

**AN INVESTIGATION INTO  
TYPES OF MULTIPLE INTELLIGENCES  
AND ACTIVITIES USED IN ENGLISH CLASSES  
AT PRIMARY SCHOOLS  
MA THESIS  
Aşlı ŞENBAŞ FİLİZ  
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**AN INVESTIGATION INTO**  
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**MA THESIS**

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## TAAHHÜTNAME

Yüksek Lisans Tezi olarak sunduğum “An Investigation into Types of Multiple Intelligences and Activities Used in English Classes at Primary Schools” adlı çalışmanın, tarafımdan, bilimsel ahlak ve geleneklere aykırı düşecek bir yardıma başvurmaksızın yazıldığını ve yararlandığım eserlerin kaynakçada gösterilenlerden oluştuğunu, bunlara atıf yapılarak yararlanılmış olduğunu belirtir ve bunu onurumla doğrularım.

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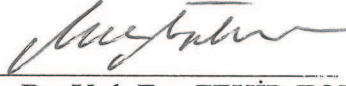
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Sosyal Bilimler Enstitüsü Müdürlüğü'ne  
Aslı ŞENBAŞ FİLİZ'e ait "An Investigation Into Types of Multiple Intelligences and  
Activities Used in English Classes at Primary Schools" adlı çalışma Yabancı Diller Eğitimi  
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**Tezin Adı:** Çoklu Zeka Alanları ve İlköğretim Okulları İngilizce Derslerinde Kullanılan Etkinlikler Üzerine Bir İnceleme

## ÖZET

Bu çalışmanın başlıca amacı öğrencilerin çoklu zeka alanları ve çoklu zeka alanlarının altıncı ve sekizinci sınıf seviyelerine, cinsiyetlerine, okullarına ve İngilizce dersi sınıf içi aktivitelerine göre nasıl farklılaştığını araştırmaktır.

Bu araştırma; 2008-2009 eğitim-öğretim yılı ikinci döneminde, Çanakkale ve ilçelerinde, altı farklı ilköğretim okulunda, toplam 269 altı ve sekizinci sınıf öğrencisi ve 9 İngilizce öğretmeni ile yapılmıştır. 138 erkek ve 131 kız öğrenci ile 171 altıncı sınıf, 98 sekizinci sınıf öğrencisi vardır. Bir çoklu zeka envanteri ile İngilizce dersi sınıf içi aktiviteler envanteri öğrencilere, bir İngilizce dersi sınıf içi aktiviteler envanteri öğretmenlere uygulanmıştır.

Envanterler yoluyla elde edilen veriler Excel ve SPSS (Sosyal Bilimler için İstatistik Program) programları, betimleyici istatistik, bağımsız gruplar t-testleri, varyans analizi yoluyla analiz edilmiştir.

Araştırma sonuçları, öğrencilerin çoklu zekalarının sınıf düzeylerine, cinsiyetlerine ve okullarına göre farklılaştığını göstermiştir. Ayrıca, öğrencilerin baskın zeka alanları ile İngilizce derslerinde tercih ettikleri etkinlikler arasında da bağlantı olduğu söylenebilir. Örneğin; müziksel zeka katılımcıların en zayıf oldukları zeka türüdür ve öğrenciler müziksel zekaya ait ders içi etkinlikleri de en az yararlı bulmuşlardır.

Elde edilen verilere göre; arařtırmaya katılan öđretmenler İngilizce derslerinde çođunlukla görsel/uzamsal ve sözel/dilsel zekaya yönelik etkinlikler kullanmaktadırlar ve müziksel zeka gibi bazı çoklu zeka alanlarına yönelik ders içi etkinlikleri göz ardı etmektedirler.

**Title:** An Investigation into Types of Multiple Intelligences and Activities Used in English Classes at Primary Schools.

## **ABSTRACT**

The main purpose of the study was to investigate primary school students' multiple intelligences according to their preferences and how the multiple intelligences differ in terms of grade level, gender, school and English classroom activities.

This research was conducted in six primary schools in Çanakkale and provinces of Çanakkale with a total of 269 sixth and eighth grade students and 9 English Language teachers in spring 2008-2009 semester. There were 138 male and 131 female students. There were 171 6<sup>th</sup> grade and 98 8<sup>th</sup> grade students in the study. In this study, three different inventories were used. A Multiple Intelligence inventory and an English classroom activities inventory were applied to the students and an English classroom inventory was applied to teachers of English.

The data obtained from the study was analyzed statistically by using both Excel and Statistical Package for Social Sciences Program (SPSS) through use of descriptive statistics, independent Samples T-Test, and Analyses of Variance (ANOVA).

The results of the study showed that primary school students' multiple intelligences showed variety according to their grade levels, gender and school. There seems to be a correlation between students' dominant multiple intelligence types and activities preferred in English classes. And the students perceived activities related to the musical intelligence to be the least useful activities.

According to data obtained, English teachers participated in this study frequently use activities related to visual/spatial and verbal/linguistic intelligence in their classes and they ignore some activities related to another types of multiple intelligences like musical intelligence.



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## **ABBREVIATIONS**

**ANOVA:** Analysis of Variance

**EFL:** English as a Foreign Language

**ELT:** English Language Teaching

**MI:** Multiple Intelligences

**MIT:** Multiple Intelligence Theory

**PS:** Primary School

**RQ:** Research Question

**SLA:** Second Language Acquisition

**SPSS:** Statistical Package for Social Sciences

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0. Introduction**

This chapter presents a brief background of the study followed by the research questions. Then the significance, assumptions and limitations to the study will be presented. Finally, the organization of the study is given.

### **1.1 Background of the Study**

Language is complex and language teaching is correspondingly complex. Different situations call for different materials, different activities, and different strategies (Lewis & Hill, 1985).

From the early 1970s, researchers in the field have been trying to find teaching methods, classroom techniques, and instructional materials that will promote better language instruction. However, in spite of all these efforts, none of the methods and techniques has proved that they can work all the time, in all classes, with all students (Richards and Rodgers, 2001). This may be because there are considerable individual differences in language learning such as gender, age, social status, motivation, attitude, aptitude, culture, etc. that may influence the process. Thus, language learners differ both in the speed of acquisition and in ultimate level of achievement (Ellis, 1994).

Individual differences have often been thought and reported to affect learning process and success. For example, female students are reported to be more successful than male students in language learning (see for example Dursun, 2007). Similarly, motivation is an indicator of success in learning a language (Demir, 2005). Age is accepted as an important factor in language learning process (Yilmaz, 2007). Likewise, positive attitude affect learning in a good way (Oller, 1978 cited in Ellis, 1994). Learners who have better social conditions are more willing and more successful than the learners who have worse social conditions. Anxiety is another individual difference which has been studied and discussed (Bailey, 1983; Horwitz, 1986; Young, 1986; cited in Ellis, 1994). For example, Ellis (1994) states that anxiety (its presence or absence) is best seen not as a necessary condition of successful second language learning, but rather as a factor that contributes in differing degrees in different learners. Individual differences have also been investigated in relation to one another (e.g., motivation and attitude, gender and motivation, intelligence and aptitude). Educators and psychologists have been carrying out research on the effects of individual differences on learning and teaching process.

Of many individual differences, intelligence is a very controversial and old issue (Genesee, 1976; Harley, 1986 cited in Spolsky, 1989; Skehan, 1980 cited in Skehan, 1989) as researchers could not reach an agreement even on the definition of intelligence. The definition and dimensions of intelligences showed changes by time.

Researchers define intelligence as the capacity to acquire knowledge, the ability to think and reason in the abstract, and the capability for solving problems (Sternberg, 1986). Some theorists believe that intelligence is a basic ability that affects performance on all cognitively oriented tasks. Gottfredson (1997) states that intelligence is a general process, mental capability that involves the ability to reason, question and plan to solve problems, think and gives meaning to unknown, comprehend ideas and language, and learn; it is the store of gathering and analyzing the information. Williams and Burden (1997) maintain that intelligence is the main factor in predicting success or failure in school.

While discussing about the definition of intelligence, some psychologists have attempted to measure the human intelligence. Thorndike and Lohman (1990) report that as early as 1904, Alfred Binet and Theodore Simon designed a test to predict success in school in response. Following them, In 1912, Wilhelm Stern developed the intelligence quotient (IQ), which is the ratio of one's mental age to one's chronological age and multiplied by 100 (cited in Thorndike and Lohman, 1990). This single score has been used to categorize students within educational settings. Many intelligence tests, similar to Binet's, measure students' abilities in logical-mathematical and verbal/linguistic domains, and students are required to respond to verbal and written multiple-choice and short-answer questions within a determined frame (Wiseman, 1997). An IQ score was computed by comparing the mental age score to the person's actual chronological age.

Intelligence tests have been criticized by several researchers because the definition of intelligence has been dependent on the capacity to answer the questions on the Intelligence Quotient (IQ) tests that focuses only on mathematical and linguistic abilities (Gardner, 1999). According to Thorndike, Bregman, Cobb and Woodyard (1973), IQ tests "greatly favored words, numbers, space-forms, and pictures, neglecting three dimensional objects and situations containing other human beings".

Recently, a new theory regarding our intelligence has been proposed. by Gardner (1983) called the theory of Multiple Intelligences (MI). Gardner criticizes the definition of intelligence as a single, general capacity manifested in certain linguistic and logical abilities that can be measured in a number (the intelligent Quotient, or IQ). MI theory is multifaceted, that is intelligence is not unitary, but composed of several independent and modular intelligences. Gardner (1983) stated that intelligence is the ability to solve problems, to create products that are valued within one or more cultural settings. In this theory, Gardner identified eight types of intelligences. These are verbal/linguistic, musical, logical/mathematical, visual/spatial, bodily/kinesthetic, interpersonal, intrapersonal and naturalist intelligence. With the theory of Multiple Intelligence,

the definition of ‘intelligence’ and ‘intelligent’ has been changed. Everybody can be intelligent in different fields, being intelligent does not mean that only being successful in mathematics or science. A musician might be intelligent as well.

Multiple Intelligence Theory has become very popular with its applications to education (Sternberg, 2002; Kornhaber, 2004; Armstrong, 2000; Haley, 2004). It has been argued that general ability was found not to be important in predicting foreign language learning performance and there are probably “multiple intelligences” for learning a foreign language (Robinson, 2002; Grigorenko, Sternberg & Erhman, 2000; Sternberg, 2002).

In Turkey, too, MI has become very popular. In 2006, Ministry of Education adopted new educational policies by passing regulations (Ministry of Education, *Tebliğler Dergisi*, March 2006, no: 2582). Ministry of Education claims that they are changing educational programs and students’ books according to the MI Theory. Teachers are, therefore, expected to construct their lessons considering MI Theory and MI preferences of the students’.

Implementation of new policies bring along new problems. In order to adapt MI Theory into their lessons, teachers have to get acquainted to MI Theory. Getting to know a system may be different from making use of it. Therefore, learning how new policies are implemented can be of special value to understand the current situation in teaching of English in Turkish primary education system. Further, it may be fruitful to learn more about students’ preferences for different learning and teaching activities. With so many individual differences involved in the learning process, investigating MI in relation to individual differences warrants new insights into how different learners react to different learning environments. This is what this study partly aims to achieve.

## **1.2. Purpose of the Study and Research Questions**

This study aims to understand which Multiple Intelligence Types are dominant among the 6<sup>th</sup> and 8<sup>th</sup> grade students of different primary schools as well as to explore the relationship between Multiple Intelligences and other individual



difference variables; gender, class, and school. This study also aimed to explore whether English language teachers implement MI Theory in their classroom activities or not.

Answers for the following research questions were sought throughout the study:

**RQ1-** Which multiple intelligence types are dominant among primary school students?

**RQ2-** Is there a difference between male students and female students in terms of their dominant multiple intelligence types?

**RQ3-** Is there a difference between 6<sup>th</sup> grade students and 8<sup>th</sup> grade students in terms of their dominant multiple intelligence types?

**RQ4-** Is there a difference between students from different socio-economic areas in terms of dominant multiple intelligence types?

**RQ5-** Which language teaching activities are perceived more useful by students?

**RQ6-** Is there a difference between 6<sup>th</sup> grade students and 8<sup>th</sup> grade students in terms of perceived usefulness of language teaching activities?

**RQ7-** Are students' MI preferences and activity preferences similar?

**RQ8-** Do the English teachers at primary schools address all MI fields?

### **1.3. Significance of the Study**

Multiple intelligences has been very popular in learning and teaching and this supplies many opportunities for both learners and teachers. MI Theory has a growing importance in development and re-designing curriculum. The national curriculum of primary education has been re-constructed regarding key principles of MI Theory. Understanding multiple intelligence would contribute to understanding learning and teaching. Results of this study can, therefore, shed

light on our students' preferences. Thus, the study can be informative about our sample. Important in this study are variables such as students' gender, grade and socio-economic features. Such variables, in interaction with MI, may contribute to our understanding of our students. Knowledge about the effects of these variables in interaction with our MI may guide the teachers in designing more effective teaching programmes.

Looking at the results of this study, English Language teachers may get new ideas about classroom activities implementing MI Theory in their classroom and they may vary their classroom activities regarding students' MI preferences. Also, they may help their students to realize strengths and weaknesses.

This study is also important for material writers. Understanding students' MI preference may definitely guide the material writers in developing more appealing materials for students of different gender, age, and socio-economic groups.

This study also may provide crucial information for teacher training programmes. The findings of this study may be illuminating in language teaching methodology courses of English Teaching Departments or other teacher training programmes as to which activities are more preferred and found useful.

Finally, the results of this study may yield interesting results over which further research can be based. Answers to be found can generate new question marks both for teachers and researchers about MI, individual differences, and the learning process.

