the teacher, accountability, and the essential structure (Keefe, 1979).

2.6.6 Locus of control

What locus of control has to do with is the dissimilarities in learners' views that end up in particular social-interactive consequences. This learning style dimension depends on a range of internal and external locus of control. Individuals who hold internal locus of control take the responsibility for their own manners while the other type put the responsibility on external factors, such as environment, luck or other people (Keefe, 1979).

This dimension of learning style has been believed to influence the learners' accomplishment (Rotter, 1971). Learners with internal control are said to achieve higher results and do better specially in exam situations comparing to those of external locus of control. Additionally, it is closely attached to the performances of the students who come from different economic backgrounds. Students who come from a low socioeconomic setting see the external factors responsible for their eventual achievement or break-down. However, those who come from high socioeconomic backgrounds consider themselves as responsible ones for the result of their actions.

2.6.7 Achievement motivation

A hypothesis associated with achievement motivation and educational perceptions is developed by David (1961). He argues that the main purpose of doing activities and participating in the learning process for the learners who have high achievement

motivation is to accomplish their goals not merely being praised or getting a prize in return. These individuals always set achievable goals. Before executing any plans, they evaluate the probability of their capability to succeed. They will only act to accomplish their goals when they are certain enough about their lucrative performance. They will never stop and set more attainable and rational goals (Keefe, 1979).

2.6.8 Social motivation

Social motivation evaluates the viewpoints, attitudes, and social communications of individuals. This dimension is based on cultural values and students are influenced by several elements, such as social classes, culture, criteria and prospects of other individuals. Opinions will be reinforced by communicating with people of the same mindsets and fragile through communicating with people of different mentalities (Keefe, 1979).

2.6.9 Masculine-Feminine behaviour

The last dimension in the list intends to illuminate the contrasts between the men and women brain performance reactions. Many studies indicate that there are distinctions in performances that are related to sex. For instance, men are more violent than women. Furthermore, they would rather deductive reasoning though women like inductive reasoning the best (Keefe, 1979).

2.7 Learning Styles and Multiple Intelligences

Much research has been done about the nature of intelligence. Spearman (1927) is the first to claim that the general intelligence is supplemented by specific abilities. He states this is the reason behind the variation in performance of people on different tasks.

Intelligence is characterized by Lumpers as a general, cohesive ability to gain information, reasoning and problem solving (Weinberg 1989). For example, Galton first suggests that individuals have a general intellectual ability which he calls the "g" factor. This ability can be demonstrated in various ways, including navigating without a compass, programming a computer. Gardner (1983) feels “Intelligence is the ability to create an effective product or offer a service that is valued in a culture;

a set of skills that make it possible for a person to solve problems in life; the potential for finding or creating solutions for problems, which involves gathering new knowledge" (p.83).

According to Lewis Terman, who has designed the first standardized intelligence test, human intelligence is our ability to think about abstract ideas. However, Edwin Boring, a famous psychologist, states that intelligence is the product of the intelligence test.

Although the researchers have mentioned above are very qualified, the definition of human intelligence by Howard Gardner (1983), who is considered the father of multiple intelligence, offers greater clarification. He says intelligence is the ability to do something useful and appreciated in society, the ability to adapt effectively to new situations and learn from past experiences, and the ability to solve problems encountered in life.

Gardner (1983), a Harvard University psychologist and neuroscience professor, develops the theory of multiple intelligences (MI). In the areas of learning and cognitive science, the idea questions traditional beliefs. Unlike the existing intelligence perception - people are born with a standardized cognitive ability that can be easily measured through short-response tests. MI reconsiders our last century learning approach and provides an alternative. Human beings have eight different types of intelligence, according to Howard Gardner, that reflect different ways of interacting with the world. Every human being has his/ her own profile of MI although people can have all eight intelligences. No two persons have them in the same configuration.

2.7.1 The multiple intelligences

Howard Gardner was the psychologist who put forward the theory of multiple intelligences as it is in today's education. Eight types of intelligence exist: linguistic, musical, spatial, logical/mathematical, kinaesthetic, interpersonal, intrapersonal and naturalistic.

2.7.1.1 Linguistic intelligence

Linguistic intelligence enables people to communicate through language and make sense of the world. Students having linguistic intelligence are great at language. They

can hear words' sounds and rhythms and language is loved by them whether it is speaking, reading or writing. These are the world's future authors, poets, journalists and public speakers.

2.7.1.2 Musical intelligence

Musical intelligence enables people to create, communicate and understand sound-based meanings. Students with musical intelligence are the ones who keep humming a tune or drumming on the desk. They hear music in everything and enjoy producing music in any way they can. These are the world's future musicians, symphony conductors, composers and producers.

2.7.1.3 Logical-mathematical intelligence

Students with mathematical intelligence are the number whiz kids. It allows them to use and appreciate abstract relations. They can easily pick up the patterns and long reasoning chains needed to be successful in math or logic puzzles. They are the future mathematicians, scientists, engineers and philosophers of the world.

2.7.1.4 Visual / spatial intelligence

People with visual intelligence can perceive visual or spatial information, and then transform it. In addition, visual intelligence helps people to recreate visual images from memory. Students who focus on pictures, charts and graphs in their books, who like to arrange their ideas before they start writing a paper, and who fill the blanks in their notes with pattern can also use their spatial intelligence. While usually linked to the visual modality, individuals with visual impairment can also exercise spatial intelligence to a high level. People with visual intelligence are the future sculptors, tour guides, architects, engineers and navigators of the world.

2.7.1.5 Kinaesthetic intelligence

People with kinaesthetic intelligence use all or part of their bodies to create products or solve problems like dancers, choreographers, surgeons, athletes and crafts people. The ability is also evident in students who love physical education and school dances, who prefer to do school projects by making models instead of writing reports.

2.7.1.6 Interpersonal intelligence

Interpersonal intelligence helps students to distinguish between their own feelings, build accurate mental models of themselves, and make decisions about their lives based on these models. They understand other people and before you notice it yourself, they can pick up on your mood. They understand why people act the way they do. These are the world's future teachers, therapists, and salesmen.

2.7.1.7 Intrapersonal intelligence

Students with intrapersonal intelligence might be called introverts. Such students tend to shy away from others. They know deeply who they are and who they want to be. The best ways to teach them are independent study and introspection by using tools like books, creative materials, diaries, privacy and time. They are in harmony with their inner feelings; they have wisdom, intuition and motivation, strong will, confidence and opinions. These students are the future philosophers and writers of the world.

2.7.1.8 Naturalist intelligence

Students with naturalist intelligence are the ones who keep their plants alive in the classroom. Naturalists have an inherent relationship with plants and animals and understand nature's balance. These are the world's future farmers, hunters, and landscapers.

2.7.2 Problems related to learning styles and multiple intelligence

Problems might arise for teachers if they try to explain things in a way, they think everybody can understand. In this case, some of their students will have difficulty in understanding what they are being taught, so students with different temperament especially the ones having different learning styles from their teacher are likely to have the greatest difficulty.

It is highly important that both teachers and students be aware of the potential problems that might be caused because of the differences in learning styles preferences. That’s why, they should, particularly teachers, be fully aware that students learn in different ways and behave in different ways. The knowledge of these differences can also benefit parents, as it can affect the approaches they might take when supporting the school work of their children at home.

So, what is important about learning styles, from the point of view of the teacher, is not to be concerned with the number of the listed styles, nor how they are labelled but to raise the awareness in both teachers and learners that people learn in different ways, and that different styles of learning present needs that should be met if teaching is to be effective and learning to take place.

Bandler and Grindler (1979) suggest that 70 per cent of learners are able to cope when a lesson is presented; however, for reasons largely unrelated to learning style, 10 per cent will not be able to learn whatever method is used; but the rest can only learn in a visual, auditory or kinaesthetic way.

A summary of a set of notes found in the psychology department website of Glasgow University questioning what we have to do with what we learnt about individual learning styles; should teachers adapt to learners, or learners to teachers? The answer to this question is 'both'; the integral point of view is that teachers should adapt to the broadest audience possible more than to individuals; to make their material reach the most people (Draper, 2004). From this perspective, therefore, the responsibility lies on both teacher and learner. However, as it is a teacher's primary role to facilitate and encourage learning for the students, it is quite clear that the teacher has the real responsibility to accommodate. Of course, some accommodation on the side of the learner is also required.

2.8 Qualities of a Good Language Learner

Mastering a foreign language successfully can be a challenging task. For most learners it takes an "investment' of time, effort, and attention" (Brown, 2001, p. 60). It can be a hard task with little results for some. However, some people seem to be able to easily pick up languages. There are obviously reasons for this discrepancy, many of which lie within the learners of the language themselves.

There is a great variation among language learners and they "reflect a range of motivations, cultures, beliefs, learning strategies, styles, and goals. They also differ in age, aptitude, gender and personality" (Cotterall, 2008:119). Studies conducted by researchers and teacher trainers have tried to link the degree of success in learning a foreign language with many of these individual features in an attempt to determine what makes a 'good language learner'. By understanding the various qualities of

good language learners, instructors can "tailor their instruction" (Yamamori, Isoda, Hiromori & Oxford, 2003:404) to make it possible for students to make the most of their learning experience.

2.8.1 Characteristics of a good language learner

Many lists and explanations of successful language learners' characteristics have been compiled over the years (Rubin, 1975; Naiman, Frohlich, Stern & Todesco, 1996; Nunan, 1995; Brown, 2000; Brown, 2001). Brown (2001) states the "characteristics of good language learners are based on the teachers and learners' own observations" (p. 208). Therefore, the lists vary and it is not possible to say that all successful learners will have the same characteristics.

A good language learner has some of these 13 characteristics according to Rubin and Thompson (1983).

1. Good learners find their own way.
2. Good learners organize information about language.
3. Good learners are creative and experiment with language.
4. Good learners make their own opportunities, and find strategies for getting practice in using the language inside and outside the classroom.
5. Good learners learn to live with uncertainty and develop strategies for making sense of the target language without wanting to understand every word.
6. Good learners use mnemonics (rhymes, word associations, etc. to recall what has been learned).
7. Good learners make errors work.
8. Good learners use linguistic knowledge, including knowledge of their first language in mastering a second language.
9. Good learners let the context (extra-linguistic knowledge and knowledge of the world) help them in comprehension.
10. Good learners learn to make intelligent guesses.
11. Good learners learn chunks of language as wholes and formalized routines to help them perform 'beyond their competence.'
12. Good learners learn production techniques (e.g. techniques for keeping a conversation going).
13. Good learners learn different styles of speech and writing and learn to vary their language according to the formality of the situation.

Figure 2.3: Characteristics of Good Language Learners Rubin & Thompson (1983)

Oxford and Brown agree that it is important for students to take risks, be motivated, use their previous scheme, have strong strategies in place and be able to live with uncertainty (Oxford, 1990; Brown, 2000).

According to McDonough and Shaw (2003), "Success is thought to be based on such factors as 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" (p. 56).

Another list is made by Lightbown and Spada (1997). They think that learners should have high intelligence, good academic skills, and enjoy the learning process. They suggest that if learners had good skills and were able to learn other subjects, then they could apply the same skills to learning a language (e.g. looking for patterns, etc.).

Lightbown and Spada's Characteristics of a 'Good Language Learner'{1997}

1. Good learners are willing and accurate guessers.
2. Good learners are willing to make mistakes.
3. Good learners try to communicate even without language.
4. Good learners look for patterns.
5. Good learners practise whenever possible.
6. Good learners analyse their own speech.
7. Good learners pay attention to their own standards.
8. Good learners enjoy grammar.
9. Good learners begin learning in childhood.
10. Good learners have above average IQs.
11. Good learners have good academic skills.
12. Good learners have good self-image and self-confidence.

Figure 2.4: Adapted from: Lightbown and Spada (1997, p.34)

The list made by Tricia Hedge (2000) focuses on 'self-directed learners'. She believes that learners with good strategies and autonomous skills will probably be more successful than learners who rely on the teacher for everything and who follow blindly without trying to process the information and make it their own (Hedge,

2000). Being self-directed means learners are motivated to learn and willing to do everything they need to accomplish the task.

Tricia Hedge's Characteristics of a 'Self-Directed Learner' {2000}

1. Self-Directed learners know their needs and work productively with the teacher towards achieving their objectives
2. Self-directed learners know how to use resources independently
3. Self-directed learners learn both inside and outside the classroom
4. Self-directed learners adjust their learning strategies as needed
5. Self-directed learners manage and divide the time in learning properly
6. Self-directed learners learn with active thinking
7. Self-directed learners don't think the teacher is a god who can give them

Figure 2.5: Characteristics of a self-directed learner (Hedge and Tricia, 2000:70).

Holden (2002) states "Autonomous learners are both cognitively and meta-cognitively aware of their role in the learning process, seek to create their own opportunities to learn, monitor their learning, and attempt actively to manage their learning in and out of the classroom" (p. 18).

2.9 Autonomous Learning

According to Richards (2019), students must take responsibility for what they study and their learning progress. Since learning is based on the learner's preference, it is believed that autonomous learning is personal and accomplishes improved learning results. Unlike the classic approaches in which the teacher makes most decisions and therefore, the teacher is the centre of the learning process. However, in order to achieve autonomous learning, Bensons (2001) suggests some different learning principles:

- The student must be active in the learning process,
- Variety of resources and activities,
- The teacher must give the students the opportunity to choose and make decisions.
- The learners have to feel supported and encouraged by the teacher.