#### **1.4. Assumptions of the Study**

This study was carried out under the following assumptions:

Students were willing to participate in the study. Students reported their preferences frankly and they expressed themselves honestly. Other group of participants were English Language teachers at primary schools. Our colleagues shared their classroom activities fairly.

### **1.5. Limitations of the Study**

This study has a number of limitations. Firstly, this study was conducted only in centre and provinces of Çanakkale. Studies in other cities with different socio-cultural profile may yield different results. Secondly, this study involved only 6th grade and 8th grade students. Findings of this study cannot be generalized to other grades. Thirdly, data was collected at the end of May in the spring term of 2008-2009 academic year. Many 8<sup>th</sup> grade students were on sick leave before SBS (Seviye Belirleme Sınavı is an examination which is taken by 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade students at the end of each year in order to enter high schools) examination. This may have biased the data as fewer 8<sup>th</sup> graders participated in the study than the 6<sup>th</sup> graders. Thirdly, findings related to teachers can only be applicable to our sample as there only nine (9) English Language teachers in the study. For this reason, it will not be appropriate to make generalizations for all English Language teachers. Finally, the results of this study regarding usefulness of teaching activities cannot unveil any cause and effect relationship as they were based on student perception, but can only be indicative of potential effectiveness.

### **1.6. Organisation of the Study**

This thesis has been organized into five chapters.

Chapter one is the introduction chapter. It provides some significant background knowledge of the study. The research questions of the study are introduced in this chapter. Assumptions and limitations of the study are followed by information on the organisation of the study.

Chapter two provides the theoretical and empirical foundation for the study. In this chapter, the basic definitions and information about the study provided.

Chapter three explains the methodology of the study. The chapter includes the participants, setting, instruments, procedure, and the data analysis.

Chapter four introduces the results of the study and interprets the findings in accordance with the research questions. Finally, findings are discussed in relation to current literature and regulations set by MEB.

Chapter five draws the conclusions out of the findings and proposes some pedagogical implications and suggestions for further research.

### **1.7 Chapter Summary**

This chapter provided some significant background knowledge of the study, presented the research questions addresses, then exhibited the assumptions and limitations of the study and finally gave information on the organization being followed.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter will revise the definition of learning, then mention about factors affecting language learning and theory of multiple intelligence will be examined.

#### **2.1 Learning**

In spite of its critical importance within education, the problem of explaining how learning takes place, and analyzing the factors that influence it remains a confused area. The problem is that learning is a highly complex activity. Most psychologists would agree that learning is a relatively persistent change in an individual's potential behaviour due to experience. This definition draws attention to three things: first that learning must change the individual in some way; second that this change comes about as a result of experience; and third that it is a change in his or her potential behaviour (Fontana, 1988 cited in Williams and Burden, 1997).

A search in contemporary dictionaries reveals that learning is "acquiring or getting of knowledge of a subject or a skill by study, experience, or instruction". A more specialized definition might read as follows: "Learning is a relatively permanent change in a behavioural tendency and is the result of reinforced practice" (Kimble and Garnezy 1963:133 as cited Brown, 1987).

Brown (1987) also extracts domains of research and inquiry:

1. Learning is acquisition or “getting.”
2. Learning is retention of information or skill.
3. Retention implies storage systems, memory, cognitive organization.
4. Learning involves active, conscious focus on and acting upon events outside or inside the organism.
5. Learning is relatively permanent, but subject to forgetting.
6. Learning involves some form of practice, perhaps reinforced practice.
7. Learning is a change in behaviour.

## **2.2 Factors Affecting Foreign Language Learning**

Recently educators have realized that every method or technique has its advantages and disadvantages, and will be effective depending on many factors, including individual differences among students being taught. Realizing the fact that some learners learn better or faster, even within the same environment, and that there is no single way of effectively teaching everybody, educational researchers have shifted their focus to the learner. Some students usually prefer to ask questions to the teacher during the exercises when the others usually prefer to sit and listen to the teacher. Teachers are aware that there are many factors which affect students' learning such as learning style, background information, age, personality, learning strategies, aptitude, motivation, attitude, intelligence, purposes (Krashen, 1979; Skehan, 1989; Lightbown and Spada, 1993; Ellis, 1994; Dörnyei, 2005).

Individual differences among language learners have attracted interests at educational researchers for many years. The study of individual differences in Second Language Acquisition (SLA) includes different concepts depending on whose research one examines. For example, Larsen-Freeman and Long (1991) include personal factors such as age and aptitude, social-psychological factors like attitude and motivation, personality factors, cognitive strategies such as ID among the possible causes of differential success among learners. According to Tudor (1996) the individual differences belonging to foreign or second language learners

have been examined under four headings. They are: introversion-extroversion, tolerance of ambiguity and risk-taking, anxiety and self-esteem, cognitive style.

However, it is beyond the scope of this study to examine all these different individual differences. This study concerns only some of these individual differences.

### **2.2.1 Anxiety**

Anxiety plays an important affective role in SLA. Anxiety is associated with feelings of uneasiness, self-doubt, apprehension, or worry. Scovel (1978 cited in Brown, 1987) defines anxiety as “a state of apprehension a vague fear...”. Jonassen & Grabowski(1993) cite Izard’s (1972) definition of anxiety as “being comprised of a combination of interacting fundamental effects: neuro physiological (such as tremors, sweating hands, flushing, increased heart rate, high blood pressure) behavioral-expressive, and phenomenological or subjective”. Izard (cited in Jonassen & Grabowski, 1993) proposes that anxiety includes fear reactions plus two or more basic emotions: distress, anger, shame (including shyness and guilt), on the negative side, and interest and excitement representing the positive side. Brown (1987) states that the research on anxiety suggests that, anxiety can be experienced at various levels. At the deepest, or global, level, *trait* anxiety is a more permanent predisposition to be anxious. Scovel (1978 cited in Ellis, 1994) defines trait anxiety as “a more permanent predisposition to be anxious”. Some people are predictably and generally anxious about many things. At a more momentary, or situational level, *state* anxiety is experienced in relation to some particular event or act (Brown, 1987). Spielberger (1983 cited in Ellis, 1994) defines *state* anxiety as “apprehension that is experienced at a particular moment in time as a response to a definite situation”. *Situation-specific* anxiety consists of the anxiety which is aroused by a specific type of situation or event such as public speaking, examinations, or class participation (Ellis, 1994, and Jonassen & Grabowski, 1993).

Learners can also experience anxiety as a result of fear or experience of ‘losing oneself’ in the target culture (Ellis, 1994). As Oxford (1992) points out, this is closely related to the idea of ‘culture shock’. She lists the affective states associated with this source of anxiety: ‘emotional regression, panic, anger, self-pity, indecision, sadness, alienation, “reduced personality”...’ (Brown, 1987; Chastain, 1988).

Scovel (1978), draws attention to Alpert and Haber’s (1960) distinction between *debilitative and facilitative anxiety* (Brown, 1987; Chastain, 1988, Ellis, 1994). The former motivates learners to ‘fight’ the new learning task, prompting them to make extra efforts to overcome their feeling of anxiety, although Horwitz (1986) suggests that this may only occur in fairly simple learning tasks. The latter causes the learner to ‘flee’ the learning task in order to avoid the source of anxiety. Williams (1991) suggests that the distinction between these two types of anxiety may correspond to the intensity of the anxiety, with a low-anxiety state having a facilitating function and a high-anxiety state a debilitating effect. Also, the two kinds of anxiety may sometimes cancel each other out, resulting in no apparent effect on achievement (Ellis, 1994).

In Bailey’s (1983) study of competitiveness and anxiety in second language learning, facilitative anxiety was one of the keys to success, and closely related to competitiveness. Bailey found in her self-analysis, however, that while competitiveness sometimes hindered her progress (for example, the pressure to outdo her peers sometimes caused her to retreat even to the point of skipping class), at other times it motivated her to study harder (as in the case of carrying out an intensive review of material in order to feel more at ease in oral work in the classroom). She explained the positive effects of competitiveness by means of the construct of facilitative anxiety (Brown, 1987; Chastain, 1988).

An anxiety (its presence or absence) is best seen as necessary condition of successful L2 learning, but rather as a factor that contributes in differing degrees in different learners (Ellis, 1994).



### 2.2.2. Attitudes

Psychologists define attitudes as the relatively enduring orientations that individuals develop towards the various objects and issues they encounter during their lives, and which they express verbally as opinions. Attitudes therefore clearly contain elements of value and belief, as well as varying degrees of factual knowledge (or what the holder takes to be factual knowledge). Less obviously, they may be partly conscious and partly unconscious, with the two sometimes even in conflict with each other (Fontana, 1991 cited in Williams and Burden, 1997).

Ellis (1985) discusses attitudes with motivation and he says “It is not always clear in SLA research what the distinction is between *attitudes* and *motivation*. Schumann (1978) lists ‘attitude’ as a social factor on a par with variables such as ‘size of learning group’. Gardner and Lambert (1972) define ‘attitude’ as the persistence shown by the learner in striving for a goal. Gardner (1979) suggests that attitudes are related to motivation by serving as supports of the learner’s overall orientation. Brown (1981) also distinguishes ‘motivation’ and ‘attitudes’. Brown uses the term ‘attitudes’ to refer to the set of beliefs that the learner holds towards members of the target language group ( e.g. whether they are seen as ‘interesting’ or ‘boring’, ‘honest’ or ‘dishonest’, etc.) and also towards his own culture.

Ellis (1985) states that Stern (1983) classifies attitudes into three types: (1) attitudes towards the community and people who speak the L2 (i.e. ‘group specific attitudes’); (2) attitudes towards learning the language concerned; and (3) attitudes towards languages and language learning in general. These attitudes are influenced by the kind of personality of the learner, for instance whether he is ethnocentric or authoritarian. They may also be influenced by the social milieu in which learning takes place.

Johnson (2001) mentions about other attitude types that have been discussed in relation to language learning: *attitude towards success*. This is ‘the degree to which a student strives for accomplishing goals in life’. It may be that people tend

to divide themselves into 'high achievers' and 'low achievers' in general. The 'high achievers' will strive to do well at everything, including learning languages.

*Attitudes towards teacher* It is a common belief that you will not learn French if you dislike the French teacher.

*Attitude towards your own country* One relevant type of attitude is associated with a feeling of 'ethnocentrism', a belief in the superiority of your own country. This unhelpful attitude is often said to be held by some countries where English is the main L1. A further fascinating factor is called 'anomie'. This is a feeling of a lack of attachment to your own culture. For example, someone who dreams all the time of living in America is likely to find the dreams helpful for learning English. But, if the reference group is felt in some way to be responsible for the negative feelings of anomie, this may prevent learning.

As Krashen (1985) has proposed, attitudes can act as barriers or bridges to learning a new language and are the "essential environmental ingredient" for language learning (Tse, 1997, p. 706).

### **2.2.3 Motivation**

The overall findings show that positive attitudes and motivation are related to success in second language learning (Gardner, 1985).

Dörnyei and Otto (1998: 65) define motivation as "In a general sense, motivation can be defined as the dynamically changing cumulative arousal in a person that initiates, directs, coordinates, and evaluates the cognitive and motor process where by initial wishes and desires are selected, prioritized, operationalised and (successfully or unsuccessfully) acted out".

Gardner (1985) defines motivation as "referring to a combination of effort plus desire to achieve the goal of learning the language plus favourable attitudes towards learning the language".

Gardner also makes the well-known distinction between *integrative* and *instrumental orientations* in motivation. Orientation is not the same as motivation, but represents reasons for studying the language. An integrative orientation occurs when the learner is studying a language because of a wish to identify with the culture of speakers of that language. An instrumental orientation describes a group of factors concerned with motivation arising from external goals such as passing exams, financial rewards, furthering a career or gaining promotion (Williams and Burden 1997; Ellis 1994).

Cognitive psychologists make a distinction between *extrinsic* and *intrinsic* motivation. Csikszentmihalyi and Nakamura (1989 cited in Williams and Burden, 1997) provide a clear definition of these concepts. They states that when the only reason for performing an act is to gain something outside the activity itself, such as passing an exam, or obtaining financial rewards, the motivation is likely to be extrinsic. When the experience of doing something generates interest and enjoyment, and the reason for performing the activity itself, then the motivation is likely to be intrinsic.

#### **2.2.4 Learning Styles**

Keefe and Ferrel (1990: 17) define learning style as ‘cognitive, affective, and psychological traits that are relatively stable indicators of how the learners perceive, interact with, and respond to the learning environment’. Likewise, Dunn (1990: 10) adds a few dimensions and defines learning styles as a combination of environmental, emotional, sociological, physical, and psychological elements that permit individuals to receive, store, and use knowledge or abilities’. In the same way Reid (1987: 89) defines learning styles as ‘the perceptual variations among learners in using one or more senses to understand, organize, and retain experience’. Another definition from Reid ( 1995, p. viii) “Learning styles refer to an individual’s natural, habitual, and preferred way(s) of absorbing, processing, and retaining new information and skills”

Shuell (1981 cited in Eggen & Kauchack, 1996) considers significant to point out that learning styles are ‘the preferred ways that different individuals have for processing and organizing information and for responding to environmental stimuli’. Richards (1985: 45) defines “learning style” (as also called Cognitive Styles) as the particular way in which a learner tries to learn something. In second or foreign language learning, different learners may prefer different solutions to learning problems.

Reid (1998) identifies six major style preferences. The first four are preferences for visual, auditory, kinesthetic, and tactile styles of learning, and the last two are preferences for group or individual preferences.

*Visual Learners:* These learners absorb information most effectively if it is provided through the visual channel. Visual learners like visual stimulation such as films and videos, and if some large chunk of information is presented orally their understanding is considerably enhanced by a handout and various visual aids, such as overhead transparencies, as well as by taking extensive notes.

*Auditory Learners* use most effectively auditory input such as lectures or audiotapes. They also like to ‘talk the material through’ by engaging in discussions and group work.

*Kinesthetic and tactile learners* are often grouped together under the ‘haptic’ style category. The kinesthetic style refers to learning most effectively through complete body experience, whereas tactile learners like a hands-on, touching learning approach.

*Individual learners:* They prefer to learn through working alone. They want to pace themselves and become critical with the presence of an authority.

*Group learners:* They prefer learning through working with others and participating in group works (Reid, 1998)

Table 2.1 provides a summary of the various dimensions of learning styles.

**Table 2.1 Overview of Some Learning Styles** (Reid, 1998: p. x)

<b><u>Perceptual Learning Styles</u></b>	
Visual	learns more effectively through the eyes (seeing)
Auditory	learns more effectively through the ear (hearing)
Tactile	learns more effectively through touch (hands-on)
Kinesthetic	learns more effectively through complete body experience
Group	learns more effectively through working with others
Individual	learns more effectively through working alone
<b><u>Field Independent and Field Dependent (Sensitive) Learning Styles</u></b>	
Field Independent	Learns more effectively sequentially, analyzing facts
Field Dependent	Learns more effectively in context (holistically) and is sensitive to human relationships
<b><u>Analytic and Global Learning Styles</u></b>	
Analytic	Learns more effectively individually, sequentially, linearly
Global	Learns more effectively through concrete experience and through interaction with other people
<b><u>Reflective and Impulsive Learning Styles</u></b>	
Reflective	Learns more effectively when given time to consider options
Impulsive	Learns more effectively when able to respond immediately
<b><u>Kolb Experiential Learning Styles</u></b>	
Converger	Learns more effectively when able to perceive abstractly and to process actively
Diverger	Learns more effectively when able to perceive concretely and to process reflectively
Assimilator	Learns more effectively when able to perceive abstractly and to process reflectively
Accommodator	Learns more effectively when able to perceive concretely and to process actively

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<b><u>Myers-Briggs Type Indicator (MBTI)</u></b>	
Extraverted	Learns more effectively through concrete experience, contacts with and relationships with others
Introverted	Learns more effectively in individual, independent learning situations
Sensing	Learns more effectively from reports of observable facts
Intuition	Learns more effectively from meaningful experiences
Thinking	Learns more effectively from impersonal and logical circumstances
Feeling	Learns more effectively from personalized circumstances
Judging	Learns more effectively by reflection, deduction, analysis, and processes that involve closure
Perceiving	Learns more effectively through negotiation, feeling, and inductive processes that postpone closure
<b><u>Right- and Left-Brained Learning Styles</u></b>	
Right-Brained	Learns more effectively through visual, analytic, reflective, self-reliant learning
Left-Brained	Learns more effectively through auditory, global, impulsive, interactive learning

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Research on learning style has shown that when new information is taught through the strongest perceptual strength, success increases. It is also confirmed that successful students and unsuccessful students have different perceptual learning style preferences (Dunn, 1983, p.496).

## **2.3 The Theory Of Multiple Intelligences**

### **2.3.1 Intelligence**

In the stereotype view, intelligence is accepted as a single quality that is manifested throughout a person's intellectual performances, measurable by a single quantifiable index called IQ score, presenting a potential early in life or not at all, inherited and static (Gardner, 1995).

In the history of psychology, there were many views of intelligence such as;

*Piaget's theory of developmental psychology* which says; intelligence is developmentally constructed in the mind by the learner and moves from concrete and abstract stages of understanding,

*Vygotsky's theory of social mediation:* intelligence is a function of activity mediated through material tools, psychological tools, and other human beings,

*Feuerstein's theory of structural cognitive modifiability:* intelligence is a function of experience and can be changed through guided mediation,

*Sternberg's successful intelligence:* intelligence is triarchic, with analytic, creative and practical components that required to be balanced,

*Perkin's theory of learnable intelligence:* intelligence is made up of neural, experiential, and reflective components that help us know our way around the good use of our minds,

*Costa's theory of intelligence behaviors:* intelligence is composed of acquired habits or states of mind that are evident in such behaviors as persistence, flexibility, decreased impulsiveness, enjoyment of thinking and reflectiveness,

*Goleman's emotional intelligence:* intelligence is both cognitive and emotional, with the motional (self-awareness, self-regulation, motivation, empathy, and social skill) ruling over the cognitive,

*Cole's theory of moral intelligence:* intelligence is composed of cognitive, psychological or emotional, and moral realms,

*Gardner's Theory of Multiple Intelligences:* intelligence is a biological and psychological potential that is the result of the experiential, cultural, and motivational factors, and made up of eight realms of knowing (verbal, visual, mathematical, musical, bodily, interpersonal, intrapersonal, naturalistic) for solving problems and creating products valued in a culture (Gardner, 1993).

Many years ago intelligence was thought as a single thing called “general intelligence” and can be objectively measured and reduced to a single number or “IQ” score. Psychologists believed that everyone is born with that “general intelligence” or “g”: our intelligence comes from our biological parents, and as a result, intelligence cannot be alterable. Psychologists have attempted to measure the human intelligence. Binet and Terman (as cited in Franzen, 2000) developed the first general intelligence test, which focuses on finding out an intelligence quotient (IQ) score. This single score has been used to categorize students within educational settings. Psychologists can tell you how smart you are by giving you an IQ test. Many intelligence tests, similar to Binet’s, measure students’ abilities in logical-mathematical and verbal/linguistic domains, and students are required to respond to verbal and written multiple-choice and short-answer questions within a determined frame (Wiseman, 1997). However, every psychologist did not share the same ideas. For example, Spearman (1904) believed that intelligence is a combination of two parts and he proposed that there is “Two –Factor Theory of Intelligence “g” & “s”. According to his theory of intelligence, the performance of any intellectual act requires some combination of “g” (general intelligence factor) which is available to the same individual to the same degree for all intellectual acts. (Specific factors) or “s” is specific to that act and varies in strength from one act to another. “S” is specific knowledge such as verbal reasoning or spatial problem solving. Spearman equated “g” with mental energy. Thus, to Spearman the most important information to have about a person’s intellectual ability is an estimate of their “g”. Also, Gardner(1983) criticises the definition of intelligence as a single, general capacity manifested in certain linguistic and logical abilities that can be measured in a number (the intelligent Quotient, or IQ). Standard IQ tests are very far from the thoughts of Gardner. Gardner (1983) states that IQ tests only measure a person’s intelligence in terms of maths and language, they fail to assess a person as a whole. They do not take the person’s other abilities into consideration. As Pyle (1981) states, intelligence which is evaluated in isolated ways or which endeavours to cut an individual of from the society he is living in is doomed to failure.



Gardner defines intelligence as a psychobiological information processing capacity to solve problems or fashion products that are valued in at least one community and culture (Kornhaber et. al. 2004). Gardner (1983) broadens the concept of intelligence and says that intelligence includes not only the results of paper and pen tests but also knowledge of the human brain and sensitivity to the diversity of human cultures.

Subsequently, Gardner (1983) proposed “The Theory of Multiple Intelligences” opposing to the traditional beliefs of intelligence in the fields of education and cognitive science that are considering intelligence to be one or addressing only linguistic and logical proficiencies of individuals while ignoring other capacities by improving the views of other researchers. He proposed eight different intelligences based on psychological, anthropological, and medical evidence. Today Gardner’s approach in many schools by considering the learner differences to differentiate for learning styles and interests.

Lazear ([www.davidlazear.com](http://www.davidlazear.com)) also disagrees with the idea that intelligence can be measured with paper and pen tests and states that: Intelligence can only be assessed or measured in life, not on a paper and pen test. Intelligence is something that happens just ‘between our ears’. It occurs throughout our entire brain-mind body system and beyond in our socio- cultural environment as well.

Armstrong (2000) believes that intelligence is not a singular thing and supports Gardner’s Multiple Intelligence Theory.

Table 2.2 provides a comparison between traditional view of “intelligence” and “multiple intelligence” theory.

**Table 2.2 Traditional view of “intelligence” and “Multiple Intelligences” Theory**

<b>Traditional view of “intelligence”</b>	<b>“Multiple Intelligences” Theory</b>
Intelligence can be measured by	Assessment of an individual’s

<p>short-answer tests: Stanford-Binet Intelligence Quotient Wechsler Intelligence Scale for Children (WISCIV) Woodcock Johnson test of Cognitive Ability Scolastic Aptitude Test</p> <p>People are born with a fixed amount of intelligence.</p> <p>Intelligence level does not change over a lifetime.</p> <p>Intelligence consists of ability in logic and language.</p> <p>In traditional practice, teachers teach the same material to everyone.</p> <p>Teachers teach a topic or “subject”.</p>	<p>multiple intelligences can foster learning and problem-solving styles. Short answer tests are not used because they do not measure disciplinary mastery or deep understanding. They only measure rote memorization skills and one’s ability to do well on short answer tests. Some states have developed test that may value process over the final answer, such as PAM (Performance Assessment in Math) and PAL (Performance Assessment in Language)</p> <p>Human beings have all of the intelligences, but each person has a unique combination, or profile.</p> <p>We can all improve each of the intelligences, though some people will improve more readily in one intelligence area than others.</p> <p>There are many more types of intelligences which reflect different ways of interacting with the world.</p> <p>M.I. pedagogy implies that teachers teach and assess differently based on individual intellectual strengths and weaknesses</p> <p>Teachers structure learning activities around an issue or question and connect subjects. Teachers develop strategies that allow for students to demonstrate multiple ways of understanding and value their uniqueness.</p>
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(Adapted from Güler, 2007)

As it is seen from the Table 2.2, the concept of intelligence has changed a great deal since multiple intelligences theory came forth.

### 2.3.2 Multiple Intelligence Theory

Gardner (1993 cited in Checkley, 1997) proposed his theory of Multiple Intelligences with the publication of *Frames of Mind: The Theory in Practice*. His theory suggests that there is a number of separate forms of intelligence and each individual possess these intelligences in varying degrees. The theory first comprised seven areas of intelligences: verbal/linguistic, logical/mathematical, musical, visual/spatial, bodily/kinesthetic, interpersonal, and intrapersonal. He later identified a new intelligence referred to as the naturalist intelligence.

Howard Gardner's Theory of Multiple Intelligence (1983) identifies that there are many forms of intelligence and that people have varying strengths and combinations of these. Gardner has currently outlined at least eight forms of intelligence. He also notes that each intelligence contains several sub intelligences.

Kornhaber et al. (2004: 2) declare: "At the heart of MI theory is the belief that each individual has a reach and differentiated mind; that no two persons have exactly the same cognitive configuration; and that education is most likely to be successful if it pays attention to these individual differences in the course of fashioning curriculum pedagogy and assessment. Theories and practises that reflect these beliefs are likely to have a long and successful life in education".

Armstrong (2000) identifies some key points which are crucial in education framework:

1. Everybody possesses all eight intelligences but in different proportions which make each human brain unique,
2. Most people can develop each intelligence to an adequate level of competency,
3. Intelligences usually work together in complex ways,
4. Each intelligence has multiple representations of abilities that give a person multiple strengths or weaknesses in that intelligence.

Gardner (1999) states in his book “Intelligence Reframed” that intelligences have their own developmental histories. For instance, people who want to be mathematicians must develop follow distinctive developmental paths to become. For example, musicians must have well-developed musical intelligence.

Eight intelligences that were developed by Gardner are verbal/linguistic, logical/mathematical, visual/spatial, bodily/kinesthetic, musical, interpersonal, intrapersonal, and naturalis intelligence. The profiles of intelligences and the information related with them are given in the following.

### **2.3.2.1 Verbal/Linguistic Intelligence**

Linguistic intelligence “entails sensitivity to different spoken and written languages, to shades of meaning, and to interactions among linguistics connotations” (Granott & Gardner, 1994, p.174). It involves using language effectively and being sensitive to the nuance, order, and rhythm of words. “Students who enjoy playing with rhymes, who pun, who always have a fun story to tell, who quickly acquire other languages – including sign language – and who write copious notes to their friends in class all exhibit linguistic intelligence” (White, Blythe, and Gardner, 1995, p. 181). This intelligence is consistent with the traditional psychology.

Linguistic intelligence is a universal ability and its development follows the same route in all children. Even deaf children acquire sign language without explicit teaching. This shows that intelligence can perform independently of a specific input modality or output channel (Gardner, 1993). Moreover, language is not a spatial form of intelligence as linguistic capacity is robust to injury to the visual-spatial location of the brain (Gardner, 1983).

The development of linguistic skill follows a specific developmental route. Gardner (1993b) gives examples of writers, poets, and novelists as the expert end states for linguistic intelligence. In case of evolution criterion, Gardner believed that linguistic intelligence “results from a coming together of a number of discrete systems, whose evolutionary history dates back many thousand years” (1993b, p.

91). Moreover, pragmatic features might have evolved from emotional expressions and gestural capacities just as the evolution of the vocal tract led to the articulation ability. Patterson and Bly (1999) summarized the evolutionary linguistic theories. Finally, the symbol system for linguistic intelligence is language.

The role linguistic intelligence plays in L2 learning has been questioned by several researchers. There are different and opposing ideas. It is proposed that language aptitude test show a relationship to intelligence scores, as they assess both oral communicative fluency skills that are not related to intelligence and the abilities to perform on decontextualized language that are related to intelligence (Segalowitz, 1997; Skehan, 1991). Skehan put forward that language aptitude should reflect communicative abilities along which individuals show differential abilities.