Classes that encourage autonomous learning involve the following:

- The teacher turns into a facilitator rather than an instructor.
- Students don't depend on the teacher to get their knowledge.
- Students become the centre of their own learning progress.
- Students get to know their own learning styles
- Students are motivated to develop their learning strategies.

Holec defines autonomy as "the ability to take charge of one's learning" (Holec, 1981) Autonomy in language study is a suitable aim for philosophical and pedagogical facts, but what is overloaded is the teacher's role. Teachers can imagine autonomous learning as an infant who depends on his/her mother to grow up. The same can be applied to autonomous learning where teachers help their students through different strategies and techniques to develop their autonomy. However, autonomous learning should not be viewed as a process in which the teacher is less involved, but it can be seen as a process of learning in which students are freer to get access to their learning progress.

As Thanasoulas (2000) proclaims, it wouldn't be absurd to declare that students come into the studying situation with the understanding and abilities to plan, monitor, and consider their learning, or to make choices about content or material and objectives.

Hill (1991) also states that autonomy is the "base of our humanity and modality" (p. 43). This takes researchers to the point that autonomy is the crucial aim of learning. It can be seen that autonomy does not only mean one thing; it has a different definition to each individual. Nevertheless, Hill (1991) claims "Little progress can be made in debates about autonomy until these different ideas are sorted out." (p. 44).

Learner autonomy is defined in different ways. For example, 'learner independence' and 'self-direction' are used to define similar perceptions. Autonomy can also be defined in the student's own role in learning in the learning process. On the other hand, students who follow this path are free to choose and make decisions about how they want to learn which is an idea that is opposed by traditionalists because they believe that teachers are not taking control over their own class as instructors. However, in language learning, it is complicated because there must be techniques employed by the teacher which will help students become aware of their skills.

Therefore they are unable to develop them (Ustunlouglu, 2009). As this is a concern and a problem, many research studies including (Rivers, 1992; Brindley, 1990) focus on improving this issue by suggesting ideas. One side of this study is autonomy which is defined as the learner's awareness of their learning process, as presented by Brindley (1990).

According to a report entitled Autonomy in Foreign Language Learning prepared by Holec (1981) for the Council of Europe, he claims that students must have the chance to direct their own learning process, which means that they can choose how they want to learn. On the other hand, Fener and Newby (2000); Benson (1997) see learner autonomy from a constructivist point of view. They say that each person creates his/her own world based on his/her own experiences, and learning is a process of creating and constructing meaning, and in order to succeed in learning, the student must be allowed to construct that kind of meaning and not repeating the teacher's own experience and meaning. In formal learning environment, students are allowed to create their meaning and learning space when they make decisions based on some rules like the pace, sequence, the type of instruction given by the teacher and the topic itself. Learning that way becomes more purposeful, effective and therefore, it holds better results in the long term. (Little, 1991, p.8). According to Benson, "the key idea that autonomy in language learning has borrowed from constructivism is the idea that effective learning is active learning" (Benson, 2001, p. 40).

Students must be aware of all that because they cannot make the right decisions if they are not aware of their responsibility. In other words, learning autonomy shows how independent a learner can be. However, learner independence is based on how much they depend on each other in a society. According to Little (1991), autonomy is mainly a "capacity-for detachment, critical reflection, decision-making and an independent action" (p.4).

According to (Benson and Voller, 1997) autonomy is used in five different ways:

- Circumstances where students learn on their own.
- A measurement of students' dependency which is suppressed by classic instructors.
- A group of skills that are learned in self-directed learning.
- The right of students to make their own decision about how they should learn.

- The responsibility of the learner's own learning process (p.2).

As can be seen, all five definitions have one thing in common, which is the learner's involvement in his/her learning. Learners bring their backgrounds and beliefs to their learning process. In this case, students are able to use the target language even outside the class which makes learning not only a set of rules that needs to be memorized but also a continuous process even outside the class. This also improves learning because according to Little (1991), when students have goals and are involved, they get to have a meta-cognitive awareness which helps learners to find their weaknesses and try to find ways to overcome those weaknesses.

3. METHODOLOGY

3.1 Introduction

This chapter sheds light on the methodology of the current research. It presents the research design, the setting the participants in addition to the procedures used in data collection and analysis.

3.2 Research Design

Research design refers to the way a study is planned and conducted and it involves the procedures and techniques employed to answer the research problem or question (McMillan & Schumacher, 1984). Quantitative research methods are employed to collect the data from students. In quantitative research methods, numerical data is undeniably the basis for obtaining statistical results at the end of the analysis process. According to Leedy (1993), quantitative research methods are defined as research methods which deal with numbers as well as anything that can be measured. Hunter, Laura and Leahey (2008) claim that the objective of quantitative method in research is to develop and employ mathematical models, theories and hypotheses on the phenomena. Among the quantitative research tools, a questionnaire was employed in the current study.

3.3 Setting

The study was conducted at a preparatory school of a university and an academy in the 2019 – 2020 academic year. The first location was English Prep. School at Istanbul Aydin University and the other one was English Prep. School for international students at ABC Horizon Academy. They are both located in Istanbul, Turkey and students at these schools take an intensive English course at all levels and have to pass a TOEFL test at the end of the programme.

3.4 Participants of the Study

The participants of the current study were a total of 111 students, consisting of both male and female students at two preparatory schools. Purposive sampling strategy was used when choosing the participants of the study. Purposive sampling strategy is

defined as “a series of strategic choices about with whom, where, and how one does one’s research.” These words have two indications. Firstly, the researchers should connect their aims to the sample. A second indication is generated from the first. That is, any sampling strategy cannot be considered to be the most successful, because the issue is connected with the study’s setting as well as its purpose (Palys, 2008:697).

3.5 Data Collection Instrument

The data of the current study were gathered through the use of a Likert scale developed by Richards (1996) (see Appendix B). This Likert scale was conducted by Richards to measure the relationship between learning styles and student achievement. The Likert scale was made up of 2 sections. The first section of the Likert scale included 7 items to collect demographic data about the participants of the study. These items focused on the participants’ gender, age, nationality, level of English, duration of studying English, purpose of studying English and the languages they speak. The aim of the second section of the Likert scale was to identify the learning style preferences of students learning English as a foreign language in relation to their nationalities, gender, age and level of English. To achieve this aim, the participants were provided with 30 items including learning style preferences based on a 5-point Likert scale. The response options included strongly agree, agree, undecided, disagree and strongly disagree. It was an English-medium Likert scale.

3.6 Data Collection Procedures

The first step to take in data collection procedure was to choose a suitable Likert scale on learning styles which has been conducted at tertiary level. It was an appropriate questionnaire which aimed to identify learners’ favoured learning styles. The data collection process began having received the approval letter from the Social Sciences Institute of İstanbul Aydin University (see Appendix A). Before meeting the students at the prep schools of the two locations, the schedule for data collection was arranged with the heads of the departments. The data collection was carried out by sending the questionnaire to the students using google form tool. Before they filled in the Likert scale, they were informed about its purpose. They spent about fifteen minutes completing the Likert scale. Consequently, the data collection

procedure was smooth and efficient because all the items were clear enough for the participants to understand.

3.7 Data Analysis

The questionnaire which consisted of 30 questions aimed to identify 6 learning styles. 5 statements are put in jumbled order randomly to measure every learning style. To get an accurate analysis, the responses of each participant were categorised into 6 learning styles; visual, auditory, kinaesthetic, tactile, group and individual. The transformation was carried out using the metrics prepared by Jack Richards the author of the questionnaire (see Appendix C). The quantitative data gathered from the questionnaire were analysed through the statistical package for social sciences, version 19 (SPSS. V19). The results of the SPSS were shown on tables. The data were presented as a frequency and percentage.

4. RESULTS

4.1 Introduction

This chapter presents the findings of the study beginning with the demographic characteristics of the sampled student population followed by the presentation of the study findings in 4 sections: findings on major and minor learning style preferences of Arabs and Turkish students (section 4.5), findings on the relationship between learning style preferences and gender (section 4.6), findings on the relationship between learning style preferences and age (section 4.7), findings on the relationship between learning style preferences and English level (section 4.8).

4.2 Students' Profile

The research findings presented here are based on a sample population of 111 students who participated in this study.

4.2.1 Genders of students

In terms of gender, Figure 4.1 reveals the gender distribution of the participants of the study. It shows that the majority of the respondents were males 58 (52.3 %) while 53 (47.7%) of the respondents were females.

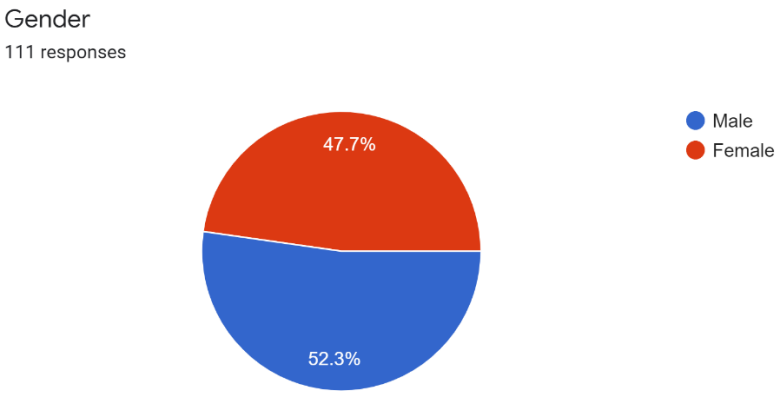

Figure 4.1: Gender Distribution of the Participants

4.2.2 Ages of students

In terms of age, Figure 4.2 reveals the age distribution of the participants of the study: 18 (16.2 %) of the respondents under the age of 18 years old, 69 (62.2 %) of the respondents between 18 and 22 years old and 24 (21.6 %) of the respondents over 22 years old.

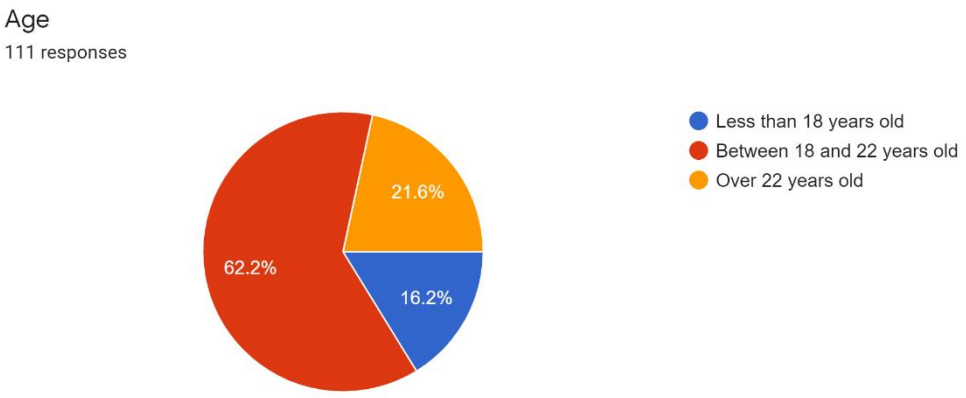

Figure 4.2: Age

4.2.3 Nationalities of the students

In terms of nationality, 50 of the participants were Turkish while 61 students were Arab. The nationalities of the participants were Algerian, Egyptian, Iraqi, Jordanian, Libyan, Moroccan, Sudani, Syrian, Tunisian and Turkish. Figure 4.3 presents the data about the nationalities of the participants who participated in the questionnaire.

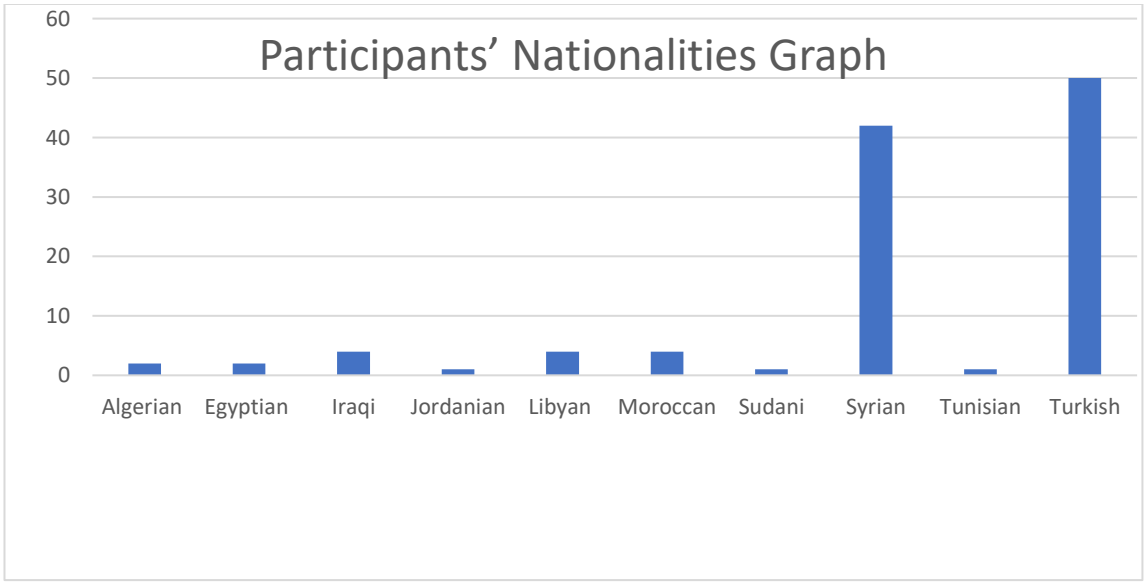

Figure 4.3: Participants' Nationalities Graph

4.2.4 Level of English of the students

Students' levels of English were categorized according to CEFR scale. Students who participated in this research are at a variety of levels. This can be seen in Figure 4.4, which indicates participants' levels of English: 15 (13.5 %) of the participants at elementary level, 30 (27 %) of the participants at pre-intermediate level, 44 (39.6 %) of the participants at intermediate level, 18 (16.2 %) of the participants at upper-intermediate level, 4 (3.6 %) of the participants at advanced level.