#### **2.3.2.2 Logical/Mathematical Intelligence**

Logical/mathematical intelligence is related to numbers and logic and the ability to reason deductively or inductively. Among the people whose logical-mathematical intelligence is high are scientists, accountants, philosophers, engineers, architects, and computer programmers. They are good at solving puzzles, exploring patterns, reasoning, and logic. Armstrong (1999, p. 10) states that this type of intelligence includes “the ability to reason, sequence, think in terms of cause-and-effect, create hypotheses, look for conceptual regularities or numerical patterns, and have a rational outlook on life”.

#### **2.3.2.3 Visual/Spatial intelligence**

Visual/spatial intelligence includes thinking in “pictures and image and the ability to perceive, transform, and re-create different aspects of the visual-spatial world” (Armstrong, 1999, p. 10). Pilots, photographers, mechanical engineers and architects are dominant in spatial intelligence. Those people also visualize well, draw or sketch their ideas graphically and can easily find their way in the three-dimensional space.

Seeing is very important for spatial information, however even blind children have spatial intelligence. Moreover, spatial intelligent persons have great observational skills. Armstrong (1999) named German student Veronica Seider, who has super visual perception, and Eskimo hunters, who pay attention to details of the ice, as example of highly spatially intelligent people.

Visual/spatial intelligence is defined by Gardner (1983: 173) as “the ability to perceive the visual world accurately, to perform transformations and modifications upon ones initial perceptions, and able to re-create aspects of ones visual experience, even in the absence of relevant physical stimuli”. He also interprets that this is the ability to be sensitive to form, colour, line and shape.

#### **2.3.2.4 Musical Intelligence**

Musical intelligence is related to the capacity perceive and produce rhythms, sound pattern, pitch, beat and melodies. Example of people who have a high degree of musical intelligence include those that can sing in tune, keep the rhythm, and be a composer (Armstrong, 1999).

Gardner (1997: 12) defines musical intelligence as “It is capacity to think in music, to be able to hear patterns, recognize them, remember them, and perhaps manipulate them. People who have a strong musical intelligence don't just remember music easily- they cannot get it out of their minds, it is so omnipresent”.

Gardner (1993) showed violinist Yehudi Menuhin, who was attracted to the violin at the age of 3 and became an international composer at the age of 10, as evidence for biologically preparedness for musical intelligence. Furthermore, specific parts of the brain in the right hemisphere play important roles in perception and productions of music.

Musical intelligence is supported with many different sources and empirically justified (Gardner, 1983). In order to think musically, one does not

need to be a musician. Music is in people's daily life most of the time and it influences how people think in powerful ways (Armstrong, 1999).

#### **2.3.2.5 Bodily-Kinesthetic Intelligence**

According to Armstrong, it is the intelligence of the "physical self" (1999, p.10). People having high level of intelligence can control their body movements successfully. They are good at carpentry, sewing and model building. They may have hobbies such as hiking, dancing, jogging, camping, swimming, or boating. They have tactile sensitivity. Athletes, craftsman, mechanics and surgeons have bodily-kinesthetic intelligence a lot.

Campbell (1996) states that bodily/kinesthetic intelligence involves the ability to combine the body and mind to perfect physical performance. By the help of automatic and voluntary movements, kinesthetic intelligence improves and leads to using bodies in highly differentiated and skilled ways.

Armstrong (2000: 2) states that bodily/kinesthetic intelligence is expertise in using the whole body to express ideas and feelings and using the hands to produce or transform things. This intelligence includes specific skills such as coordination, balance, dexterity, strength, flexibility, and speed.

#### **2.3.2.6 Interpersonal Intelligence**

Interpersonal intelligence includes talent in understanding and working with others, as well as responding to feeling and intentions of others (Sternberg, 1990; Rosnow, Skleder, Jacger, & Rind, 1994). Religious or political leaders, teachers, directors, administrators, therapists, negotiators and parents show high interpersonal intelligences. Gardner (1993a) mentioned Anne Sullivan's experiment of training Helen Keller, who is a blind and deaf seven-year old child. At the end of the training, Helen grasped the language and progressed well. The key was Sullivan's interpersonal intelligence, which does not depend on language.

Interpersonal intelligence builds on a core capacity to “notice and make distinctions among other individuals and in particulars, among their moods, temperaments, motivations, and intentions” (Gardner. 1993b p.239).

According to Gardner (1983:239), interpersonal intelligence is seen in how we “notice distinction among others; in particular, contrasts in their moods, temperaments, motivations and intentions”. He (1997:12) also adds: “It’s an ability we all need, but it is a premium if you are a teacher, clinician, salesperson, or politician. Anybody who deals with other people has to be skilled in interpersonal sphere”.

They are skilled at understanding people, organizing, collaborating, communicating, and mediating conflicts.

#### **2.3.2.7 Intrapersonal Intelligence**

Intrapersonal intelligence is the ability to understand inner self. It refer to “cognate faculties that are involved when we turn our curiosity or attention inward in order to understand ourselves (i.e. toward to personal realm of behavior, feelings, and motivations)” (Rosnow et al., 1994, p. 94). They can appreciate their feelings and guide their life trough self-understanding. They may be very introspective, independent, goal-directed and self-disciplined. They enjoy mediation as well as working alone. Theologians, introspective novelists, counselors, and self-employed business people are dominant in this intelligence (Armstrong, 1999).

Intrapersonal intelligence helps people access to their own feelings, emotions, discriminate among emotions, label them and guide their behavior. It is the most private intelligence. Therefore, it need symbolic evidence from music, language or other expressive forms of intelligences (Gardner, 1993b).

Campbell et al. (1996:195) assert that at the core of our inner world, we have strengths that give us chance to understand ourselves and other people, and at the same time to imagine plan and solve problems. Without these inner resources it would notbe easy for us to live a productive life.



People who have this intelligence are good at working alone and pursuing own interests, they learn best at working alone.

### **2.3.2.8 Naturalist intelligence**

Gardner added naturalist intelligence into his intelligence list in 1995 (cited in Campbell et al. 1999). Identifying people, animals, plants around us and interacting with them, distinguishing among species, formulate and test hypothesis, extract meaning, comparing, contrasting, and perceiving interdependence are all gifts of naturalist intelligence (Campbell et al. 1999). Students with high naturalist skills are interested in topics about nature; they are also sensitive to environmental problems. In the EFL classroom, such topics may heighten students' attention and engage them in production of the target language. When the world around us is integrated in the language learning process, it is obvious that naturalist students will widely benefit and the others will be much more aware of the world we live in.

Armstrong (2000, p.64) identifies five strategies that accommodate naturalist students' needs in the classroom and outside the classroom:

1. Nature walks: Students visit the natural scene that the topic of the lesson takes place. Afterwards, students feel themselves more ready to involve in creative writing, drawing sessions.

2. Windows onto learning: Students love looking out of the window. This tendency is used to direct them to observe what's happening outside and report on their observations as a part of a language learning activity.

3. Plants as props: For some language learning techniques, such as drama and roleplay, props are necessary to set the scene. Plants meet this need of language classrooms and become living props.

4. Pet-in-the-classroom: Relating topics to be learned to a pet in the classroom heightens students' observation and scientific questioning skills.

5. Ecostudy: When nature is a part of the school day, students get more aware of the

natural systems which we live in and gain respect.

Needs of naturalist intelligence in the foreign language classroom Environment (adapted from Armstrong, 2003; Campbell et al, 1999).

What does naturalist intelligence need in the foreign language classroom environment?

1. Magazines, texts, stories on environmental issues,
2. Pictures of interesting places in the world along with open-ended questions to start a debate,
3. Different sorts of animals and plants living in different places on earth with their names in English,
4. A list of websites relating to nature and environment that can be a good source for homework.

#### **2.4 English Language Classroom Activities According to Multiple Intelligence Theory**

Every student comes to school with a mental capacity to learn new things as others with the previously gained knowledge and experiences through their environment as a result of interactions between the learner and the natural surroundings, their family, the school etc. They try to adapt themselves to the new ways of teaching by integrating their previous knowledge both consciously or unconsciously and also using their learning styles and strategies. They can sometimes learn easily but sometimes cannot; from this state we cannot draw a conclusion that the reason they cannot grasp the subject matter is because of their mental or physical disability but this is because of process, something we know but we do not know how to look into.

The traditional classroom tends to treat students as a homogeneous group, with the teacher presenting the same exercises to all of students at the same time, and expecting the same answers to be produced within similar time limits. Students are expected to learn the knowledge presented by the teachers with an emphasis on the use of language and logical-mathematical analysis.

After Gardner (1993) proposed the multiple intelligences theory, educators who seek a more comprehensive and individualized education system have been interested in the theory to improve teaching and learning in a multiplicity of ways (Goodnough, 2001). The Theory of Multiple Intelligences refers to a learner-based philosophy that characterizes human intelligence as having multiple dimensions that must be acknowledged and developed in education (Richards & Rodgers, 2001:115) has changed how teachers facilitate and assess learning. The MI theory gives importance to how students learn according to their varying interests, skills and dominant intelligences. The theory acknowledges that all students may not have verbal or mathematical talents, but they may have an expertise in other areas (Brualdi, 1998). Armstrong (1994) states that the theory of multiple intelligences is a new model of learning to help students learn effectively.

Multiple Intelligence has many implications for teaching and learning a foreign language. It is a learner-centred theory. It gives importance to the abilities-intelligences in each individual. In terms of teaching English, MI Theory presents a wide variety of teaching strategies that can be implemented in the classroom to support the existing ones. It assists teachers expand their teaching repertoire to include a broader range of methods, materials and techniques for reaching more diverse range of learners. The principle in MI Theory is to meet students' different needs so it emphasizes learner-centred language learning. Teachers can apply activities for different of the students. These activities can help the students to learn the language. Language learning can be easier and enjoyable when the suitable activities are chosen for the students depending on their intelligences. Reid (1998: 7) states that MI theory offers language teachers a way to examine their best teaching techniques and strategies in the light of human differences and researchers (Armstrong, 2000; Berman, 1998; Reid, 1998) suggest classroom activities which can be applied for different multiple intelligences.

### *Verbal/linguistic Intelligence*

This is the easiest to develop as great attention has been given to it in schools (Armstrong, 1994). Education requires the use of this intelligences and as a result, learners have more chance to develop linguistic intelligence.

Berman (1998), who is concerned with the use of MI in language teaching, proposes general activities for linguistic students in ELT classes. The sample activities proposed by Berman (1998), Reid (1998), Armstrong (2000) are:

- Group discussions,
- completing worksheets,
- giving presentations,
- listening to lectures,
- reading,
- wordbuilding games,
- storytelling,
- brainstorming,
- tape recordings,
- journal writing, and publishing
- telling jokes,
- doing crossword puzzles,
- writing essays/reports,
- taking and giving dictation
- memorizing linguistic facts

Golubtchik ([www.teachersnetwork.org](http://www.teachersnetwork.org)) recommends some type of activities for the teachers :

- creating a real or imagined correspondence between historical or contemporary characters,
- writing a journal,
- composing scripts that depict historical events,
- writing newspapers of a different time period,

- complete with then –current events, fashion, entertainment, and feature items,
- interviewing a famous person with knowledge of a topic, or whose accomplishments are admired,
- inviting a guest speaker and planning appropriate questions,
- reading poetry or writing poetry, stories, ideas, or thoughts,
- creating analogies to explain concepts, designing bulletin boards,
- using recording devices,
- doing dramatic reading.

#### *Logical/mathematical Intelligence*

Armstrong (2000: 2) states that this intelligence includes sensitivity to logical patterns and relationships, statements and propositions (if-then, cause-effect), functions, and other related abstractions. The kinds of processes used in logical/mathematical intelligence include categorization, classification, inference, generalization, calculation and hypothesis testing. Sample activities for logical/mathematical intelligence purposed by Berman (1998), Reid (1998), Armstrong (2000), Golubtchik ([www.teachersnetwork.org](http://www.teachersnetwork.org)) are:

- Logic puzzles,
- logical-sequential presentations,
- problem-solving,
- guided discovery
- scientific demonstrations
- classification and categorization
- quantifications and calculations
- creating codes
- creating trivial games that others can play,
- developing crossword and other puzzles for classmates to solve,
- constructing a time in and filling in details,
- investigating authentic problems and developing possible solutions,
- mapping a location,

- diagramming procedures,
- using pattern blocks, unifix cubes, legos, and other math manipulatives to demonstrate concepts,
- playing calculator games,
- conducting research and laboratory experiments,
- categorizing facts and information,
- composing analogies.
- strategy games, sorting and classifying objects,

*Bodily/kinesthetic Intelligence*

Campbell (1996) states that bodily/kinesthetic intelligence involves the ability to combine the body and mind to perfect physical performance. Activities which are suggested for bodily/kinesthetic intelligence are:

- Circle dancing,
- brain gym,
- relaxation exercises,
- craftwork,
- dramatizing a literary or historical event,
- role playing,
- creating a dance or movement that tells a story,
- going on field trips to appropriate sites,
- participating in learning centres,
- learning outdoors,
- acting out vocabulary words or a sequence of events,
- constructing projects and making diagrams, models, and replicas of systems or procedures,
- building puppets and putting on a show related to content,
- playing charades.
- miming, using physical gestures

(Berman, 1998; Golubtchik ([www.teachersnetwork.org](http://www.teachersnetwork.org)); Reid, 1998; Armstrong, 2000; Lazear, 2000).

### *Visual/spatial Intelligence*

Armstrong (2000: 55) states that “spatial intelligence responds to pictures, either the images in one’s mind or the images in the external world: photos, slides, movies, drawings, graphic symbols, ideographic languages, and so forth”.

Language classroom activities suggested for visual/spatial intelligence are:

- charts,
- mind maps,
- visualization,
- diagrams,
- drawing or painting a picture, poster, chart or sketch, representing what they have learned,
- making a three-dimensional model such as a physical map,
- creating colorful designs, shapes, and patterns to illustrate a scene from nature or history,
- imagining and visualizing how literary or historic figures might have changed events,
- taking photographs or video camera to create a pictorial report,
- constructing props and costumes to dramatize an event,
- developing color-coding systems to categorize information.
- picture metaphors,
- color cues,
- picture literacy experiences,
- visual awareness activities.

(Berman, 1998; Golubtchik ([www.teachersnetwork.org](http://www.teachersnetwork.org)); Reid, 1998; Armstrong, 2000).

### *Musical Intelligence*

Campbell (1996) suggests that music can be used in the classroom as an aid in creating a positive emotional atmosphere promoting learning. It can also be

used to increase the suspense, sadness, tragedy or joy of stories or texts; moreover, songs can create enthusiasm and relaxing atmosphere in the classrooms.

Golubtchik ([www.teachersnetwork.org](http://www.teachersnetwork.org)), Berman (1998), Reid (1998), Armstrong (2000) state some activities in order to reach musical intelligence:

- songs, jazz chants,
- background music,
- writing an original song, rap, jingle, or cheer,
- playing instruments,
- composing music that conveys the theme or mood of the lesson,
- researching, comparing, and constructing music of different cultures or time periods,
- identifying rhythmic patterns in music or poetry,
- creating a rhythmic way to remember information,
- performing a rap or song that summarizes information.
- clapping and slapping memory games

### *Interpersonal Intelligence*

Armstrong (2000: 60) states that all children have interpersonal intelligence to one degree or another, so every educator should be aware of teaching approaches that incorporate interaction among people.

Some activities proposed for interpersonal intelligence are:

- Group work,
- Group brainstorming,
- pairwork,
- peer teaching
- participating in jigsaw activities, where each person in a group is responsible for specific tasks,



- working on interactive computer software, e-mail, and the internet,
  - joining any group project,
  - identifying with figures in art or literature,
  - studying or creating oral histories, interviewing or creating imaginary interviews with relevant people (real, historical, or literary),
  - constructing a family tree,
  - peer tutoring,
  - discussing.
- (Berman, 1998; Golubtchik ([www.teachersnetwork.org](http://www.teachersnetwork.org)); Reid, 1998; Armstrong, 2000).

### *Intrapersonal Intelligence*

Armstrong (2000: 62) states that because most students spend many hours a day with many other people, teachers need to build in frequent opportunities during the day for students to experience themselves as autonomous beings with unique life stories and a deep sense of individuality.

Researchers(Berman, 1998; Golubtchik ([www.teachersnetwork.org](http://www.teachersnetwork.org)); Reid, 1998; Armstrong, 2000). suggest some language classroom activities for intrapersonal intelligence:

- project work,
- learner diaries,
- reflective learning activities,
- self study,
- personal goal settings
- writing journal entries that summarize content and any personal reactions to
- content, completing independent assignments,
- meeting with the teacher outside of class,
- investigating complex problems,

- researching topics of interest,
- reflecting in a journal about their learning process,
- creating personal files of topics they have studied,
- writing first person accounts of events,
- personalizing a character and writing his/her ‘autobiography’,
- constructing a bibliography that can be used by others,
- self-assessing projects and products to determine how to improve learning.

### *Naturalist Intelligence*

According to Armstrong (2000), more of the natural world needs to be brought into the classroom and other areas of the school building, so that naturalistically inclined students might have greater access to developing their naturalist intelligence while inside the school building. Armstrong (2000), Golubtchik ([www.teachersnetwork.org](http://www.teachersnetwork.org)) recommends some strategies to use with naturalist learners:

- classifying and categorizing activities,
- background music-in the form of sounds created in the natural world,
- reading nature magazines,
- working in the garden
- going on field trips and nature walks,
- forecasting and tracking the weather,
- observing the sky, clouds, stars, and space,
- hiking in natural surroundings,
- reporting on nature videos,
- listing attributes of objects,
- recording changes or development over time,
- photographing nature,
- devising classification items,
- caring for plants and animals,

- using graphic organizers.
- nature walks,
- windows onto learning, plants as props,
- pet in the classroom,
- ecostudy

Hoerr (1997: 43) mentions the advantages of using multiple intelligences in teaching and says that the multiple intelligence theory recognizes and respects the students' different ways of learning. It presents to them chances to use various intelligences to acquire knowledge and share it with others.

Greenhawk (1997:62) gives the reasons for applying the multiple intelligences theory in classrooms as follows:

- To help students understand their abilities and those of others
- To show students how to use their strenghts both to learn and work on their weaknesses
- To build up students' confidence so they would be willing to take educational risks
- To help students learn more by providing unforgettable learning
- To more accurately assess students' mastery of basic skills and higher-level content.

## **2.5 Studies Related to the Theory of Multiple Intelligences**

There are many studies related to the theory of multiple intelligences.

### ***Studies in Turkey***

Demirel (1998) investigated whether there was a significant effect of Multiple Intelligences Theory on the fourth grade students' achievement. Beside, it was also investigated whether there was a significant effect of this theory on fourth graders' attitudes toward social science; and what opinions and views

students' teachers and observers possessed about the implementation of the theory in social science classrooms. The study, lasting for fifteen days, was conducted with two classes of fourth graders in Ankara Tevfik Fikret College Primary School. The experimental group had social science lessons through MI Theory, whereas the control group with traditional methods. The observation results showed that the students in the experimental group participated actively in the MI activities, produced creative and original thoughts. In addition, those MI activities affected the relationship among the students and students' MI positively. Results of the teacher interviews showed that MI Theory activities affected students positively in terms of their logical thinking, establishing relations among cases, problem solving abilities. On the other hand, the teachers also thought that when conditions of the Turkish Schools were considered, conducting MI Theory was so difficult in the schools. Most of the students found MI activities and materials pleasant and enjoyable. Moreover, the students stated that those activities and materials were more enjoyable and different than other classroom activities and materials. The experimental group students' attitudes toward social science was significantly more positive than the students' in the control group. Finally, according to results of the achievement tests there was no significant effect of MI Theory on fourth grader's Social Science achievement. According to researchers, the reason of this could be because the lessons were conducted by using MI Theory; however the assessment of it was done by using traditional methods.

Similarly, Demirci (1999) used both multiple intelligences theory and active learning approach in order to compare the effects of active learning approach on students' success with the effect of traditional method. The study was carried on in Life Sciences Course that was used for the first time on second grade students of primary education in 1998-1999 term. The students were chosen from among Beytepe Primary Education school students. The results post test average points showed that multiple intelligences and effective cooperative learning approaches had more positive results than the traditional method.

In 1999-2000 educational year, Multiple Intelligence Theory Application Project was performed as a qualitative experimental study at Bařkent University

College, Ayşeabla Schools whose facilitator was Gözütok (2000). This Project aimed to make the students become aware of their abilities, parents to recognize their children's skills, parents and teacher to be informed about MI Theory and the teachers to apply educational methods which take care of talents of their students. At the end of the project, teachers claimed that the lessons they planned and performed according to MI Theory were useful and the students were both successful and happy. They had no difficulty about class management in the lessons, which MI Theory was performed. The students said that they had learned those lessons well and felt happy during the lessons. Some of high school teachers however claimed that they had difficulty in applying MI Theory to their students. The last grade (11th grade) students considered the activities performed during the lesson as a waste of time and said that test solving would have been more useful for them.

İşisağ (2000) identified multiple intelligences preferences of in EFL classes in the English Language Teaching (ELT) department of Gazi University. A self-statement based inventory was created by the researcher and administered to 200 students. He found out that interpersonal followed by intrapersonal and linguistic intelligences were dominant among EFL students. Naturalistic, logical and musical intelligences were preferred at least. İşisağ (2000) argued that it is reasonable to conclude that self-reports of intelligences reflect a relationship between the major field, in this case EFL, and intelligences. EFL students are in-service teachers and their interest in teaching may reflect their interpersonal and intrapersonal intelligences. Their preference for linguistic intelligence may also show that they do well in language learning and social studies rather than in science and mathematics.

Baran (2000) examined the relationship between university students' major study fields and their dominant intelligence preferences. Self-statement based Multiple Intelligence Inventory, which was developed by Gardner and adapted to Turkish by Abacı was administered to 233 students from 6 departments. The results of ANOVA and LSD analyses showed that students of mathematic department had higher mathematical- logical intelligence; counseling students had

higher interpersonal and intrapersonal intelligence; art students had higher spatial intelligence than the other student groups at the significance level of .01. Based on these relations, Baran (2000) argued that individuals tend to prefer in a study area that they believe they are strong. However, neither Turkish linguistic nor foreign language education students showed statistically significant preference for linguistic intelligence. Baran (2000) suggested several possible reasons for those students not showing higher linguistic intelligence preference compared to other groups in the study. First, students were admitted to the university based on their achievement on university entrance exam, which assess students' linguistic knowledge but not their ability to use the language. Second, there might have been chance factors affecting students' choice of their major field. Third, students might not have been able to choose their department based on their ability and interests. Replicating this study with a mixed method, that is using both qualitative and quantitative techniques could provide deeper information related to students' dominant intelligence and preference of study area.

Oklan (2001) conducted a research to find out six years old children's interest in the seven intelligences areas. The researcher used Teele Inventory of Multiple Intelligences (TIMI) and Multiple Intelligences Developmental Assessment Scales (MIDAS) and compared their results. TIMI was administrated to 411 six years old students. MIDAS was administrated to their families to find out their perception of their childrens' multiple intelligences. It was found that according to the TIMI results dominant intelligences were ranked as spatial intelligence, bodily-kinesthetic intelligence and interpersonal intelligence. MIDAS results showed that according to families their childrens' dominant intelligences were ranked as spatial intelligence, interpersonal intelligence and bodily-kinesthetic intelligence.

Şahin (2001) investigated whether there was a significant difference between Multiple Intelligence Theory and traditional methods on third grade Social Science students' achievement and what opinions and views experimental group students and their teacher possessed about the implementation of the theory. This research was conducted in the second term of 1999-2000 academic year with

third graders in Zonguldak (Ereğli) Kışla Primary School. Pretest-posttest experimental and control group design, observations, and interviews were utilized in the study. According to results of tests, students' achievement scores in the experimental group were significantly higher than the students in the control group. Besides, in the experimental group, the results of the observations and interviews made with the students in the experimental group indicated that using multiple intelligences activities and materials in the social science lessons affected students' multiple intelligences positively. Finally, teacher interview results showed that he had positive views on Multiple Intelligence activities and materials.

The objective of Acat's (2002) study was to find out whether multiple intelligences theory was applicable in teaching and learning situations of Turkey. The researcher analyzed the qualitative data obtained. The results fell into two categories: positive and negative effects. The positive effects were as follows: Multiple Intelligence Theory contributed a lot to the control of the class and effectiveness and caused a more effective evaluation. All potentials of the individual were activated by Multiple Intelligence Theory and this was contributed to social academic and personal development of the individual. In addition, it was concluded that Multiple Intelligence Theory was beneficial for the preparation of learning/teaching activities and that it had an approach different from the traditional one.

Besides, negative ideas about the realization of Multiple Intelligence Theory result from the lack of time, heavy lesson schedules in Turkey, evaluation system and overcrowded classrooms. It was observed that Multiple Intelligence Theory caused some difficulties in practice and these result from the inability in making a connection between level, subject and intelligences domain.

The purpose of Göğebakan's (2003) study was to investigate the 'students' multiple intelligences according to their preferences and how students' multiple intelligences differ in terms of grade level (first, third, fifth and eighth ) and gender. This research was conducted at Middle East Technical University

Development Foundation School in the spring of the 2001-2002 academic year with three classes from each level namely first grade, third grade, fifth grade and eight grade. In this study, Pictorial Teele Inventory for Multiple Intelligences was applied on 321 students and the results were analyzed. In order to examine the effect of the gender and grade level on students' Multiple Intelligences mean, Standard deviation and MANOVA were used. Results showed that students multiple intelligences showed variety according to their grade levels. For example, the students at the first grade level demonstrated strong preference for linguistic intelligence and logical/mathematical intelligence in the first grade and the two intelligences were followed by visual/spatial intelligence, and bodily/kinesthetic intelligence. While the third grade students' most dominant intelligences preferences were interpersonal, spatial, logical/mathematical, and linguistic intelligence the fifth and eighth grade students' preferences were interpersonal intelligence, bodily/kinesthetic intelligence, musical intelligence, and visual/spatial intelligence. When results are examined in terms of gender, it can be said that the male students' logical/mathematical and bodily/kinesthetic intelligence mean scores were higher than female students' whereas the female students' musical intelligence mean score was higher than male students'.

Aşçı (2003) investigated the effects of multiple intelligences based instruction on ninth grade students' ecology achievement, their attitudes toward ecology, and their multiple intelligences. She made an experimental study which consists of two groups called experimental group and control group. She applied Ecology Achievement Test, Ecology Attitude Scale and Multiple Intelligences Inventory. She analyzed the results with MANCOVA and concluded that the multiple intelligences based instruction is more effective than the traditional instruction in terms of achievement and multiple intelligences; however she found no significant results between the two groups.