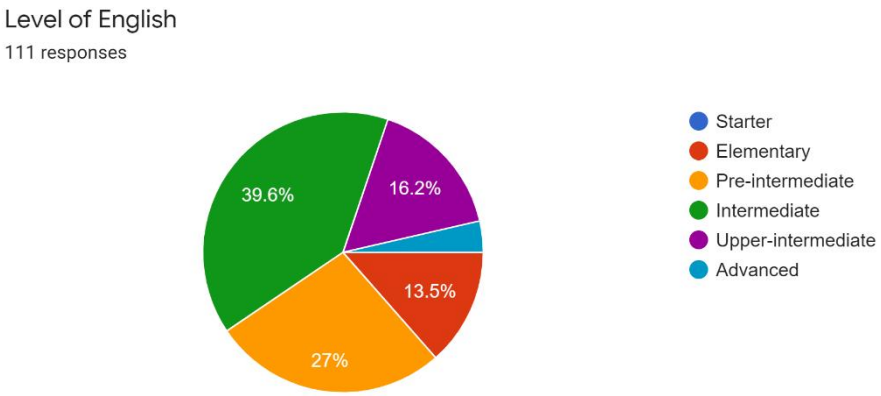

Figure 4.4: Participants' Levels of English Graph

4.3 Reliability

Reliability is a measure of the degree to which a research instrument yields consistent results or data. Each time it is used under the same condition, it is expected to give nearly the same results (Mugenda & Mugenda, 2003).

4.3.1 Split half reliability

Table 4.1: Reliability Statistics

Cronbach's Alpha	**Part 1**	**Value**	**.592**
		N of Items	15a
	Part 2	Value	.619
		N of Items	15b
	Total N of Items		30
Correlation Between Forms			.651
Spearman-Brown Coefficient	Equal Length		.789
	Unequal Length		.789
Guttman Split-Half Coefficient			.788

Table 4.2: Scale Statistics

	Mean	Variance	Std. Deviation	N of Items
Part 1	55.03	37.390	6.115	15a
Part 2	55.81	32.973	5.742	15b
Both Parts	110.84	116.083	10.774	30

In this model, the scale has been divided into two parts, one of which contains 15 items. Then, the correction between these two parts is examined by using Spearman-Brown Coefficient.

Spearman-Brown Coefficient = $\frac{2r}{1+r}$ = 0.789

Guttman Split-Half Coefficient is ccalculated by using this Equation

$$۲\left(۱-\frac{\sigma_{۱}^{۲}+\sigma_{۲}^{۲}}{\sigma^{۲}}\right)$$

The result is 0.788, which is a good stability ratio.

4.3.2 Reliability analysis cronbach's alpha

Table 4.3: Reliability Statistics

Cronbach's Alpha	N of Items
.761	30

Cronbach's Alpha is calculated and the result is 0.761, which is considered a good stability ratio.

Table 4.4: Cronbach's Alpha if Item Deleted

Item-Total Statistics				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
Q 1	106.69	112.651	.169	.760
Q 2	106.68	107.600	.431	.748
Q 3	107.18	107.913	.321	.752
Q 4	107.11	107.661	.362	.750
Q 5	107.35	103.448	.585	.739
Q 6	107.14	107.943	.333	.752
Q 7	106.96	110.762	.208	.758
Q 8	106.62	109.292	.418	.750
Q 9	106.93	108.013	.323	.752
Q 10	106.95	108.633	.429	.749
Q 11	106.86	108.197	.416	.749
Q 12	106.95	109.943	.321	.753
Q 13	107.18	111.640	.130	.764
Q 14	107.17	103.907	.499	.742
Q 15	106.65	109.848	.387	.752
Q 16	107.59	107.536	.316	.753
Q 17	107.32	114.930	-.016-	.774
Q 18	107.32	113.330	.069	.766
Q 19	107.14	103.627	.507	.741
Q 20	107.12	110.577	.284	.755
Q 21	107.22	105.407	.402	.747
Q 22	106.92	109.512	.322	.753
Q 23	107.32	106.254	.358	.750
Q 24	107.65	111.248	.147	.763
Q 25	107.39	104.712	.420	.746
Q 26	106.95	109.433	.378	.751
Q 27	107.68	116.621	-.077-	.777
Q 28	107.28	112.858	.082	.766
Q 29	107.68	113.436	.062	.767
Q 30	107.32	114.018	.035	.769

This table shows Cronbach's Alpha if the item is deleted. Some items can be deleted so the value of Cronbach's Alpha gets higher. We can notice that the deletion of statements (13, 17, 19, 24, 27, 28, 29, 30) can increase the value of Cronbach's Alpha, but since the increase is so slight, they can be kept.

4.4 Mean, standard deviation and percentage values of each item

Table 4.5: Mean of (Average, Standard Deviation and Percentage) for each Item

Item	Mean	Standard Deviation	Percentage	Rank	Degree
1	4.14	0.78	82.88	4	High
2	4.15	0.87	83.06	3	High
3	3.66	1.06	73.15	15	High
4	3.73	0.99	74.59	10	High
5	3.49	0.98	69.73	20	Med
6	3.69	1.03	73.87	13	High
7	3.87	0.99	77.48	9	High
8	4.22	0.72	84.32	1	High
9	3.91	1.04	78.20	7	High
10	3.89	0.77	77.84	8	High
11	3.98	0.83	79.64	5	High
12	3.89	0.81	77.84	8	High
13	3.66	1.14	73.15	15	High
14	3.67	1.08	73.33	14	High
15	4.19	0.71	83.78	2	High
16	3.25	1.12	65.05	22	Med
17	3.51	1.26	70.27	19	High
18	3.51	1.08	70.27	19	High
19	3.70	1.09	74.05	12	High
20	3.72	0.81	74.41	11	High
21	3.62	1.14	72.43	16	High
22	3.92	0.86	78.38	6	High
23	3.52	1.15	70.45	18	High
24	3.19	1.14	63.78	23	Med
25	3.45	1.17	69.01	21	Med
26	3.89	0.77	77.84	8	High
27	3.16	1.23	63.24	24	Med
28	3.56	1.13	71.17	17	High
29	3.15	1.10	63.06	25	Med
30	3.52	1.11	70.45	18	High

As seen in Table 4.5, (Item 8) is the strongest item and then comes (Item15), while (Item 29) is the weakest one.

4.5 Findings on Major and Minor Learning Style Preferences of Arabs and Turkish Students

The respondents were asked to express their degree of agreement with 30 items listed in the Likert scale so that their responses to numbers could be transferred to be able to reformulate their learning style preferences. This was conducted by using the

transformation metric prepared by the author of the Likert scale. In the Likert scale, there were six learning styles to be measured and each response of a respondent was given a numerical value as follows: Strongly agree = 5, Agree = 4, Undecided = 3, Disagree = 2, Strongly disagree = 1. The total of the responses was collected for every individual for the six learning styles and then it was multiplied by 2. The score ranged between 0 and 50. Between 25 and 37 it was considered minor learning style preference while between 38 and 50 it was considered major learning style preference.

4.5.1 Learning style preferences of Arab undergraduates studying EFL

Table 4.6 below shows the results of the Arab participants' learning style preferences.

Table 4.6: Arab Participants' Learning Style Preferences

Visual	**Mean**	**Standard Deviation**	**Auditory**	**Mean**	**Standard Deviation**
q 6	3.85	1.01	q1	4.1	0.7
q 10	3.9	0.83	q 7	4.08	0.92
q 12	3.84	0.88	q 9	3.85	1.15
q 24	3.41	1.19	q 17	3.08	1.41
q 29	3.25	1.14	q 20	3.87	0.81
sum	18.25	5.05	sum	18.98	4.98
Sum*2	36.49	10.09	Sum*2	37.97	9.96
Kinaesthetic	**Mean**	**Standard Deviation**	**Tactile**	**Mean**	**Standard Deviation**
q2	4.11	0.91	q 11	4.08	0.78
q8	4.3	0.64	q 14	3.9	0.98
q15	4.13	0.67	q 16	3.26	1.18
q19	3.79	1.02	q 22	3.95	0.74
q26	4	0.73	q 25	3.8	1.06
sum	20.33	3.98	sum	19	4.74
Sum*2	40.66	7.95	Sum*2	38	9.49
Group	**Mean**	**Standard Deviation**	**Individual**	**Mean**	**Standard Deviation**
q 3	4.02	0.97	q 13	3.39	1.24
q 4	3.98	0.92	q 18	3.26	1.14
q 5	3.75	0.96	q 27	3.13	1.35
q 21	3.75	1.06	q 28	3.36	1.2
q 23	3.93	1.01	q 30	3.21	1.18
sum	19.44	4.93	sum	16.36	6.11
Sum*2	38.89	9.86	Sum*2	32.72	12.22

As can be seen, Arab students' learning style preferences were divided into 3 major learning style preferences and 3 minor learning style preferences. The most preferred learning style of Arab undergraduate students was kinaesthetic (40.66), Group learning style came next in the order of the most preferred learning styles (38.89), then Tactile (38). The three minor learning style preferences came in the following order; Auditory (37.97), Visual (36.49) and the least preferred learning style was Individual (32.72).

4.5.2 Learning style preferences of Turkish undergraduates studying EFL

Table 4.7 below shows the results of the Turkish participants' learning style preferences.

Table 4.7: Turkish Participants' Learning Style Preferences

Visual	**Mean**	**Standard Deviation**	**Auditory**	**Mean**	**Standard Deviation**
q 6	3.5	1.02	q1	4.2	0.88
q 10	3.88	0.69	q 7	3.62	1.03
q 12	3.96	0.73	q 9	3.98	0.89
q 24	2.92	1.03	q 17	4.04	0.81
q 29	3.04	1.05	q 20	3.54	0.79
sum	17.3	4.51	sum	19.38	4.4
Sum*2	34.6	9.02	Sum*2	38.76	8.79
Kinaesthetic	**Mean**	**Standard Deviation**	**Tactile**	**Mean**	**Standard Deviation**
q2	4.2	0.81	q 11	3.86	0.88
q8	4.12	0.8	q 14	3.38	1.14
q15	4.26	0.75	q 16	3.24	1.04
q19	3.6	1.18	q 22	3.88	1
q26	3.76	0.8	q 25	3.02	1.15
sum	19.94	4.33	sum	17.38	5.22
Sum*2	39.88	8.67	Sum*2	34.76	10.43
Group	**Mean**	**Standard Deviation**	**Individual**	**Mean**	**Standard Deviation**
q 3	3.22	1.00	q 13	3.98	0.91
q 4	3.42	0.99	q 18	3.82	0.92
q 5	3.16	0.91	q 27	3.2	1.07
q 21	3.46	1.22	q 28	3.8	0.99
q 23	3.02	1.12	q 30	3.9	0.89
sum	16.28	5.23	sum	18.7	4.78
Sum*2	32.56	10.46	Sum*2	37.4	9.56

As it is seen in Table 8, Turkish students' learning style preferences were divided into 2 major learning style preferences and 4 minor ones. The most preferred learning style of Turkish undergraduate students was kinaesthetic (39.88). Auditory learning style came next in the order of the most preferred learning styles (38.76). The four minor learning style preferences came in the following order; individual (37.4), tactile (34.76), visual (34.6) and the least preferred learning style was group (32.56).

4.6 Findings on Learning Style Preferences According to Gender

Learning style preferences were examined from the gender perspective and the result showed that there was no big difference between learning style preferences and gender. The results were very close in Visual (Female = 35.59 vs. Male = 35.7) both males and females' results were in the minor learning style preferences, Auditory (Female = 38.41 vs. Male = 38.23) both males and females' results were in the major learning style preferences, Kinaesthetic (Female = 41.07 vs. Male = 39.47) both males and females' results were in the major learning style preferences, Individual (Female = 34 vs. Male = 35.74) both males and females' results were in the minor learning style preferences, but for Tactile (Female = 38.14 vs. Male = 34.79), and Group (Female = 38.28 vs. Male = 33.58) females' results were in the major learning style preferences; however, males' results were in the minor learning style preferences.

ANOVA and inferential analysis were carried out. In ANOVA and inferential analysis – Chi-square, if the significance (Sig) was smaller than 0.05. This indicated that there was a statistically significant relationship between the two **valuables,** but if the significance was bigger than **0.05**, which showed that there was no statistically significant relationship between the two valuables.

ANOVA and inferential analysis (Pearson Chi-Square, Likelihood Ratio, Linear-by-Linear Association) showed that there was only a statistically significant relationship between group and individual learning styles and gender.

Table 4.8: Learning Style Preferences According to Gender

Visual	**Female**	**Standard Deviation**	**Male**	**Standard Deviation**
q 6	3.57	0.87	3.83	1.14
q 10	3.86	0.76	3.92	0.78
q 12	3.88	0.74	3.91	0.88
q 24	3.28	1.11	3.09	1.17
q 29	3.21	1.08	3.09	1.12
sum	17.79	4.56	17.85	5.09
Sum*2	35.59	9.12	35.7	10.18
Auditory	Female	Standard Deviation	Male	Standard Deviation
q1	4.16	0.79	4.13	0.79
q 7	3.95	0.95	3.79	1.03
q 9	3.78	0.99	4.06	1.08
q 17	3.43	1.2	3.6	1.33
q 20	3.9	0.85	3.53	0.74
sum	19.21	4.77	19.11	4.97
Sum*2	38.41	9.53	38.23	9.94
Kinaesthetic	Female	Standard Deviation	Male	Standard Deviation
q2	4.17	0.81	4.13	0.92
q8	4.19	0.76	4.25	0.69
q15	4.29	0.81	4.08	0.59
q19	3.91	1.07	3.47	1.08
q26	3.97	0.83	3.81	0.7
sum	20.53	4.27	19.74	3.98
Sum*2	41.07	8.54	39.47	7.96
Tactile	Female	Standard Deviation	Male	Standard Deviation
q 11	4	0.9	3.96	0.77
q 14	3.91	1.1	3.4	1.01
q 16	3.34	1.1	3.15	1.13
q 22	4.03	0.97	3.79	0.75
q 25	3.78	1.2	3.09	1.04
sum	19.07	5.26	17.4	4.71
Sum*2	38.14	10.52	34.79	9.42

Table 4.8 (con.): Learning Style Preferences According to Gender

Group	**Female**	**Standard Deviation**	**Male**	**Standard Deviation**
q 3	3.91	1.08	3.38	0.98
q 4	3.93	1.05	3.51	0.9
q 5	3.67	0.95	3.28	0.98
q 21	3.74	1.28	3.49	0.98
q 23	3.88	1.26	3.13	0.92
sum	19.14	5.61	16.79	4.76
Sum*2	38.28	11.22	33.58	9.51
Individual	Female	Standard Deviation	Male	Standard Deviation
q 13	3.36	1.01	3.98	1.18
q 18	3.38	1.02	3.66	1.12
q 27	3.22	1.2	3.09	1.26
q 28	3.55	1.1	3.57	1.16
q 30	3.48	1.03	3.57	1.19
sum	17	5.35	17.87	5.9
Sum*2	34	10.71	35.74	11.81

Table 4.9: ANOVA between Gender and Learning Style

		ANOVA (Analysis of Variance)				
		Sum of Squares	**DF**	**Mean Square**	**F**	**Sig.**
Visual	Between Groups	.983	1	.983	2.839	.095
	Within Groups	37.752	109	.346		
	Total	38.736	110			
Auditory	Between Groups	.173	1	.173	.651	.421
	Within Groups	28.911	109	.265		
	Total	29.083	110			
Kinesthetic	Between Groups	.165	1	.165	.464	.497
	Within Groups	38.811	109	.356		
	Total	38.976	110			
Tactile	Between Groups	.361	1	.361	.932	.336
	Within Groups	42.174	109	.387		
	Total	42.535	110			
Group	Between Groups	10.993	1	10.993	18.434	.000
	Within Groups	65.005	109	.596		
	Total	75.999	110			
Individual	Between Groups	6.015	1	6.015	8.185	.005
	Within Groups	80.103	109	.735		
	Total	86.117	110			

- Significance between visual learning style and gender = 0.092 > 0.05 ⇨ There is no statistically significant difference between gender and visual learning style.
- Significance between auditory learning style and gender = 0.421 > 0.05 ⇨ There is no statistically significant difference between gender and auditory learning style.
- Significance between kinaesthetic learning style and gender = 0.497 > 0.05 ⇨ There is no statistically significant difference between gender and kinaesthetic learning style.
- Significance between tactile learning style and gender = 0.336 > 0.05 ⇨ There is no statistically significant difference between gender and tactile learning style.
- Significance between group learning style and gender = 0 < 0.05 ⇨ There is a statistically significant difference between gender and kinaesthetic learning style.
- Significance between individual learning style and gender = 0.05 = 0.05 ⇨ There is a statistically significant difference between gender and group learning style.

4.6.1 Inferential statistics

Table 4.10: Learning Styles * Gender Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Visual * gender	111	100.0%	0	.0%	111	100.0%
Auditory * gender	111	100.0%	0	.0%	111	100.0%
Kinesthetic * gender	111	100.0%	0	.0%	111	100.0%
Tactile * gender	111	100.0%	0	.0%	111	100.0%
Group * gender	111	100.0%	0	.0%	111	100.0%
Individual * gender	111	100.0%	0	.0%	111	100.0%

Table 4.11: Visual Learning Style * Gender Cross Table and Chi Square

Cross table			Gender		
			Male	**Female**	**Total**
Visual	Disagree	Count	0	1	1
		% within visual	.0%	100.0%	100.0%
	Undecided	Count	17	7	24
		% within visual	70.8%	29.2%	100.0%
	Agree	Count	28	41	69
		% within visual	40.6%	59.4%	100.0%
	Strongly agree	Count	13	4	17
		% within visual	76.5%	23.5%	100.0%
Total		Count	58	53	111
		% within visual	52.3%	47.7%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	12.180[a]	3	.007
Likelihood Ratio	12.938	3	.005
Linear-by-Linear Association	.044	1	.833
N of Valid Cases	111		

Table 4.12: Auditory Learning Style * Gender Cross Table and Chi Square

Cross table			Gender		
			Male	**Female**	**Total**
Auditory	Undecided	Count	6	5	11
		% within auditory	54.5%	45.5%	100.0%
	Agree	Count	34	32	66
		% within auditory	51.5%	48.5%	100.0%
	Strongly agree	Count	18	16	34
		% within auditory	52.9%	47.1%	100.0%
Total		Count	58	53	111
		% within auditory	52.3%	47.7%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	.044[a]	2	.978
Likelihood Ratio	.044	2	.978
Linear-by-Linear Association	.000	1	.995
N of Valid Cases	111		

Table 4.13: Kinesthetic Learning Style * Gender Cross Table and Chi Square

Cross table			Gender		
			Male	**Female**	**Total**
Kinesthetic	Undecided	Count	3	5	8
		% within kinesthetic	37.5%	62.5%	100.0%
	Agree	Count	24	27	51
		% within kinesthetic	47.1%	52.9%	100.0%
	Strongly agree	Count	31	21	52
		% within kinesthetic	59.6%	40.4%	100.0%
Total		Count	58	53	111
		% within kinesthetic	52.3%	47.7%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	2.379[a]	2	.304
Likelihood Ratio	2.392	2	.302
Linear-by-Linear Association	2.342	1	.126
N of Valid Cases	111		

Table 4.14: Tactile Learning Style * Gender Cross Table and Chi Square

Cross Table			Gender		
			Male	**Female**	**Total**
Tactile	Undecided	count	7	12	19
		% within tactile	36.8%	63.2%	100.0%
	Agree	count	31	27	58
		% within tactile	53.4%	46.6%	100.0%
	Strongly agree	count	20	14	34
		% within tactile	58.8%	41.2%	100.0%
Total		count	58	53	111
		% within tactile	52.3%	47.7%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	2.430[a]	2	.297
Likelihood Ratio	2.447	2	.294
Linear-by-Linear Association	2.077	1	.150
N of Valid Cases	111		

Table 4.15: Group Learning Style * Gender Cross Table and Chi Square

Cross table			Gender		
			Male	**Female**	**Total**
Group	Disagree	Count	1	5	6
		% within group	16.7%	83.3%	100.0%
	Undecided	Count	5	17	22
		% within group	22.7%	77.3%	100.0%
	Agree	Count	32	17	49
		% within group	65.3%	34.7%	100.0%
	Strongly agree	Count	20	14	34
		% within group	58.8%	41.2%	100.0%
Total		Count	58	53	111
		% within group	52.3%	47.7%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	14.667[a]	3	.002
Likelihood Ratio	15.333	3	.002
Linear-by-Linear Association	8.391	1	.004
N of Valid Cases	111		

Table 4.16: Individual Learning Style * Gender Cross Table and Chi Square

Cross table			Gender		
			Male	**Female**	**Total**
Individual	Strongly disagree	Count	2	0	2
		% within individual	100.0%	.0%	100.0%
	Disagree	Count	4	1	5
		% within individual	80.0%	20.0%	100.0%
	Undecided	Count	16	14	30
		% within individual	53.3%	46.7%	100.0%
	Agree	Count	22	24	46
		% within individual	47.8%	52.2%	100.0%
	Strongly agree	Count	14	14	28
		% within individual	50.0%	50.0%	100.0%
Total		Count	58	53	111
		% within individual	52.3%	47.7%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	3.803[a]	4	.433
Likelihood Ratio	4.695	4	.320
Linear-by-Linear Association	1.856	1	.173
N of Valid Cases	111		

4.7 Findings on Learning Style Preferences According to Age

To examine the relationship between participants' ages and learning style preferences, learning style preferences were grouped into three age groups: participants less than 18 years old, participants between 18 and 22 years old and participants over 22 years old. Kinaesthetic learning style was categorized as major learning style preference by the three age groups with convergent results while visual and individual learning styles were categorized as minor learning style preferences by the three age groups with a slight difference between each age group and the other. However, auditory learning style was categorized as minor learning style preference by participants less than 18 years old. It was categorized as major learning style preference by participants between 18 and 22 years old and over 22 years old. On the other hand, tactile and group learning styles were categorized as minor learning style preferences by participants less than 18 years old and participants between 18 and 22 years old, but it was categorized as major learning style preference by participants over 22 years old. According to ANOVA analysis, there was a statistically significant difference between age and group and auditory learning styles, but inferential statistics (Chi square) showed that there was a statistically significant difference between age and auditory learning style only. On the other hand, inferential statistics (Chi square) showed that there was no statistically significant difference between age and group learning style.

Table 4.17: Learning Style Preferences According to Age

Visual	**Less than 18**	**Standard Deviation**	**Between 18-22**	**Standard Deviation**	**Over than 22**	**Standard Deviation**
q 6	3.72	1.18	3.61	0.96	3.92	1.1
q 10	3.89	0.96	3.86	0.69	4	0.83
q 12	3.56	1.04	3.96	0.67	3.96	0.95
q 24	3.28	1.32	3.13	1.11	3.29	1.12
q 29	3.22	1.56	3.14	1.02	3.13	0.95
sum	17.67	6.06	17.7	4.45	18.29	4.96
Sum*2	35.33	12.12	35.39	8.91	36.58	9.92
Auditory	Less than 18	Standard Deviation	Between 18-22	Standard Deviation	Over than 22	Standard Deviation
q1	4	0.59	4.17	0.8	4.17	0.87
q 7	3.78	1.17	3.86	0.99	4	0.88
q 9	3.44	1.46	3.88	0.98	4.33	0.64
q 17	2.44	1.54	3.78	1.01	3.54	1.32
q 20	3.67	1.08	3.64	0.77	4	0.66
sum	17.33	5.85	19.33	4.55	20.04	4.37
Sum*2	34.67	11.7	38.67	9.1	40.08	8.73

Table 4.17 (con.): Learning Style Preferences According to Age

Kinesthetic	**Less than 18**	**Standard Deviation**	**Between 18-22**	**Standard Deviation**	**Over than 22**	**Standard Deviation**
q2	4.17	1.15	4.14	0.83	4.17	0.76
q8	4.39	0.7	4.13	0.75	4.33	0.64
q15	4.11	0.9	4.2	0.63	4.21	0.78
q19	3.72	1.32	3.61	1.1	3.96	0.86
q26	4.11	0.83	3.75	0.77	4.13	0.61
sum	20.5	4.9	19.84	4.08	20.79	3.65
Sum*2	41	9.8	39.68	8.16	41.58	7.3
Tactile	Less than 18	Standard Deviation	Between 18-22	Standard Deviation	Over than 22	Standard Deviation
q 11	4.06	0.8	3.9	0.84	4.17	0.82
q 14	3.89	1.18	3.51	1.12	3.96	0.81
q 16	3	1.41	3.25	1.06	3.46	1.02
q 22	4	0.77	3.84	0.9	4.08	0.83
q 25	3.56	1.38	3.23	1.09	4	1.06
sum	18.5	5.55	17.72	5.01	19.67	4.54
Sum*2	37	11.1	35.45	10.03	39.33	9.07
Group	Less than 18	Standard Deviation	Between 18-22	Standard Deviation	Over than 22	Standard Deviation
q 3	3.67	1.14	3.45	1.06	4.25	0.74
q 4	4.11	1.08	3.49	0.95	4.13	0.85
q 5	3.56	1.15	3.35	0.94	3.83	0.92
q 21	3.11	1.41	3.61	1.11	4.04	0.81
q 23	3.56	1.46	3.36	1.08	3.96	1
sum	18	6.24	17.26	5.15	20.21	4.31
Sum*2	36	12.48	34.52	10.3	40.42	8.62
Individual	Less than 18	Standard Deviation	Between 18-22	Standard Deviation	Over than 22	Standard Deviation
q 13	3.44	1.42	3.83	1.00	3.33	1.24
q 18	3.44	1.34	3.62	1.02	3.25	1.03
q 27	3.44	1.38	3.17	1.14	2.92	1.35
q 28	3.83	1.25	3.55	1.04	3.38	1.28
q 30	3.78	1.17	3.62	1.07	3.04	1.08
sum	17.94	6.56	17.8	5.26	15.92	5.98
Sum*2	35.89	13.12	35.59	10.52	31.83	11.96

Table 4.18: ANOVA between Age and Learning Style

ANOVA						
		Sum of squares	**Df**	**Mean square**	**F**	**Sig.**
Visual	Between groups	.273	2	.137	.384	.682
	Within groups	38.463	108	.356		
	Total	38.736	110			
Auditory	Between groups	3.232	2	1.616	6.750	.002
	Within groups	25.852	108	.239		
	Total	29.083	110			
Kinaesthetic	Between groups	.748	2	.374	1.056	.351
	Within groups	38.228	108	.354		
	Total	38.976	110			
Tactile	Between groups	1.267	2	.633	1.657	.195
	Within groups	41.268	108	.382		
	Total	42.535	110			
Group	Between groups	6.188	2	3.094	4.787	.010
	Within groups	69.811	108	.646		
	Total	75.999	110			
Individual	Between groups	2.760	2	1.380	1.788	.172
	Within groups	83.357	108	.772		
	Total	86.117	110			

- Significance between visual learning style and age = 0.682 > 0.05 ⇨ There is no statistically significant difference between age and visual learning style.
- Significance between auditory learning style and age = 0.002 < 0.05 ⇨ There is a statistically significant difference between age and auditory learning style.
- Significance between kinaesthetic learning style and age = 0.351 > 0.05 ⇨ There is no statistically significant difference between age and kinaesthetic learning style.
- Significance between tactile learning style and age = 0.195 > 0.05 ⇨ There is no statistically significant difference between age and tactile learning style.