Bulut (2003) aimed to identify the advantages of applying MI Theory in teaching English as a foreign language to children. The participants of the study are 71 students at fifth grade. There are two hours of English lesson of them every week. At the beginning of the study, the intelligences of the students are



identified. Then, their English course book “Enjoy English 5” is evaluated to identify activities for each intelligence. As a result of this study, it has been ascertained that specific grammatical structures should be presented via different activities and exercises designed in accordance with various intelligences of the students. MI Theory seems to be helpful in English lessons.

Akbaş (2004) made a study called “The Effects of Multiple Intelligences Based Instruction on Six Graders’ Science Achievement and Attitudes toward Science”. His study was an experimental type study conducted in 2nd term of 2002-2003 educational years with six grade students of METU Ankara College Primary School and lasted for three weeks. He used science achievement test and science attitude scale. At the end of the study, he justified the idea that the multiple intelligences based instruction was more effective than the traditional instruction. However, the statistical analysis indicated no significant result about students’ attitudes toward science.

Uysal (2004) aimed to explore the self-estimated intelligence dimensions of seventh and tenth grade students, and the effect of grade level, gender, age, socio economic status, physics/science achievement, and branch in school on these dimensions. In this study a Multiple Intelligence Inventory was used as a measuring instrument. The study was conducted in randomly selected 26 elementary and 7 high schools throughout Çankaya, Keçiören, Yenimahalle districts of Ankara with a total 3721 seventh and tenth grade students in fall 2003-2004 semester. Strengths and weakness of the students vary according to grade level. Seventh grade students perceived themselves higher on verbal/linguistic and logical/mathematical intelligences, and tenth graders perceived themselves higher on the remaining five dimensions of intelligences. Also, significant differences found in female and male students’ self-estimated intelligence dimensions for both two different grade levels. Seventh grade females perceived themselves to be higher than males in verbal/linguistic, visual/spatial, musical, bodily/kinesthetic, and interpersonal intelligences. Similarly tenth grade females perceived themselves to be higher than males in all of the intelligence dimensions except the logical/mathematical intelligence. The result of the study indicated significant

differences on verbal/linguistic intelligence of 10th grade students coming from different branches, namely science-math, literature-math, and literature-social sciences branches. Students from literature-social science branch perceived themselves to be higher than the students from other two branches on verbal/linguistic intelligence, and students from science- math branch perceived themselves to be higher than students from other two branches on logical/mathematical intelligence. The study also revealed significance positive correlation between science achievement and interpersonal intelligence of 7th graders, but when we look at the intelligence dimensions and physics achievement of 10th grade students, there were no significant correlations with medium high effect sizes. Results of this study showed that not only there are significant differences in perceptions of intelligences among grade levels, but also there are significant differences in perceptions between females and males, students from different branches, different socio economic status, and ages. Significant gender differences found also in this study both for seventh and tenth grade students. Both seventh and tenth grade females rated themselves higher than males in all seven dimension except the logical/mathematical intelligence, in this dimension males rated themselves to be higher than females.

Erdir (2005) aimed to find out the benefits of Multiple Intelligence Theory in terms of vocabulary teaching to improve reading and listening skills. The hypothesis of this study is that the success rate of vocabulary teaching by MI Theory to improve reading and listening skills would be higher than the ones taught by traditional method. This study is carried out in the army academy to the second year cadets. The application made in the 2003-2004 academic year lasted for four months, and the success rates between two groups were observed. Multiple Intelligence Theory based instruction is found to be far more successful than the traditional methods.

Eke-Demirci's (2005) research was applied to the fifth class students of Sami Sipahi Primary School in 2004-2005 education term. Two different valid scales are used to get knowledge about students intelligence fields. When the data are examined, it is seen that points students get from each intelligence field and

answers students give to the questions are different. This situation caused different orders in the level of improvement of intelligence fields of students. It is seen that activities for each intelligence field about the keyboard keys subject can be arranged and the participation of students can be achieved.

In Köken-Bilgin's (2006) study an experimental study was applied to 50 9th grade students. The results showed that students who were instructed by multiple intelligences theory based on instruction were achieved higher than the ones which were instructed by the traditional science instruction about chemical bonding concept. There was also a significant difference between the students instructed with Multiple Intelligence Theory Based Instruction and the students instructed with traditional Science Instruction with respect to the attitudes of students toward chemistry. There was no significant difference between the attitudes and achievement of female students and that of male students.

In Güler-Karadeniz's (2006) quantitative study, experimental and survey methods were used. This study includes 52 students. As a result; Multiple Intelligence Theory affects positively to achievement in English lesson and the permanence of the learned knowledge of the ninth grade students in Anatolian High School.

Akar (2006) carried out his research to compare the academic achievements and the intelligence domains of the 6th, 7th, and 8th grade pupils according to the multiple intelligence theory and to expose the intelligence profiles of the primary level students based on the multiple intelligence theory 975 students who have been educated at 6th, 7th, and 8th grades in Sample Primary School in 2004-2005 academic year has involved in the study. If academic achievement has been taken as dependent variable in this research, there has been a logical relationship between logical-mathematical intelligence and the multiple intelligence theory.

Oran(2006) made an experimental study. 102 students took place in the study, 51 of them studied the topic through techniques stemming from Multiple Intelligence Theory for five weeks while the others studied the same topic through more traditional methods. At the end of the study, the students in experiment

group hold a positive attitude towards Multiple Intelligences based techniques in terms of their educational environment perceptions. The results suggest that a Multiple Intelligences based approach may have encouraged students to perceive themselves academically more successful in learning English as a foreign language.

The aim of Hamurlu's (2007) study is the analysis of the effects of the instruction based on multiple intelligences theory on the students' achievements in English classes and the students' attitudes towards English at 9th grade at foreign language based high school. It is an experimental study, consisting of 60 9th grade students at Cumhuriyet High School in the school year of 2005-2006 in Şahinbey, Gaziantep. The study lasted five weeks including 40 hours. At the end of the study, it has been realized that the instruction based on multiple intelligences theory has increased the students' achievements in English classes and has made positive effects on the students' attitudes towards English.

Temel's (2008) study aimed to explore the impact of learning activities based on the Multiple Intelligence Theory on the success of first stage primary school students in English lessons. An experimental study was conducted with four classrooms, eighty students at İsabey Primary School located in Selçuk, İzmir. These eighty students were chosen from the two fourth grades and the two fifth grades. The results of the study showed that the students of the both treatment groups who have learned the subjects through learning activities based on the Multiple Intelligence Theory were more successful than the students of the both control groups. As a result, it is concluded that Multiple Intelligences methods effect English achievement of the students and the difference between these methods and traditional learning methods is significant.

### ***Studies Out of Turkey***

Shearer (1999) conducted The Multiple Intelligence Developmental Assessment Scales on 1679 students from kindergarten to the eighth grade in order to the students' most dominant intelligences. It was found that the students

at the first grade level demonstrated strong preference for musical and visual/spatial intelligences and these two intelligences were followed by interpersonal intelligence, and bodily/kinesthetic intelligence. Whereas for the students in the third grade the most dominant intelligences were spatial, bodily/kinesthetic, the fifth grade students were the strongest in spatial intelligence, musical, interpersonal, and bodily/kinesthetic intelligence. Additionally the students at the eighth grade were strongest in musical intelligence, intrapersonal intelligence, and spatial intelligence.

Teele (2000) administered Teele Inventory of Multiple Intelligences over 6000 students from kindergarten to twelfth grade in 1992. She found that the first grade students' dominant preferences were visual/spatial, logical/mathematical, bodily/kinesthetic and linguistic intelligences. The students in the third grade were demonstrated the strong picture preference for spatial, bodily/kinesthetic, interpersonal and linguistic and logical/mathematical intelligences. The students' picture preferences in the fifth grade were spatial, bodily/kinesthetic, interpersonal and musical while the students in the middle school were the most dominant in interpersonal, spatial, bodily/kinesthetic and musical intelligences.

Franzen (2000) made a survey about 407 fifth, sixth and seventh grade students' self-perceptions of eight multiple intelligences, and the interpersonal and naturalistic intelligences yielded the highest mean score and verbal/linguistic intelligence yielded the lowest mean score among all grades of students. Similarly, Harms (1998) conducted a research with 644 third, seventh, and eleventh grade students, and found that, of the eight intelligences, interpersonal and naturalistic yielded the highest mean scores, whereas verbal/linguistic and intrapersonal intelligences yielded the lowest mean scores among the entire student sample.

Geimer, Getz, Pochert, Pullam (2000) studied on improving student achievement in Language Arts through implementation of Multiple Intelligences Strategies. The students were taught through MI based activities and traditional language teaching methods. At first, the theory was presented to the learners.

Students were given a MI assessment and exposed to a variety of lessons following a MI format. These lessons were taught using a variety of subjects and intelligences. The language art subjects identified throughout the process were English grammar, reading comprehension and spelling. The study took four months. The results of the grammar phase, reading comprehension phase were more successful when compared to traditional teaching results. Spelling results showed a slight trend towards traditional instruction in three out of the four targeted classrooms

Applications of MI theory to second language learning were investigated by Haley in a quasi-experimental research (2004). Applications included instructional strategies, curriculum development, and assessment. Haley conducted both qualitative and quantitative data from different schools in six countries including 650 students in grades K-12 and 23 English as a Second Language (ESL) and foreign language teachers. Students' achievements before and after MI application. Haley (2004) concluded that application of MI theory to second language and foreign language learning has positive impact in both students and teachers.

A similar research carried out by Kornhaber (2004). The results showed improvement in at least two of the four areas including curriculum, assessment, school structure, and pedagogy. Kornhaber (2004) also reported that The Project on School Using MI Theory (SUMIT), which took 3,5 years and included 41 schools had been implementing MI theory for more that 3 years. SUMIT provided a detailed report on practices in classrooms and frameworks in schools. Approximately 80% improvement was found in students' test scores, behaviors, parental involvement, and success of the students with learning disabilities.

## **2.6 Chapter Summary**

This chapter presented relevant literature on some individual differences in learning and Multiple Intelligence Theory of Howard Gardner. Also, studies related to MI were presented.

## CHAPTER THREE

### METHODOLOGY

#### 3.0 Introduction

This chapter presents the methodology applied in the study. First, the objectives and research questions of the study are stated and research design is analyzed. Next, the methodological flow of the study is presented together with the description of the setting, participants, instruments, data collection, and data analysis.

#### 3.1.Objectives

This study aims to understand which Multiple Intelligence Types are dominant among the 6<sup>th</sup> and 8<sup>th</sup> grade students of different primary schools as well as to explore the relationship between Multiple Intelligences and other individual difference variables; gender, class, and school. This study also aimed to explore whether English language teachers implement MI Theory in their classroom activities or not.

Answers for the following research questions were sought throughout the study:

**RQ1-**Which multiple intelligence types are dominant among primary school students?

**RQ2-** Is there a difference between male students and female students in terms of their dominant multiple intelligence types?

**RQ3-** Is there a difference between 6<sup>th</sup> grade students and 8<sup>th</sup> grade students in terms of their dominant multiple intelligence types?

**RQ4-** Is there a difference between students from different socio-economic areas in terms of dominant multiple intelligence types?

**RQ5-** Which language teaching activities are perceived more useful by students?

**RQ6-** Is there a difference between 6<sup>th</sup> grade students and 8<sup>th</sup> grade students in terms of perceived usefulness of language teaching activities?

**RQ7-** Are students' MI preferences and activity preferences similar?

**RQ8-** Do the English teachers at primary schools address all MI fields?

### **3.2 Setting**

The study was carried out in Çanakkale (city centre) and the provinces of Çanakkale, Yenice and Gökçeada. Six different primary schools participated in the study. To better represent the population in Çanakkale, schools reflecting different socio-economic features have been selected. These schools were 18 Mart Primary School, Mustafa Kemal Primary School, Çanakkale College, İsmail Kaymak College, Gökçeada Cumhuriyet Primary School, Yenice Cumhuriyet Primary School.

These primary schools have different characteristics and were selected to ensure a better representation of socio-cultural profile of Çanakkale. Students in these schools come from families who have very different economical conditions, social status, background knowledge, and culture. For this purpose, schools from peripheral provinces and central Çanakkale were chosen. Further, to better reflect socio economical differences in the city center Çanakkale, data from two private school and four state schools were chosen. Distribution of these schools can be seen in Table 3.1.



**Table 3.1. Distribution of Schools Participated in the Study**

<b>School Name</b>	<b>Location</b>	<b>Socio-economical status</b>
Çanakkale College	Centre	Private
İsmail Kaymak College	Centre	Private
18 Mart Primary School	Centre	State
Mustafa Kemal Primary School	Centre	State
Gökçeada Cumhuriyet Primary School	Province	State
Yenice Cumhuriyet Primary School	Province	State

Çanakkale College, İsmail Kaymak College are private schools but other schools are state schools. 18 Mart Primary School is located in the city centre and its students generally have comparatively better life standards. Mustafa Kemal Primary School is in the periphery of Çanakkale city centre and Gökçeada Cumhuriyet Primary School and Yenice Cumhuriyet Primary School are in the provinces of Çanakkale. The students at these schools have relatively lower socio economic conditions than the others. Çanakkale College and İsmail Kaymak College are private schools. They are in the city centre of Çanakkale and their students have comparatively better socio economic conditions.

The number of the students in each school were different from each others. In Gökçeada Cumhuriyet Primary School, there were two 6<sup>th</sup> grade classes and two 8<sup>th</sup> grade classes, an average number of the students in each class was 30. In İsmail Kaymak College there were two 6<sup>th</sup> grade classes and one 8<sup>th</sup> grade class, the number of 6<sup>th</sup> graders were 26 and the number of 8<sup>th</sup> graders were 12. In Yenice Cumhuriyet Primary School there were two 6<sup>th</sup> grade classes and two 8<sup>th</sup> grade classes, an average number of the students in each class was 30.