- Significance between group learning style and age = 0.01 < 0.05 ⇨ There is a statistically significant difference between age and group learning style.
- Significance between individual learning style and age = 0.172 > 0.05 ⇨ There is no statistically significant difference between age and individual learning style.

4.7.1 Inferential statistics

Table 4.19: Learning Styles * Age Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Visual * age	111	100.0%	0	.0%	111	100.0%
Auditory * age	111	100.0%	0	.0%	111	100.0%
Kinesthetic * age	111	100.0%	0	.0%	111	100.0%
Tactile * age	111	100.0%	0	.0%	111	100.0%
Group * age	111	100.0%	0	.0%	111	100.0%
Individual * age	111	100.0%	0	.0%	111	100.0%

Table 4.20: Visual Learning Style * Age Cross Table and Chi Square

Cross table			Age			
			Less than 18	18-22	Over than 22	Total
Visual	Disagree	Count	1	0	0	1
		% within visual	100.0%	.0%	.0%	100.0%
	Undecided	Count	4	14	6	24
		% within visual	16.7%	58.3%	25.0%	100.0%
	Agree	Count	8	49	12	69
		% within visual	11.6%	71.0%	17.4%	100.0%
	Strongly agree	Count	5	6	6	17
		% within visual	29.4%	35.3%	35.3%	100.0%
Total		Count	18	69	24	111
		% within visual	16.2%	62.2%	21.6%	100.0%

Chi square			Asymp. Sig. (2- sided)
	Value	df	
Pearson Chi-Square	12.972[a]	6	.043
Likelihood Ratio	11.315	6	.079
Linear-by-Linear Association	.132	1	.717
N of Valid Cases	111		

Table 4.21: Auditory Learning Style * Age Cross Table and Chi Square

Cross table			Age			
			Less than 18	18-22	Over than 22	Total
Auditory	Undecided	Count	6	4	1	11
		% within auditory	54.5%	36.4%	9.1%	100.0%
	Agree	Count	8	44	14	66
		% within auditory	12.1%	66.7%	21.2%	100.0%
	Strongly agree	Count	4	21	9	34
		% within auditory	11.8%	61.8%	26.5%	100.0%
Total		Count	18	69	24	111
		% within auditory	16.2%	62.2%	21.6%	100.0%

Chi square			Asymp. Sig. (2- sided)
	Value	Df	
Pearson chi-square	13.631[a]	4	.009
Likelihood ratio	10.304	4	.036
Linear-by-linear association	5.030	1	.025
N of valid cases	111		

Table 4.22: Kinesthetic Learning Style * Age Cross Table and Chi Square

Cross table			Age			
			Less than 18	18-22	Over than 22	Total
Kinesthetic	Undecided	Count	2	5	1	8
		% within kinesthetic	25.0%	62.5%	12.5%	100.0%
	Agree	Count	7	32	12	51
		% within kinesthetic	13.7%	62.7%	23.5%	100.0%
	Strongly agree	Count	9	32	11	52
		% within kinesthetic	17.3%	61.5%	21.2%	100.0%
Total		Count	18	69	24	111
		% within kinesthetic	16.2%	62.2%	21.6%	100.0%

Chi Square			Asymp. Sig. (2- sided)
	Value	df	
Pearson Chi-Square	1.019[a]	4	.907
Likelihood Ratio	1.028	4	.906
Linear-by-Linear Association	.024	1	.877
N of Valid Cases	111		

Table 4.23: Tactile Learning Style * Age Cross Table and Chi Square

Cross table			Age			
			Less than 18	18-22	Over than 22	Total
Tactile	Undecided	Count	5	12	2	19
		% within tactile	26.3%	63.2%	10.5%	100.0%
	Agree	Count	7	39	12	58
		% within tactile	12.1%	67.2%	20.7%	100.0%
	Strongly agree	Count	6	18	10	34
		% within tactile	17.6%	52.9%	29.4%	100.0%
Total		Count	18	69	24	111
		% within tactile	16.2%	62.2%	21.6%	100.0%

Chi Square			Asymp. Sig. (2- sided)
	Value	df	
Pearson Chi-Square	4.621[a]	4	.328
Likelihood Ratio	4.666	4	.323
Linear-by-Linear Association	1.984	1	.159
N of Valid Cases	111		

Table 4.24: Group Learning Style * Age Cross Table and Chi Square

Cross table			Age			
			Less than 18	18-22	Over than 22	Total
Group	Disagree	Count	1	5	0	6
		% within group	16.7%	83.3%	.0%	100.0%
	Undecided	Count	5	15	2	22
		% within group	22.7%	68.2%	9.1%	100.0%
	Agree	Count	6	34	9	49
		% within group	12.2%	69.4%	18.4%	100.0%
	Strongly agree	Count	6	15	13	34
		% within group	17.6%	44.1%	38.2%	100.0%
Total		Count	18	69	24	111
		% within group	16.2%	62.2%	21.6%	100.0%

Chi Square			Asymp. Sig. (2- sided)
	Value	df	
Pearson Chi-Square	11.324[a]	6	.079
Likelihood Ratio	12.389	6	.054
Linear-by-Linear Association	4.751	1	.029
N of Valid Cases	111		

Table 4.25: Individual Learning Style * Age Cross Table and Chi Square

Cross table			**Age**			
			Less than 18	**18-22**	**Over than 22**	**Total**
Individual	Strongly disagree	Count	1	0	1	2
		% within individual	50.0%	.0%	50.0%	100.0%
	Disagree	Count	1	2	2	5
		% within individual	20.0%	40.0%	40.0%	100.0%
	Undecided	Count	4	16	10	30
		% within individual	13.3%	53.3%	33.3%	100.0%
	Agree	Count	6	35	5	46
		% within individual	13.0%	76.1%	10.9%	100.0%
	Strongly agree	Count	6	16	6	28
		% within individual	21.4%	57.1%	21.4%	100.0%
Total		Count	18	69	24	111
		% within individual	16.2%	62.2%	21.6%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	11.812[a]	8	.160
Likelihood Ratio	12.437	8	.133
Linear-by-Linear Association	1.400	1	.237
N of Valid Cases	111		

4.8 Findings on Learning Style Preferences According to English Level

Learning style preferences were classified according to level of English of the participants and the results were varied as shown in the table below. Visual learning style was preferred the most by Elementary level learners while auditory, kinaesthetic and tactile learning styles were preferred the most by advanced level learners, Group learning style was preferred the most by pre-intermediate learners, but individual learning style was preferred the most by intermediate learners. According to ANOVA analysis, there was a statistically significant difference between level of English and group learning style, but inferential statistics (Chi square) showed that there was no statistically significant difference between level of English and learning styles.

Table 4.26: Learning Style Preferences According to English Level

Visual	**Elementary**	**Standard Deviation**	**Pre-intermediate**	**Standard Deviation**	**Intermediate**	**Standard Deviation**	**Upper-intermediate**	**Standard Deviation**	**Advanced**	**Standard Deviation**
q 6	3.73	1.19	4	0.78	3.61	1.02	3.56	0.98	2.75	1.26
q 10	4.07	1.16	3.9	0.79	3.95	0.61	3.56	0.78	4.00	0.00
q 12	4	1.03	3.8	0.83	4	0.57	3.56	1.04	4.5	0.58
q 24	4.07	1.19	3.47	1.09	3.05	1.01	2.33	0.97	3.25	0.5
q 29	3.27	1.34	3.2	1.04	3.2	1.07	2.78	0.94	3.5	1.00
sum	19.13	5.92	18.37	4.52	17.82	4.28	15.78	4.72	18	3.34
Sum*2	38.27	11.84	36.73	9.04	35.64	8.55	31.56	9.44	36	6.67
Auditory	Elementary	Standard Deviation	Pre- intermediate	Standard Deviation	Intermediate	Standard Deviation	Upper-intermediate	Standard Deviation	Advanced	Standard Deviation
q1	4.47	1.00	4.17	0.7	4.16	0.87	3.78	0.78	4.25	0.58
q 7	4.4	0.78	4.07	0.64	3.73	0.72	3.56	0.83	3.50	0.58
q 9	3.47	0.78	3.9	0.77	3.91	0.58	4.28	0.83	4.00	0.5
q 17	2.2	1.16	3.43	0.92	3.84	1.19	3.72	1.1	4.5	0.58
q 20	3.93	0.67	3.7	0.68	3.64	0.88	3.78	0.68	3.75	0.00
sum	18.47	4.39	19.27	3.71	19.27	4.24	19.11	4.22	20	2.23
Sum*2	36.93	8.77	38.53	7.42	38.55	8.47	38.22	8.43	40	4.46
Kinesthetic	Elementary	Standard Deviation	Pre- intermediate	Standard Deviation	Intermediate	Standard Deviation	Upper-intermediate	Standard Deviation	Advanced	Standard Deviation
q2	3.93	0.67	4.1	0.69	4.11	0.89	4.44	0.65	4.5	0.96
q8	4.27	0.65	4.27	0.91	4.11	1.00	4.28	1.04	4.50	1.73
q15	4.27	1.38	4.13	0.95	4.18	0.98	4.11	0.89	4.75	0.82
q19	3.8	1.47	3.73	1.12	3.61	0.99	3.83	1.18	3.5	1.00
q26	4.13	1.11	3.67	0.81	3.86	0.81	4.11	0.65	4	0.50
sum	20.4	5.28	19.9	4.48	19.89	4.67	20.78	4.41	21.25	5.01
Sum*2	40.8	10.57	39.8	8.96	39.77	9.33	41.56	8.82	42.5	10.01

Table 4.26 (con.): Learning Style Preferences According to English Level

Tactile	**Elementary**	**Standard Deviation**	**Pre-intermediate**	**Standard Deviation**	**Intermediate**	**Standard Deviation**	**Upper-intermediate**	**Standard Deviation**	**Advanced**	**Standard Deviation**
q 11	4.27	1.00	4.03	0.85	3.73	0.76	4.06	0.73	5.00	0.00
q 14	3.6	1.3	3.87	0.89	3.43	1.15	3.89	1.08	4.00	0.00
q 16	3.2	1.64	3.17	0.97	3.25	1.12	3.22	0.88	4.25	0.5
q 22	4.00	0.95	3.93	0.86	3.82	0.84	4.00	0.97	4.25	0.50
q 25	3.33	1.6	3.53	1.02	3.18	1.13	4.00	0.91	3.75	0.50
sum	18.4	6.5	18.53	4.58	17.41	5.00	19.17	4.56	21.25	1.5
Sum*2	36.8	12.99	37.07	9.16	34.82	10	38.33	9.12	42.5	3.00
Group	Elementary	Standard Deviation	Pre- intermediate	Standard Deviation	Intermediate	Standard Deviation	Upper-intermediate	Standard Deviation	Advanced	Standard Deviation
q 3	4	1.47	3.93	0.94	3.41	0.97	3.5	1.1	3.75	0.96
q 4	3.93	1.23	3.9	0.92	3.55	0.93	3.72	1.13	3.75	0.50
q 5	3.53	1.08	3.73	1	3.2	0.95	3.61	0.92	4.00	0
q 21	3.13	1.36	3.77	0.95	3.48	1.21	4.06	0.94	4	0.00
q 23	4	1.27	3.7	1.01	3.16	1.2	3.72	1.13	3.5	0.58
sum	18.6	6.41	19.03	4.82	16.8	5.26	18.61	5.21	19	2.03
Sum*2	37.2	12.81	38.07	9.64	33.59	10.53	37.22	10.14	38	4.07
Individual	Elementary	Standard Deviation	Pre- intermediate	Standard Deviation	Intermediate	Standard Deviation	Upper-intermediate	Standard Deviation	Advanced	Standard Deviation
q 13	3.87	1.13	3.63	1.2	3.82	0.99	3.22	1.31	3.25	0.50
q 18	3.67	1.11	3.23	1.07	3.73	0.95	3.28	1.23	3.75	0.50
q 27	3.47	1.73	2.83	1.01	3.34	1.16	3.11	1.18	2.75	0.96
q 28	3.80	1.4	3.37	1.05	3.73	1.02	3.50	1.1	2.5	1.00
q 30	3.4	1.15	3.3	1.08	3.77	1.08	3.39	1.09	3.5	0.58
sum	18.2	6.53	16.37	5.41	18.39	5.20	16.5	5.91	15.75	3.53
Sum*2	36.4	13.07	32.73	10.82	36.77	10.4	33	11.82	31.5	7.07

Table 4.27: ANOVA between English Level and Learning Style

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Visual	Between Groups	.003	1	.003	.010	.921
	Within Groups	38.732	109	.355		
	Total	38.736	110			
Auditory	Between Groups	.010	1	.010	.036	.849
	Within Groups	29.074	109	.267		
	Total	29.083	110			
Kinesthetic	Between Groups	.707	1	.707	2.012	.159
	Within Groups	38.269	109	.351		
	Total	38.976	110			
Tactile	Between Groups	1.305	1	1.305	3.451	.066
	Within Groups	41.229	109	.378		
	Total	42.535	110			
Group	Between Groups	6.094	1	6.094	9.502	.003
	Within Groups	69.905	109	.641		
	Total	75.999	110			
Individual	Between Groups	.834	1	.834	1.067	.304
	Within Groups	85.283	109	.782		
	Total	86.117	110			

- Significance between visual learning style and level of English = 0.921 > 0.05 ⇨ There is no statistically significant difference between English level and visual learning style.
- Significance between auditory learning style and level of English = 0.849 > 0.05 ⇨ There is no statistically significant difference between English level and auditory learning style.
- Significance between kinaesthetic learning style and level of English = 0.195 > 0.05 ⇨ There is no statistically significant difference between English level and kinaesthetic learning style.
- Significance between tactile learning style and level of English = 0.066 ≥ 0.05 ⇨ There is no statistically significant difference between English level and tactile learning style.

- Significance between group learning style and level of English = 0.03 < 0.05 ⇨ There is statistically significant difference between English level and group learning style.
- Significance between individual learning style and level of English = 0.304 > 0.05 ⇨ There is no statistically significant difference between English level and individual learning style.

4.8.1 Inferential statistics

Table 4.28: Visual Learning Style * English Level Cross Table and Chi Square

Cross table		**Level of English**					
		Elementary	**Pre-intermediate**	**Intermediate**	**Upper-intermediate**	**Advance**	**Total**
Visual Disagree	Count	1	0	0	0	0	1
	% within visual	100.0%	.0%	.0%	.0%	.0%	100.0%
Undecided	Count	1	6	7	9	1	24
	% within visual	4.2%	25.0%	29.2%	37.5%	4.2%	100.0%
Agree	Count	7	19	31	9	3	69
	% within visual	10.1%	27.5%	44.9%	13.0%	4.3%	100.0%
Strongly agree	Count	6	5	6	0	0	17
	% within visual	35.3%	29.4%	35.3%	.0%	.0%	100.0%
Total	Count	15	30	44	18	4	111
	% within visual	13.5%	27.0%	39.6%	16.2%	3.6%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	26.439[a]	12	.009
Likelihood Ratio	24.438	12	.018
Linear-by-Linear Association	7.696	1	.006
N of Valid Cases	111		

Table 4.29: Auditory Learning Style * English Level Cross Table and Chi Square

Cross table			Level of English					
			Elementary	Pre-intermediate	Intermediate	Upper-intermediate	Advance	Total
Auditory	Undecided	Count	2	4	4	1	0	11
		% within auditory	18.2%	36.4%	36.4%	9.1%	.0%	100.0%
	Agree	Count	8	15	27	13	3	66
		% within auditory	12.1%	22.7%	40.9%	19.7%	4.5%	100.0%
	Strongly agree	Count	5	11	13	4	1	34
		% within auditory	14.7%	32.4%	38.2%	11.8%	2.9%	100.0%
Total		Count	15	30	44	18	4	111
		% within auditory	13.5%	27.0%	39.6%	16.2%	3.6%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	3.398[a]	8	.907
Likelihood Ratio	3.818	8	.873
Linear-by-Linear Association	.022	1	.882
N of Valid Cases	111		

Table 4.30: Kinesthetic Learning Style * English Level Cross Table and Chi Square

Cross table			Level of English					
			Elementary	Pre-intermediate	Intermediate	Upper-intermediate	Adv.	Total
Kinesthetic	Undecided	Count	1	2	3	2	0	8
		% within kinesthetic	12.5%	25.0%	37.5%	25.0%	.0%	100.0%
	Agree	Count	7	18	20	6	0	51
		% within kinesthetic	13.7%	35.3%	39.2%	11.8%	.0%	100.0%
	Strongly agree	Count	7	10	21	10	4	52
		% within kinesthetic	13.5%	19.2%	40.4%	19.2%	7.7%	100.0%
Total		Count	15	30	44	18	4	111
		% within kinesthetic	13.5%	27.0%	39.6%	16.2%	3.6%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	8.332[a]	8	.402
Likelihood Ratio	9.873	8	.274
Linear-by-Linear Association	2.044	1	.153
N of Valid Cases	111		

Table 4.31: Tactile Learning Style * English Level Cross Table and Chi Square

Cross table		Level of English					
		Elementary	Pre-intermediate	Intermediate	Upper-intermediate	Advance	Total
Tactile Undecided	Count	4	5	8	2	0	19
	% within tactile	21.1%	26.3%	42.1%	10.5%	.0%	100.0%
Agree	Count	6	18	24	10	0	58
	% within tactile	10.3%	31.0%	41.4%	17.2%	.0%	100.0%
Strongly agree	Count	5	7	12	6	4	34
	% within tactile	14.7%	20.6%	35.3%	17.6%	11.8%	100.0%
Total	Count	15	30	44	18	4	111
	% within tactile	13.5%	27.0%	39.6%	16.2%	3.6%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	11.890[a]	8	.156
Likelihood Ratio	12.305	8	.138
Linear-by-Linear Association	3.014	1	.083
N of Valid Cases	111		

Table 4.32: Group Learning Style * English Level Cross Table and Chi Square

Cross table		Level of English					
		Elementary	Pre-intermediate	Intermediate	Upper-intermediate	Advance	Total
Group Disagree	Count	0	0	6	0	0	6
	% within group	.0%	.0%	100.0%	.0%	.0%	100.0%
Undecided	Count	4	6	8	4	0	22
	% within group	18.2%	27.3%	36.4%	18.2%	.0%	100.0%
Agree	Count	6	12	19	9	3	49
	% within group	12.2%	24.5%	38.8%	18.4%	6.1%	100.0%
Strongly agree	Count	5	12	11	5	1	34
	% within group	14.7%	35.3%	32.4%	14.7%	2.9%	100.0%
Total	Count	15	30	44	18	4	111
	% within group	13.5%	27.0%	39.6%	16.2%	3.6%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	13.023[a]	12	.367
Likelihood Ratio	15.556	12	.212
Linear-by-Linear Association	.303	1	.582
N of Valid Cases	111		

Table 4.33: Individual Learning Style * English Level Cross Table and Chi Square

Cross table		Level of English					
		Elementary	Pre-intermediate	Intermediate	Upper-intermediate	Advance	Total
Individual Strongly disagree	Count	1	1	0	0	0	2
	% within individual	50.0%	50.0%	.0%	.0%	.0%	100.0%
Disagree	Count	0	2	1	2	0	5
	% within individual	.0%	40.0%	20.0%	40.0%	.0%	100.0%
Undecided	Count	4	9	8	6	3	30
	% within individual	13.3%	30.0%	26.7%	20.0%	10.0%	100.0%
Agree	Count	3	14	23	5	1	46
	% within individual	6.5%	30.4%	50.0%	10.9%	2.2%	00.0%
Strongly agree	Count	7	4	12	5	0	28
	% within individual	25.0%	14.3%	42.9%	17.9%	.0%	100.0%
Total	Count	15	30	44	18	4	111
	% within individual	13.5%	27.0%	39.6%	16.2%	3.6%	100.0%

Chi Square	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	21.715[a]	16	.153
Likelihood Ratio	22.700	16	.122
Linear-by-Linear Association	.212	1	.645
N of Valid Cases	111		

5. DISCUSSION

5.1 Introduction

This chapter presents a brief summary and the conclusions of the current study. And then, it highlights the limitations of the study and suggestions for further studies.

5.2 Summary of the Study

The aim of the study was to investigate the minor and major learning style preferences preferred by the Arab and Turkish participants at the tertiary level. This study also examined if there was a difference in learning style preferences between male and female students. Moreover, it determined if there was a relationship between learning style preferences and the age of the learners and also if there was a relationship between the learners and their levels of English. The participants of the current study were a total of 111, consisting of both male and female students in the foundation year. They came from ten nationalities speaking two mother tongues: Turkish and Arabic. Quantitative research methods were employed in order to collect and analyse the data of this study. The data of the current study were collected through a questionnaire developed by Jack Richards (see Appendix A). The data gathered from the questionnaire were analysed using descriptive statistics.

The following research questions guided the study to achieve the aims mentioned above:

- What are the major and minor learning style preferences of Arab undergraduates studying EFL?
- What are the major and minor learning style preferences of Turkish undergraduates studying EFL?
- Is there a significant relationship between learning style preferences and gender?

- Is there a significant relationship between age and learning style preferences?
- Is there a significant relationship between English level of learners and learning style preferences?

5.3 Conclusions

5.3.1 Identify the major and minor learning style preferences of Arab undergraduates studying EFL

The first research question of the study aimed at finding the major and minor learning style preferences of Arab undergraduates studying English as a foreign language. The findings of the current study revealed that Arab students' major learning style preferences were categorized according to the following order from the most preferred to the least; kinaesthetic, group and tactile. While the minor learning style preferences of Arab students were categorized according to the following order from the most preferred to the least; auditory, visual and individual.

5.3.2 Identify the major and minor learning style preferences of Turkish undergraduates studying EFL

The second research question of the study aimed at finding the major and minor learning style preferences of Turkish undergraduates studying English as a foreign language. The analysis of the data revealed that Turkish students' major learning style preferences were confined to two learning styles categorized according to the following order from the most preferred to the least; kinaesthetic and auditory. While the minor learning style preferences of Turkish students were categorized according to the following order from the most preferred to the least; individual, tactile, visual and group.

5.3.3 Determine the relationship between learning style preferences and gender

The study findings on the relationship between learning style preferences and gender showed that there was no significant difference between the results of females and males for the following learning styles according to the descriptive analysis: visual, auditory, kinaesthetic and individual, but for tactile and group learning styles,

females preferred them with higher degree of preference in comparison to males. According to ANOVA and Chi square analysis, there was a relationship only between gender and group and individual learning styles. This is consistent with the findings of Hamidon (2015) who found out that there was a slight difference between styles of learning and gender. Hamidon (2015) also explained that differences might occur because of the sample of population, course books, the environment or the facilitator. However, it can be said that there was no learner who preferred only one learning style. On the contrary, learners may learn through adapting many learning styles with different percentage of preference. According to Dunn and Dunn (1992), in most cases, a successful learner learns in several different ways. However, students with naturally one or two learning styles can improve significantly when taught through other learning styles. In a nutshell, there is a slight difference between learning style preferences and gender since the difference was only in two learning styles and gender.

5.3.4 Determine the relationship between age and learning style preferences

This study revealed that there was a relationship between age and learning style preferences. The study findings showed that the degree of preference changed according to the age groups. Learners over 22 years old described themselves as auditory, tactile and group learners while these three learning styles were preferred the least by learners under 18 years old, so learners' preferences of learning styles may change over time as they get older. This contradicts what Li, Y. S. (2011) concluded in a study of the relationship between age and learning styles among students in different nursing programs in Taiwan, he concluded that the ages of nursing students were not significantly related to their learning style (Li, 2011).

5.3.5 Determine the relationship between English level of learners and learning style preferences

The study findings revealed that there was a relationship between the English level of learners and learning style preferences. Students at the elementary level preferred the visual learning style the most, which was a logical result. They are improving their English, so they depend on the visual support. Students at the

advanced level preferred the auditory, kinaesthetic and tactile learning styles the most since they are independent users of the language.

5.4 Limitations of the Study

The findings on the minor and major learning style preferences preferred by the Arab and Turkish participants at the tertiary level, the relationship between learning style preferences and gender, the relationship between learning style preferences and age and the relationship between the learners and their levels of English are specific to this setting. Another limitation may be the use of a questionnaire as a data collection instrument based on a Liker rating scale which might have hindered to collect a full expression of the participants' thoughts, needs, or perspectives. Finally, no interview data were collected to confirm the results gathered from the questionnaire.

5.5 Suggestions for Further Study

In further studies, researchers might work on an experimental group for a long period of time to measure their learning style preferences during the progress of the English levels from the starter level till the advanced or to find the accurate relationship between the learning style preferences and age. In addition, in further studies, working on teaching style preferences and match them to learning preferences of the students might help the teachers choose which is better for their students.

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APPENDICES

Appendix A

Evrak Tarih ve Sayısı: 30/07/2019-4617

T.C.
İSTANBUL AYDIN ÜNİVERSİTESİ REKTÖRLÜĞÜ
Sosyal Bilimler Enstitüsü Müdürlüğü

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Bilgi için: Büke KENDER
Unvanı: Enstitü Sekreteri

Appendix B

Questionnaire:

	SA	A	U	D	SD
1 When the teacher tells me the instructions, I understand better.					
2 I prefer to learn by doing something in class.					
3 I get more work done when I work with others.					
4 I learn more when I study with a group.					
5 In class, I learn best when I work with others.					
6 I learn better by reading what the teacher writes on the chalkboard.					
7 When someone tells me how to do something in class, I learn it better.					
8 When I do things in class, I learn better.					
9 I remember things I have heard in class better than things I have read.					
10 When I read instructions, I remember them better.					
11 I learn more when I can make a model of something.					
12 I understand better when I read instructions					
13 When I study alone, I remember things better					
14 I learn more when I make something for a class project					
15 I enjoy learning in class by doing experiments					
16 I learn better when I make drawings as I study					
17 I learn better in class when the teacher gives a lecture					
18 When I work alone, I learn better					
19 I understand things better in class when I participate in role playing.					
20 I learn better in class when I listen to someone.					
21 I enjoy working on an assignment with two or three classmates					
22 When I build something, I remember what I have learned better.					