In order to carry out the study the necessary permission was obtained from local administration of Ministry of Education.

### **3.3 Participants**

The students who participated in the study were randomly selected. The target participants of the study were 6<sup>th</sup> and 8<sup>th</sup> grade students. Grade differences have been reported in language learning. For example, Demir (2005) found that

the 6<sup>th</sup> graders were more motivated both intrinsically and extrinsically. Such a difference can be related to pre-puberty and puberty features of students as most pupils tend to enter their puberty while they are at the 7<sup>th</sup> grade with considerable biological and psychological changes, leading to sharp differences between 6<sup>th</sup> and 8<sup>th</sup> grade students (Kulaksızoğlu, 1998; Özbay & Öztürk, 1992). So this study intended to see whether there may be a difference among the participants before puberty and puberty in terms of multiple intelligences and preferences for classroom activities.

Two hundred sixty nine (269) students and nine (9) English language teachers participated in the study. There were one hundred thirty eight (138) male and one hundred thirty one (131) female students. There were one hundred seventy one (171) 6<sup>th</sup> grade and ninety eight (98) 8<sup>th</sup> grade students in the study. The data was collected in the Spring term of 2008-2009 academic year. Therefore, the 8<sup>th</sup> grade students were fewer, because the instruments were applied at the end of May when many 8<sup>th</sup> graders were on sick leave before SBS (Seviye Belirleme Sınavı). SBS is an examination which is taken by 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade students at the end of each year in order to enter high schools.

The participants from the state schools started to learn English as a foreign language at the 4<sup>th</sup> grade but the participants from private schools started to learn English as a foreign language at the 1<sup>st</sup> grade. The participants' background experience of language learning is different from each others. Distribution of the participants according to school, class, and gender can be seen in Table 3.2.

**Table 3.2. Distribution of the Participants of the Study**

SCHOOL	CLASS	FEMALE	MALE	TOTAL	
18 Mart Primary School (Central, state)	6 <sup>th</sup> grade	27	11	16	27
Çanakkale College (Central, private)	6 <sup>th</sup> grade	21	15	6	21
Gökçeada Cumhuriyet Primary School (Province, state)	6 <sup>th</sup> grade	47	41	44	85
Mustafa Kemal Primary School (Periphery, state)	8 <sup>th</sup> grade	38			
	6 <sup>th</sup> grade	32	8	24	32
Yenice Cumhuriyet Primary School (Province, state)	6 <sup>th</sup> grade	21	43	35	78
	8 <sup>th</sup> grade	57			
İsmail Kaymak College (Central, private)	6 <sup>th</sup> grade	23	13	13	26
	8 <sup>th</sup> grade	3			

English Language teachers who participated in the study were also from the schools where the study was carried out and they were the teachers of classes from the data was collected. They are young teachers, two of them had ten years experience of English language teaching, four teachers had five years experience of English language teaching, and three of participant teachers had two years experience of English language teaching. Distribution of participant English teachers according to schools can be seen in Table 3.3.

**Table 3.3. Distribution of participant English teachers.**

SCHOOL	The number of English teachers participated in the study
18 Mart Primary School (Central, state)	1
Çanakkale College (Central, private)	1
Gökçeada Cumhuriyet Primary School (Province, state)	2
Mustafa Kemal Primary School (Central, state)	1
Yenice Cumhuriyet Primary School (Province, state)	2
İsmail Kaymak College (Central, private)	2

### 3.4 Instruments

In the study three different questionnaires were used. The first one was Armstrong's (2000) Multiple Intelligence Inventory, the second was an Inventory for Activities Used in English Classes. This second inventory was developed by the researcher based on current literature. A teacher version, the Inventory for Activities Used in English Classes was also used. A brief description of these instruments are presented below.

#### *3.4.1 The Multiple Intelligence Inventory*

The Multiple Intelligence (MI) Inventory (Appendix A) used in this study is based on Gardner's Theory of Multiple Intelligences. This inventory was developed by Armstrong (1994) and translated into Turkish by Saban (2001). In

order to apply this inventory the researcher obtained permission from Saban (Personal communication: see Appendix D for the consent message).

With regard to reliability, the Cronbach alpha coefficient of the inventory was calculated. The Cronbach alpha value of each multiple intelligence field is given below in Table 3.4.

**Table 3.4. Cronbach Alpha Values of MI Inventory**

<b>Multiple Intelligence Fields</b>	<b>Cronbach Alpha Value</b>
Verbal/Linguistic Intelligence	.72
Logical/Mathematical Intelligence	.76
Visual/Spatial Intelligence	.72
Musical Intelligence	.74
Bodily/Kinesthetic Intelligence	.74
Interpersonal Intelligence	.79
Naturalist Intelligence	.86
Intrapersonal Intelligence	.68

As can be seen in Table 3.4, internal consistency values of each intelligence field is greater than the accepted value of 0.60, which implies that the inventory tends to be moderately reliable. This was in keeping with Temel's (2008) study where the same inventory was made use of. He also found that Saban's (2001) translated version of Armstrong's (2000) inventory was reliable enough. In Temel's study, Cronbach alpha value of the whole inventory was calculated to be .79. Blending the two findings Saban's inventory was considered to be reliable enough to proceed with data collection.

The Multiple Intelligence (MI) Inventory used in this study has 80 items with a five point likert scale. The items aim to measure students' multiple intelligence preferences. The inventory includes 10 items for each of the eight multiple intelligence fields, these fields are verbal/linguistic, logical/mathematical, visual/spatial, musical, bodily/kinesthetic, interpersonal,

naturalistic, and intrapersonal. Due to space limitations only number of items are presented in Table 3.5 below.

**Table 3.5. Representations of the MI Inventory Items**

Multiple Intelligence Fields	Inventory Items
Verbal/Linguistic Intelligence	1,2,3,4,5,6,7,8,9,10
Logical/Mathematical Intelligence	12,13,14,15,16,17,18,19,20,21,22
Visual/Spatial Intelligence	23,24,25,26,27,28,29,30,31,32
Musical Intelligence	33,34,35,36,37,38,39,40,41,42
Bodily/Kinesthetic Intelligence	43,44,45,46,47,48,49,50,51,52
Interpersonal Intelligence	53,54,55,56,57,58,59,60,61
Naturalist Intelligence	62,63,64,65,66,67,68,69,70,71
Intrapersonal Intelligence	72,73,74,75,76,77,78,79,80,81

### ***3.4.2 Activities Used in English Classes Inventory for Students***

The second instrument used in this study was Activities Used in English Classes Inventory (the inventory can be found in Appendix B). The inventory purports to find out which classroom activities are found beneficial by the students. The inventory includes 49 activity descriptions which represent eight multiple intelligence fields with a five point likert scale. The participants choose a number from 1 to 5. “1” represents “I never find it useful” , “2” represents “I do not find it useful” , “3” represents “I am not sure” , “4” represents “I find it useful” and “5” represents “I find it very useful”.

The inventory was developed by the researcher. While developing this inventory, the researcher investigated and utilized the sources (The list of distribution of frequently used activities in English classes according to multiple intelligence fields by Po-Ying cited in Bulut (2003), the sample lesson plans and classroom activities according to multiple intelligence fields by Armstrong (1994), the sample lesson plans and classroom activities according to multiple intelligence fields by Selçuk, Kayılı & Okut (2002), the inventory developed by

Şad (2008), Kagan& Kagan (1998) and Campbell, Campbell & Dickinson (2004)).

### ***3.4.3 Activities Used in English Classes Inventory for Teachers***

As a third instrument, Activities Used in English Classes Inventory (the inventory can be found in Appendix C) was adapted for the English teachers. The inventory included 48 items which represent eight multiple intelligence fields with a five point likert scale. The teachers chose a number from 1 to 5 and “1” represents “never” , “2” represents “rarely” , “3” represents “sometimes” , “4” represents “usually” and “5” represents “always”. The items intended to find out how frequently classroom activities are used by English teachers. The students’ and teachers’ inventories of activities were nearly the same, but teachers’ inventory was for frequency of activities while students’ inventory was for usefulness of activities. Distribution of activities can be seen in Table 3.6 below.

**Table 3.6 Representations of the Activities Used in English Classes Inventory Items**

Multiple Intelligence Fields	Inventory Items
Verbal/Linguistic Intelligence	12,13,14,15,16,17,19,20,21,22
Logical/Mathematical Intelligence	23,24,25,26,27,28
Visual/Spatial Intelligence	38,39,40,41,42,43
Musical Intelligence	33,34,35,36,37
Bodily/Kinesthetic Intelligence	6,7,8,9,10,11
Interpersonal Intelligence	1,2,3,4,5
Naturalistic Intelligence	44,45,46,47,48,49
Intrapersonal Intelligence	29,30,31,32

### **3.5 Procedures for Data Collection**

The study was carried out during the spring term of the 2008-2009 academic year. The researcher collected the data by herself at schools except for Yenice Cumhuriyet Primary School. The instruments were sent to Yenice and an English teacher at Cumhuriyet Primary School collected the data for the researcher. Eighty inventories for students and two inventories for English teachers were sent to Yenice and seventy-eight inventories from students and two inventories from English teachers came back to the researcher with an almost full return rate. Filling in the inventories took 40 minutes for the students and it took 20 minutes for the teachers.

### **3.6 Procedures for Data Analysis**

Within the scope of the research questions, the data gathered from the questionnaires was analyzed by using various procedures of analysis. The data obtained from the study was analyzed statistically by using Statistical Package for Social Sciences (SPSS, version 16.0). Descriptive statistics, independent Samples T-Test, and Analysis of Variance (ANOVA) were conducted to seek answers to particular research questions.

### **3.7 Chapter Summary**

This chapter presented the methodology implemented in the study. First, the objectives and the research questions were introduced. Then, the methodology of the study was explained.

## **CHAPTER FOUR**

### **FINDINGS AND DISCUSSIONS**

#### **4.0 Introduction**

This chapter presents and discusses findings of the study. The findings will be presented in order of research questions.

#### **4.1 Objectives and Research Questions**

This study aims to understand which Multiple Intelligence Types are dominant among the 6<sup>th</sup> and 8<sup>th</sup> grade students of different primary schools as well as to explore the relationship between Multiple Intelligences and other individual difference variables: gender, class, and school. This study also aimed to explore whether English language teachers implement MI Theory in their classroom activities or not.

Answers for the following research questions were sought throughout the study:

**RQ1-** Which multiple intelligence types are dominant among primary school students?

**RQ2-** Is there a difference between male students and female students in terms of their dominant multiple intelligence types?

**RQ3-** Is there a difference between 6<sup>th</sup> grade students and 8<sup>th</sup> grade students in terms of their dominant multiple intelligence types?



**RQ4-** Is there a difference between students from different socio-economic areas in terms of dominant multiple intelligence types?

**RQ5-** Which language teaching activities are perceived more useful by students?

**RQ6-** Is there a difference between 6<sup>th</sup> grade students and 8<sup>th</sup> grade students in terms of perceived usefulness of language teaching activities?

**RQ7-** Are students' MI preferences and activity preferences similar?

**RQ8-** Do the English teachers at primary schools address all MI fields?

## 4.2 Findings

### 4.2.1 Dominant Multiple Intelligence Types of the Students

**RQ1-** Which multiple intelligence types are dominant among primary school students?

To find out the answer to this question, mean values for each intelligence type was tabulated on SPSS, which then were put in order of descending order of mean values. Table 4.1 presents these mean values.

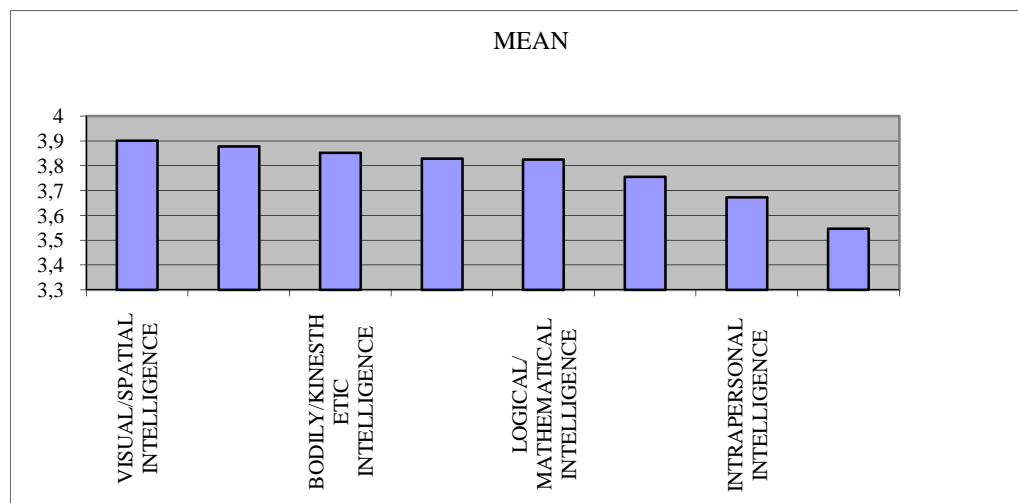
**Table 4.1. Dominant MI Types of the Students**

Multiple Intelligence Types	N	Mean	Std. Deviation
VISUAL/SPATIAL INTELLIGENCE	247	3.9012	.6542
NATURALIST INTELLIGENCE	242	3.8777	.8554
BODILY/KINESTHETIC INTELLIGENCE	229	3.8520	.6841
INTERPERSONAL INTELLIGENCE	246	3.8288	.7343
LOGICAL/ MATHEMATICAL INTELLIGENCE	217	3.8244	.7058
VERBAL/LINGUISTIC INTELLIGENCE	237	3.7561	.6104
INTRAPERSONAL INTELLIGENCE	247	3.6737	.6441
MUSICAL INTELLIGENCE	227	3.5458	.8362

As the table 4.1 indicates, students demonstrated strong preference for visual/spatial intelligence (M=3.9012) and naturalist intelligence (M=3.8777) and

two intelligences followed by bodily-kinesthetic ( $M=3.8520$ ) and interpersonal ( $M=3.8288$ ) intelligences. Musical intelligence ( $M=3.5458$ ) and intrapersonal intelligence ( $M=3.6737$ ) were preferred least by the primary school students. Although there is not a very big difference between the mean values, students' intelligence preferences are different from each other. The results implied that the students preferred the items that belong to visual/spatial intelligence field in the questionnaire. These results are illustrated in Figure 4.1.