Appendix B (con.):

Questionnaire:

	SAAUDSD
23 I prefer to study with others.	
24 I learn better by reading than by listening to someone.	
25 I enjoy making something for a class project.	
26 I learn best in class when I can participate in related activities	
27 In class, I work better when I work alone	
28 I prefer working on projects by myself	
29 I learn more by reading textbooks than by listening to lectures	
30 I prefer to work by myself	

Appendix C

Instructions

There are 5 questions for each learning style category in this questionaire. The questions are grouped below according to each learning style. Each question you answer has a numerical value :

SA	A	U	D	SD
5	4	3	2	1

fill in the blanks below with the numerical value of each answer. For example, if you answered Strongly Agree (SA) for question 6 (a visual question), write a number 5 (SA) on the blank next to question 6 below.

Visal

6—5

When you have completed all the numerical values for Visual, add the numbers. Multiply the answer by 2, and put the total in the apporpriate blank.

Follow this process for each of the learning style categories. When you are finished, look at the scale at the bottom of the page : it will help you determine your major learning style preference (s), your minor learning style preference (s), and thoselearning style (s) that are negligible.
If you need help, please ask your teacher.

VISUAL
6 — _____
10 — _____
12 — _____
24 — _____
29 — _____
TOTAL_____×2=_____(Score)

TACTILE
11 — _____
14 — _____
16 — _____
22 — _____
25 — _____
TOTAL_____×2=_____(Score)

AUDITORY
1 — _____
7 — _____
9 — _____
17 — _____
20 — _____
TOTAL_____×2=_____(Score)

GROUP
3 — _____
4 — _____
5 — _____
21 — _____
23 — _____
TOTAL_____×2=_____(Score)

KINESTHETIC
2 — _____
8 — _____
15 — _____
19— _____
26 — _____
TOTAL_____×2=_____(Score)

INDIVIDUAL
13 — _____
18 — _____
27— _____
28 — _____
30 — _____
TOTAL_____×2=_____(Score)

Major Learning Style Preference	36-50
Minor Learning Style Preference	25-37
Negligible	0-24

Appendix D

Average, standard deviation and percentage were calculated for every participant in the six learning styles (visual, auditory, Kinaesthetic, tactile, group and individual) so we can get accurate percentages to help the researcher find the answers to the reseach questions.

Table D.1: Visual Learning Style Results for Every Participant

Visual			
	Average	**Standard Deviation**	**Percentage**
1	4.20	1.79	84.00
2	5.00	0.00	100.00
3	3.60	1.52	72.00
4	4.40	0.55	88.00
5	4.40	0.55	88.00
6	2.00	1.22	40.00
7	3.20	1.30	64.00
8	2.80	0.84	56.00
9	3.20	0.84	64.00
10	3.80	0.84	76.00
11	3.80	1.30	76.00
12	3.60	1.52	72.00
13	3.20	0.84	64.00
14	4.00	0.00	80.00
15	2.60	0.89	52.00
16	4.60	0.55	92.00
17	4.20	0.45	84.00
18	2.80	0.84	56.00
19	3.40	1.14	68.00
20	3.60	0.89	72.00
21	4.00	0.71	80.00
22	3.40	1.34	68.00
23	4.00	0.71	80.00
24	4.00	0.71	80.00
25	3.80	0.45	76.00
26	3.60	0.89	72.00
27	5.00	0.00	100.00
28	3.80	0.45	76.00
29	3.80	0.84	76.00
30	4.20	0.45	84.00
31	3.80	1.64	76.00
32	2.80	1.10	56.00
33	2.60	0.89	52.00
34	3.40	1.34	68.00
35	2.80	1.10	56.00
36	3.40	1.14	68.00
37	3.40	0.89	68.00

38	3.80	0.45	76.00
39	3.80	0.45	76.00
40	4.00	0.00	80.00
41	4.60	0.55	92.00
42	3.40	1.14	68.00
43	4.60	0.55	92.00
44	3.00	0.71	60.00
45	2.80	1.30	56.00
46	4.40	0.89	88.00
47	2.80	1.64	56.00
48	3.00	0.71	60.00
49	3.40	0.89	68.00
50	2.60	0.89	52.00
51	3.80	1.64	76.00
52	3.40	0.89	68.00
53	3.00	1.58	60.00
54	3.40	0.89	68.00
55	4.00	0.71	80.00
56	4.20	0.84	84.00
57	3.40	0.89	68.00
58	2.80	1.10	56.00
59	4.40	0.55	88.00
60	3.60	0.89	72.00
61	2.40	0.55	48.00
62	2.40	0.55	48.00
63	3.20	0.84	64.00
64	3.20	0.84	64.00
65	3.40	0.89	68.00
66	3.20	1.10	64.00
67	3.60	0.55	72.00
68	3.80	0.45	76.00
69	3.00	0.71	60.00
70	3.40	1.52	68.00
71	3.00	0.00	60.00
72	4.00	0.71	80.00
73	3.20	1.10	64.00
74	3.80	0.45	76.00
75	3.80	0.45	76.00
76	4.00	0.00	80.00
77	4.00	1.41	80.00
78	3.40	0.55	68.00
79	2.20	0.84	44.00
80	2.80	0.84	56.00
81	4.20	1.30	84.00
82	3.20	1.30	64.00
83	4.20	0.45	84.00
84	4.00	1.00	80.00
85	3.40	0.55	68.00

86	3.60	0.55	72.00
87	3.00	0.71	60.00
88	3.00	0.71	60.00
89	3.60	1.52	72.00
90	4.00	0.00	80.00
91	3.60	0.89	72.00
92	3.80	0.84	76.00
93	3.80	1.10	76.00
94	4.00	0.00	80.00
95	4.00	1.73	80.00
96	3.80	0.84	76.00
97	4.60	0.55	92.00
98	3.80	0.45	76.00
99	3.80	0.84	76.00
100	3.20	0.84	64.00
101	3.40	0.89	68.00
102	3.40	1.52	68.00
103	2.80	1.30	56.00
104	2.80	1.10	56.00
105	4.00	1.73	80.00
106	3.00	1.00	60.00
107	3.80	0.45	76.00
108	3.60	0.55	72.00
109	3.40	0.89	68.00
110	3.80	0.84	76.00
111	4.80	0.45	96.00

Table D.2: Auditory Learning Style Results for Every Participant

Auditory			
	Average	**Standard Deviation**	**Percentage**
1	3.20	2.05	64.00
2	4.20	1.79	84.00
3	4.20	0.45	84.00
4	4.00	1.73	80.00
5	3.00	1.41	60.00
6	3.20	2.05	64.00
7	3.00	1.22	60.00
8	3.40	0.55	68.00
9	3.80	1.30	76.00
10	3.60	1.52	72.00
11	4.60	0.55	92.00
12	3.60	1.67	72.00
13	3.80	0.84	76.00
14	3.40	0.89	68.00
15	2.80	1.30	56.00
16	4.20	1.30	84.00
17	4.20	0.84	84.00
18	3.40	1.52	68.00
19	3.80	1.30	76.00
20	3.40	0.89	68.00
21	4.20	0.84	84.00
22	2.20	1.10	44.00
23	4.00	1.73	80.00
24	3.00	1.58	60.00
25	3.80	0.84	76.00
26	4.00	0.00	80.00
27	4.20	1.79	84.00
28	3.80	0.84	76.00
29	4.40	0.55	88.00
30	2.80	1.30	56.00
31	4.00	1.00	80.00
32	3.80	1.64	76.00
33	3.60	0.55	72.00
34	4.00	1.00	80.00
35	3.80	1.64	76.00
36	3.60	0.55	72.00
37	4.20	0.84	84.00
38	4.00	0.00	80.00
39	4.00	0.00	80.00
40	3.80	1.10	76.00
41	4.60	0.55	92.00
42	4.00	0.71	80.00
43	4.80	0.45	96.00
44	3.00	0.00	60.00
45	3.00	1.00	60.00

46	4.60	0.55	92.00
47	3.20	1.30	64.00
48	3.80	0.45	76.00
49	3.80	0.45	76.00
50	4.20	0.45	84.00
51	4.00	1.00	80.00
52	4.40	0.89	88.00
53	4.20	0.84	84.00
54	4.00	0.71	80.00
55	4.20	0.45	84.00
56	3.60	0.55	72.00
57	4.20	0.84	84.00
58	4.40	0.55	88.00
59	3.20	1.10	64.00
60	3.80	0.84	76.00
61	4.20	0.45	84.00
62	4.20	0.45	84.00
63	3.60	0.55	72.00
64	3.00	1.00	60.00
65	4.60	0.55	92.00
66	4.00	0.00	80.00
67	4.00	0.00	80.00
68	3.80	0.84	76.00
69	2.80	0.84	56.00
70	3.80	1.30	76.00
71	4.00	0.71	80.00
72	3.40	0.89	68.00
73	4.40	0.55	88.00
74	3.60	0.55	72.00
75	3.40	0.55	68.00
76	4.00	0.00	80.00
77	5.00	0.00	100.00
78	3.80	0.84	76.00
79	3.80	1.10	76.00
80	3.60	0.55	72.00
81	3.60	1.67	72.00
82	4.40	0.55	88.00
83	4.00	0.00	80.00
84	4.00	1.00	80.00
85	4.20	0.45	84.00
86	3.80	0.45	76.00
87	3.60	0.55	72.00
88	3.80	1.10	76.00
89	4.40	0.55	88.00
90	3.80	0.84	76.00
91	4.40	0.55	88.00
92	3.80	0.84	76.00
93	3.80	1.10	76.00

94	3.80	0.45	76.00
95	4.40	1.34	88.00
96	4.00	1.22	80.00
97	3.20	1.30	64.00
98	3.60	0.55	72.00
99	4.00	1.22	80.00
100	3.20	1.10	64.00
101	3.80	1.10	76.00
102	2.20	1.79	44.00
103	4.20	1.10	84.00
104	4.20	0.45	84.00
105	4.60	0.89	92.00
106	3.60	0.55	72.00
107	3.60	0.55	72.00
108	4.20	0.45	84.00
109	4.00	0.00	80.00
110	4.20	0.45	84.00
111	5.00	0.00	100.00

Table D.3: Kinesthetic Learning Style Results for Every Participant

Kinesthetic			
	Average	**Standard Deviation**	**Percentage**
1	2.40	1.34	48.00
2	5.00	0.00	100.00
3	4.00	0.00	80.00
4	4.60	0.55	92.00
5	4.40	0.89	88.00
6	4.60	0.89	92.00
7	4.60	0.89	92.00
8	3.60	0.55	72.00
9	3.60	0.55	72.00
10	4.00	0.71	80.00
11	4.00	0.00	80.00
12	3.20	1.30	64.00
13	3.80	0.45	76.00
14	4.00	0.00	80.00
15	5.00	0.00	100.00
16	4.80	0.45	96.00
17	4.00	0.00	80.00
18	3.80	0.84	76.00
19	3.60	0.55	72.00
20	2.80	0.84	56.00
21	4.60	0.55	92.00
22	3.40	0.55	68.00
23	4.40	0.55	88.00
24	3.60	0.55	72.00
25	4.20	0.45	84.00
26	4.00	0.00	80.00
27	5.00	0.00	100.00
28	4.20	0.45	84.00
29	3.80	0.45	76.00
30	3.60	0.55	72.00
31	5.00	0.00	100.00
32	4.80	0.45	96.00
33	4.00	0.00	80.00
34	5.00	0.00	100.00
35	4.20	0.45	84.00
36	4.20	0.45	84.00
37	4.20	0.84	84.00
38	4.20	0.45	84.00
39	4.00	0.00	80.00
40	4.80	0.45	96.00
41	4.40	0.55	88.00
42	4.00	0.00	80.00
43	4.80	0.45	96.00
44	3.80	0.84	76.00
45	3.60	0.89	72.00

46	4.00	0.71	80.00
47	2.60	0.55	52.00
48	4.00	0.71	80.00
49	3.40	0.89	68.00
50	4.40	0.89	88.00
51	5.00	0.00	100.00
52	4.00	0.71	80.00
53	4.40	0.55	88.00
54	4.00	0.71	80.00
55	4.40	0.55	88.00
56	4.60	0.55	92.00
57	2.60	1.14	52.00
58	4.80	0.45	96.00
59	2.60	1.34	52.00
60	3.40	0.55	68.00
61	4.20	0.84	84.00
62	4.20	0.84	84.00
63	4.80	0.45	96.00
64	4.60	0.55	92.00
65	4.00	1.00	80.00
66	4.40	0.55	88.00
67	3.60	0.55	72.00
68	3.20	0.84	64.00
69	4.40	0.89	88.00
70	4.20	0.84	84.00
71	4.00	0.00	80.00
72	4.20	0.45	84.00
73	3.60	1.14	72.00
74	4.00	0.00	80.00
75	3.80	0.84	76.00
76	4.00	0.00	80.00
77	4.40	0.55	88.00
78	3.60	0.55	72.00
79	4.40	0.55	88.00
80	4.80	0.45	96.00
81	3.60	1.14	72.00
82	4.60	0.55	92.00
83	4.40	0.55	88.00
84	4.40	0.55	88.00
85	3.60	0.55	72.00
86	3.60	0.55	72.00
87	3.60	0.55	72.00
88	4.00	1.22	80.00
89	4.60	0.55	92.00
90	4.20	0.84	84.00
91	3.20	1.10	64.00
92	4.00	0.71	80.00
93	4.00	1.22	80.00

94	4.00	0.00	80.00
95	4.00	1.00	80.00
96	4.20	0.45	84.00
97	3.40	0.89	68.00
98	2.80	0.84	56.00
99	4.20	0.45	84.00
100	3.20	1.10	64.00
101	3.60	0.55	72.00
102	3.60	1.67	72.00
103	4.40	0.89	88.00
104	3.00	1.41	60.00
105	4.80	0.45	96.00
106	4.40	0.55	88.00
107	2.80	0.45	56.00
108	4.20	0.84	84.00
109	3.20	1.10	64.00
110	4.80	0.45	96.00
111	4.80	0.45	96.00

Table D.4: Tactile Learning Style Results for Every Participant

Tactile			
	Average	**Standard Deviation**	**Percentage**
1	2.80	1.79	56.00
2	5.00	0.00	100.00
3	4.60	0.55	92.00
4	4.00	1.22	80.00
5	2.60	1.14	52.00
6	3.00	1.87	60.00
7	3.20	1.79	64.00
8	3.60	0.89	72.00
9	3.20	0.84	64.00
10	3.60	1.67	72.00
11	4.80	0.45	96.00
12	2.80	1.79	56.00
13	3.00	1.22	60.00
14	3.80	0.45	76.00
15	3.60	1.14	72.00
16	4.80	0.45	96.00
17	3.80	0.84	76.00
18	3.80	0.84	76.00
19	4.00	0.71	80.00
20	3.60	0.89	72.00
21	5.00	0.00	100.00
22	4.20	0.84	84.00
23	4.40	0.55	88.00
24	3.40	1.14	68.00
25	3.80	0.84	76.00
26	3.20	1.10	64.00
27	5.00	0.00	100.00
28	3.80	0.84	76.00
29	3.60	0.55	72.00
30	2.60	0.89	52.00
31	4.60	0.89	92.00
32	4.40	0.89	88.00
33	3.40	0.89	68.00
34	4.60	0.55	92.00
35	3.60	0.89	72.00
36	3.60	0.89	72.00
37	4.00	0.71	80.00
38	4.40	0.55	88.00
39	3.80	0.45	76.00
40	4.20	0.45	84.00
41	4.20	0.45	84.00
42	4.20	0.45	84.00
43	4.60	0.55	92.00
44	3.20	0.84	64.00
45	3.20	1.10	64.00

46	4.40	0.55	88.00
47	3.80	1.64	76.00
48	3.60	0.55	72.00
49	3.00	0.71	60.00
50	4.00	0.00	80.00
51	4.60	0.89	92.00
52	2.80	0.45	56.00
53	4.00	0.71	80.00
54	3.60	0.55	72.00
55	4.20	0.45	84.00
56	3.60	0.55	72.00
57	2.40	1.14	48.00
58	4.00	1.00	80.00
59	3.80	0.45	76.00
60	3.20	0.84	64.00
61	4.00	0.71	80.00
62	4.00	0.71	80.00
63	4.20	0.84	84.00
64	4.20	0.45	84.00
65	3.00	0.00	60.00
66	3.80	1.10	76.00
67	3.80	0.45	76.00
68	3.20	0.84	64.00
69	4.00	1.00	80.00
70	3.40	0.55	68.00
71	3.80	0.45	76.00
72	3.00	1.00	60.00
73	4.00	1.22	80.00
74	4.20	0.45	84.00
75	3.00	0.71	60.00
76	4.00	0.00	80.00
77	2.60	1.82	52.00
78	3.20	0.84	64.00
79	4.00	1.22	80.00
80	2.60	1.14	52.00
81	3.00	0.71	60.00
82	4.40	0.89	88.00
83	4.20	0.45	84.00
84	3.60	0.89	72.00
85	3.20	0.84	64.00
86	3.60	0.55	72.00
87	3.60	0.55	72.00
88	2.60	0.89	52.00
89	4.20	0.45	84.00
90	4.20	0.84	84.00
91	3.20	1.10	64.00
92	4.00	0.71	80.00
93	4.00	1.22	80.00

94	4.00	0.00	80.00
95	4.00	1.00	80.00
96	4.20	0.45	84.00
97	3.40	0.89	68.00
98	2.80	0.84	56.00
99	4.20	0.45	84.00
100	3.20	1.10	64.00
101	3.60	0.55	72.00
102	3.60	1.67	72.00
103	4.40	0.89	88.00
104	3.00	1.41	60.00
105	4.80	0.45	96.00
106	4.40	0.55	88.00
107	2.80	0.45	56.00
108	4.20	0.84	84.00
109	3.20	1.10	64.00
110	4.80	0.45	96.00
111	4.80	0.45	96.00

Table D.5: Group Learning Style Results for Every Participant

Group			
	Average	**Standard Deviation**	**Percentage**
1	3.80	1.79	76.00
2	5.00	0.00	100.00
3	3.80	1.10	76.00
4	3.60	0.55	72.00
5	5.00	0.00	100.00
6	2.80	2.05	56.00
7	2.40	0.89	48.00
8	3.80	0.84	76.00
9	3.20	1.30	64.00
10	2.60	1.34	52.00
11	4.20	0.45	84.00
12	3.80	1.10	76.00
13	4.00	0.71	80.00
14	4.20	0.45	84.00
15	4.20	0.45	84.00
16	4.80	0.45	96.00
17	3.60	0.55	72.00
18	4.00	0.71	80.00
19	4.20	0.45	84.00
20	2.40	0.89	48.00
21	4.80	0.45	96.00
22	2.00	1.00	40.00
23	4.80	0.45	96.00
24	3.80	0.45	76.00
25	4.20	0.45	84.00
26	3.60	0.89	72.00
27	5.00	0.00	100.00
28	4.20	0.45	84.00
29	3.80	0.45	76.00
30	2.60	0.55	52.00
31	5.00	0.00	100.00
32	5.00	0.00	100.00
33	4.00	0.00	80.00
34	3.60	1.34	72.00
35	4.40	0.89	88.00
36	3.40	0.55	68.00
37	3.40	0.55	68.00
38	4.20	0.45	84.00
39	3.20	0.84	64.00
40	4.20	0.45	84.00
41	3.60	0.55	72.00
42	4.40	0.55	88.00
43	4.60	0.55	92.00
44	3.80	1.10	76.00
45	3.60	0.89	72.00

46	4.80	0.45	96.00
47	2.20	1.10	44.00
48	3.80	0.45	76.00
49	2.60	0.55	52.00
50	3.60	1.14	72.00
51	5.00	0.00	100.00
52	3.80	0.84	76.00
53	4.00	0.00	80.00
54	4.20	0.45	84.00
55	4.20	0.45	84.00
56	4.00	0.71	80.00
57	1.80	0.45	36.00
58	4.60	0.55	92.00
59	3.40	0.89	68.00
60	3.60	0.89	72.00
61	3.20	0.45	64.00
62	3.20	0.45	64.00
63	2.80	1.10	56.00
64	3.40	1.14	68.00
65	2.00	0.00	40.00
66	3.20	1.10	64.00
67	4.20	0.84	84.00
68	1.60	0.55	32.00
69	3.80	0.45	76.00
70	4.20	0.84	84.00
71	4.20	0.45	84.00
72	3.00	0.71	60.00
73	3.40	0.55	68.00
74	3.80	0.45	76.00
75	3.80	0.45	76.00
76	4.00	0.00	80.00
77	2.60	0.89	52.00
78	3.20	0.45	64.00
79	3.60	1.14	72.00
80	4.00	0.00	80.00
81	3.00	1.00	60.00
82	3.00	1.22	60.00
83	4.00	0.00	80.00
84	3.00	1.22	60.00
85	3.20	0.45	64.00
86	3.40	0.55	68.00
87	3.60	0.55	72.00
88	3.00	0.00	60.00
89	3.80	0.45	76.00
90	4.20	0.45	84.00
91	2.80	1.10	56.00
92	2.20	0.45	44.00
93	4.20	0.45	84.00

94	2.80	1.10	56.00
95	2.20	1.10	44.00
96	3.60	0.55	72.00
97	2.60	1.14	52.00
98	2.20	0.45	44.00
99	3.60	0.55	72.00
100	2.00	0.71	40.00
101	2.60	0.55	52.00
102	3.40	1.34	68.00
103	3.80	0.45	76.00
104	1.60	0.55	32.00
105	5.00	0.00	100.00
106	4.60	0.89	92.00
107	3.60	0.55	72.00
108	4.20	0.45	84.00
109	2.40	0.89	48.00
110	4.20	0.45	84.00
111	4.80	0.45	96.00

Table D.6: Individual Learning Style Results for Every Participant

Individual			
	Average	**Standard Deviation**	**Percentage**
1	1.00	0.00	20.00
2	5.00	0.00	100.00
3	4.20	0.84	84.00
4	4.20	0.45	84.00
5	4.00	0.00	80.00
6	4.00	1.73	80.00
7	4.40	0.55	88.00
8	4.20	0.45	84.00
9	2.20	1.64	44.00
10	3.60	1.52	72.00
11	2.20	1.64	44.00
12	3.00	1.22	60.00
13	3.80	0.45	76.00
14	3.40	0.89	68.00
15	2.80	1.10	56.00
16	3.60	1.14	72.00
17	3.80	0.84	76.00
18	2.20	0.45	44.00
19	3.80	0.84	76.00
20	4.60	0.55	92.00
21	2.80	1.64	56.00
22	3.80	1.30	76.00
23	1.40	0.55	28.00
24	3.20	0.84	64.00
25	4.40	0.55	88.00
26	3.00	1.00	60.00
27	5.00	0.00	100.00
28	4.40	0.55	88.00
29	3.80	0.45	76.00
30	4.00	0.00	80.00
31	2.40	0.55	48.00
32	1.60	0.55	32.00
33	2.20	0.45	44.00
34	2.00	1.00	40.00
35	4.20	0.45	84.00
36	3.20	0.84	64.00
37	3.60	1.14	72.00
38	3.40	1.34	68.00
39	4.20	0.84	84.00
40	4.80	0.45	96.00
41	4.80	0.45	96.00
42	2.00	0.00	40.00
43	1.00	0.00	20.00
44	2.00	0.71	40.00
45	2.80	0.84	56.00

46	3.60	0.55	72.00
47	5.00	0.00	100.00
48	2.60	0.55	52.00
49	4.00	0.00	80.00
50	3.40	0.89	68.00
51	2.40	0.55	48.00
52	2.60	0.55	52.00
53	3.40	0.55	68.00
54	2.60	0.55	52.00
55	3.00	0.71	60.00
56	2.80	0.45	56.00
57	3.80	1.10	76.00
58	2.20	0.45	44.00
59	4.40	0.55	88.00
60	3.20	0.45	64.00
61	4.00	0.00	80.00
62	4.00	0.00	80.00
63	4.00	0.71	80.00
64	4.20	0.45	84.00
65	4.20	1.10	84.00
66	4.00	0.00	80.00
67	3.00	0.00	60.00
68	4.80	0.45	96.00
69	2.80	0.45	56.00
70	4.20	1.10	84.00
71	2.20	0.45	44.00
72	3.60	1.14	72.00
73	3.40	0.55	68.00
74	3.20	0.45	64.00
75	3.60	0.89	72.00
76	4.00	0.00	80.00
77	4.00	1.00	80.00
78	2.80	0.84	56.00
79	3.60	1.67	72.00
80	2.80	0.45	56.00
81	3.00	1.22	60.00
82	5.00	0.00	100.00
83	4.40	0.55	88.00
84	4.20	1.30	84.00
85	3.60	0.55	72.00
86	3.20	0.45	64.00
87	4.00	0.00	80.00
88	4.00	0.00	80.00
89	4.20	0.84	84.00
90	3.00	0.71	60.00
91	4.00	0.00	80.00
92	4.00	0.71	80.00
93	2.80	0.45	56.00

94	4.00	0.00	80.00
95	4.20	1.79	84.00
96	3.00	1.00	60.00
97	4.60	0.55	92.00
98	5.00	0.00	100.00
99	3.00	1.00	60.00
100	4.20	0.45	84.00
101	4.60	0.89	92.00
102	4.00	1.41	80.00
103	3.60	0.55	72.00
104	3.20	1.10	64.00
105	3.20	2.05	64.00
106	3.80	0.84	76.00
107	2.80	0.45	56.00
108	3.40	1.14	68.00
109	4.00	0.00	80.00
110	3.00	0.71	60.00
111	2.20	0.84	44.00

RESUME

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- Master Degree in English Language and Literature Program from Istanbul Aydin University (2019).
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- Head of English Department at abchorizon; BTEC approved center Turkey, Istanbul (February 2018 – Present).
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- Sales consultant for MM publications, Turkey branch (June 2015 – December 2015)
- Teaching at Governmental, Non-Governmental Schools and private sessions:
  - Fatih school, Turkey (2014 - 2015).
  - Qadimoon School, Turkey (2013 – 2014).
  - Ibn Zaydon, Al-Ma'amoon, and Omar Bn Abdlaziz Schools, Damascus (2012 – 2013).
  - Teaching private sessions (2009 – 2013).
- AL-Anwar Establishment for university services: Editor specialized in Translation, Grammar and Composition subjects (2011 – 2013).