**Figure 4.1. Dominant MI Types**



These findings are in keeping with some research results available in literature. For example, Bulut (2003) also reports that Visual/Spatial, Naturalist and Interpersonal Intelligences were dominant Multiple Intelligence fields of 5<sup>th</sup> grade students while Intrapersonal Intelligence was the weakest Multiple Intelligence field among the participants. In Temel's study (2008) the participants of the study demonstrated strong preference in Visual/Spatial Intelligence and they demonstrated weak preference in Intrapersonal Intelligence. Güler-Karadeniz (2006) also reports that 9<sup>th</sup> grade students perceived Visual/Spatial and Bodily/Kinesthetic Intelligences as their dominant MI fields while they perceived Musical Intelligence as their weak MI field. However, the findings did not support Akar's study (2006). It has got dissimilar results. 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade students'

Multiple Intelligence preferences were investigated and Verbal/Linguistic and Logical/Mathematical Intelligences are mostly preferred Multiple Intelligence fields and Naturalist Intelligence was least preferred MI field. Similarly, Akçin (2009) reports that Verbal/Linguistic and Musical Intelligences were dominant MI fields of 11<sup>th</sup> grade students while Naturalist and Intrapersonal Intelligences were not dominant. On the other hand, Eke-Demirci's (2005) study's results and Gürçay and Eryılmaz's (2002) study's results show dissimilarity to this study's results. They found that all of the intelligence dimensions distributed nearly in equal proportions in the sample of students. This may be because these studies were conducted in different cultural settings. For example, Eke Demirci's study was conducted in Eskişehir, the current study was conducted in Çanakklae. Another reason for this could be the instrument used. In this study, translated version (Saban, 2001) of Armstrong's instrument (2000) was made use of. However, Bulut (2003) used Selçuk's (2002) Multiple Intelligence inventory. Participants' grades may be another reason. In this study the participants were 6<sup>th</sup> and 8<sup>th</sup> graders, in Bulut's (2003) study the participants were 5<sup>th</sup> graders while 9<sup>th</sup> grade students participated in Güler Karadeniz's (2006) study. Such differences can explain the dissimilarity.

#### **4.2.2 Gender differences in Multiple Intelligence Preferences**

**RQ2-** Is there a difference between male students and female students in terms of their dominant multiple intelligence types?

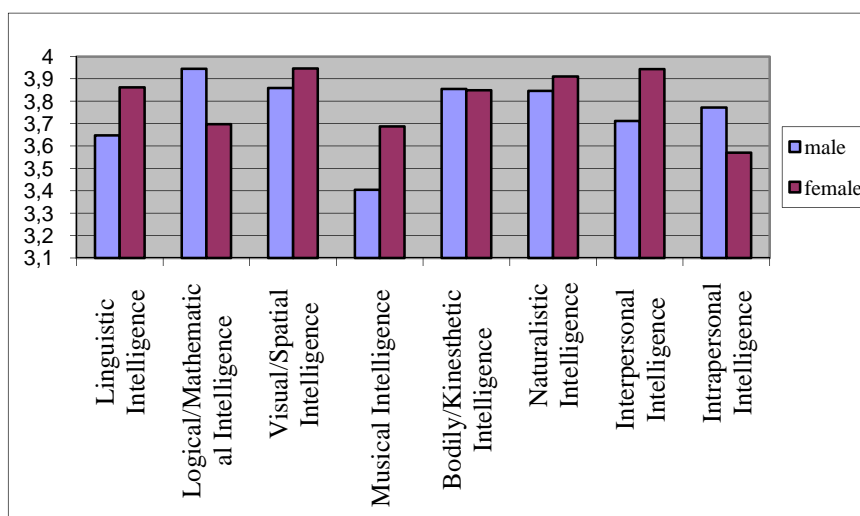
To find out, whether the students' gender affected the difference among the mean scores of multiple intelligences, an independent samples t-test analysis was conducted. Results can be seen in Table 4.2.

**Table 4.2. Gender Differences in Dominant MI Types of the Students**

	Gender	N	Mean	Std. Deviation	Mean differen ce	t	df	Sig.
VERBAL/ LINGUISTIC INTELLIGENCE	Male	117	3.6479	.6520	-.2138	-2.733	235	p<.007
LOGICAL/ MATHEMATICAL INTELLIGENCE	Female	120	3.8617	.5493	.2469	2.611	215	p<.010
VISUAL/SPATIAL INTELLIGENCE	Male	127	3.8591	.6497	-8.6778	-1.042	245	p>.298
MUSICAL INTELLIGENCE	Female	120	3.9458	.6586	-.2823	-2.575	225	p<.011
BODILY- KINESTHETIC INTELLIGENCE	Male	113	3.6876	.7397	6.376	.070	227	p>.944
NATURALIST INTELLIGENCE	Female	109	3.8486	.6814	-6.4711	-.587	240	p>.558
INTERPERSONAL INTELLIGENCE	Male	122	3.7122	.7904	-.2313	-2.497	244	p<.013
INTRAPERSONAL INTELLIGENCE	Female	124	3.9435	.6578	.2011	2.479	245	p<.014
	Male	126	3.7722	.6878				
	Female	121	3.5711	.5804				

Based on the results of analysis shown in Table 4.2, male students perceived logical/mathematical intelligence (M=3.9450) as their most dominant intelligence while female students did not do so. Female students identified visual/spatial intelligence (M=3.9458) and interpersonal intelligence (M=3.9435) as their most dominant intelligences. Figure 4.2 shows gender differences in terms of dominant Multiple Intelligence fields.

**Figure 4.2. Gender Differences in Dominant MI Types of the Students**



As can be seen in the table 4.2 and the graph 4.2 there was a significant difference among the students' intelligence mean scores according to gender, the difference between male and female students' mean scores (females'  $M=3.6876$  and males'  $M=3.4053$ ) of musical intelligence is dominant. Based on the results of analysis, linguistic intelligence ( $p<.007$ ), logical/mathematical intelligence ( $p<.010$ ), musical intelligence ( $p<.011$ ), interpersonal intelligence ( $p<.013$ ), and intrapersonal intelligence ( $p<.014$ ) preferences were significantly different from each other between male and female participants of the study. Bodily/kinesthetic intelligence preferences of male and female students were nearly the same. There was a significant difference in verbal/linguistic intelligence, logical/mathematical intelligence, musical intelligence, interpersonal intelligence, and intrapersonal intelligence. Female students perceived themselves higher in verbal/linguistic intelligence, musical intelligence, and interpersonal intelligence while male students perceived themselves higher in intrapersonal intelligence, and logical/mathematical intelligence. Significant difference was found between female and male students' multiple intelligence preferences.

This result of this research shows similarity to some of findings in literature. Loori (1995) investigated the multiple intelligence preferences of male and female students in the United States. The results showed that there were significant

differences between male and females in terms of their preferences of Multiple intelligences. Male students showed strong preference for logical-mathematical intelligence while the female students preferred intrapersonal intelligence. Similarly Akar (2006), Uysal (2004), Bulut (2003), and Göğebakan (2003) report that there were significant differences between Multiple Intelligence preferences of male and female students. Chan (2001), Franzen (2000), Rammstedt and Rammsayer (2000), Synder (2000), and Harms (1998), found significant differences between females and males in multiple intelligence dimensions in different grade levels. However, Kuloğlu's (2005) study shows dissimilarity in terms of gender differences in Multiple Intelligence. He reports that there was no significant difference between male and female participants' Multiple Intelligence preferences.

#### **4.2.3 Grade differences in MI preferences**

**RQ3-** Is there a difference between 6<sup>th</sup> grade students and 8<sup>th</sup> grade students in terms of their dominant multiple intelligence types?

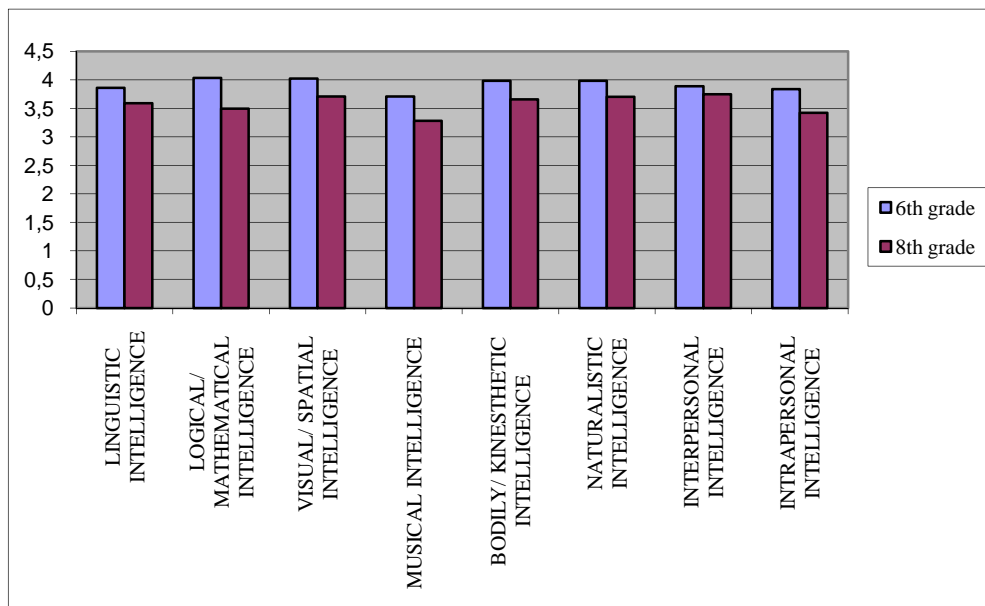
In order to answer this question, an independent samples t-test analysis was conducted. The results showed that the sixth grade students perceived strong preference in eight multiple intelligence fields. Mean scores of the two groups are shown in the Table 4.3.

**Table 4.3 Grade Differences in Dominant MI Types of the Students**

	CLASS	N	Mean	Std. Deviation	Mean difference	T	Df	Sig.
LINGUISTIC INTELLIGENCE	6 <sup>th</sup>	147	3.8592	.5895				
	8 <sup>th</sup>	90	3.5878	.6096	.2714	3.396	235	p<.001
LOGICAL/ MATHEMATICAL INTELLIGENCE	6 <sup>th</sup>	134	4.0299	.5962				
	8 <sup>th</sup>	83	3.4928	.7452	.5371	5.852	215	p<.001
VISUAL/ SPATIAL INTELLIGENCE	6 <sup>th</sup>	152	4.0211	.5887				
	8 <sup>th</sup>	95	3.7095	.7091	.3116	3.737	245	p<.001
MUSICAL INTELLIGENCE	6 <sup>th</sup>	142	3.7049	.8324				
	8 <sup>th</sup>	85	3.2800	.7770	.4249	3.815	225	p<.001
BODILY/ KINESTHETIC INTELLIGENCE	6 <sup>th</sup>	138	3.9819	.6654				
	8 <sup>th</sup>	91	3.6549	.6682	.3269	3.632	227	p<.001
NATURALISTIC INTELLIGENCE	6 <sup>th</sup>	152	3.9809	.8190				
	8 <sup>th</sup>	90	3.7033	.8912	.2776	2.465	240	p<.014
INTERPERSONAL INTELLIGENCE	6 <sup>th</sup>	146	3.8866	.7629				
	8 <sup>th</sup>	100	3.7444	.6856	.1422	1.495	244	p>.136
INTRAPERSONAL INTELLIGENCE	6 <sup>th</sup>	151	3.8338	.5978				
	8 <sup>th</sup>	96	3.4219	.6366	.4119	5.147	245	p<.001

According to Table 4.3, there were statistically significant differences between the mean scores of 6th grade students and 8th grade students with an exception in Interpersonal Intelligence ( $p < .136$ ). All other differences except for Naturalist Intelligence were highly significant at  $p < .001$ . The difference in the Naturalist Intelligence was also significant at  $p < .01$ . In seven Multiple Intelligence fields, 6th grade students were more dominant. These were logical/mathematical intelligence, linguistic intelligence, visual intelligence, musical intelligence, bodily/kinesthetic intelligence, naturalistic intelligence, and intrapersonal intelligence. Figure 4.3 shows the differences between 6<sup>th</sup> grade students' and 8<sup>th</sup> grade students' Multiple Intelligence preferences.

**Figure 4.3. Grade Differences in Dominant MI Types of the Students**



The results of this study show that there were statistically significant differences between the mean scores of 6th grade students' and 8th grade students' Multiple Intelligence preferences. These results support the results of previous studies about grade difference in Multiple Intelligence. For example, Göğebakan (2003) investigated how students' multiple intelligences differ in terms of grade level (first, third, fifth and eighth). Results showed that students' multiple intelligences showed variety according to their grade levels. For example, the students at the first grade level demonstrated strong preference for linguistic intelligence and logical-mathematical intelligence in the first grade and the two intelligences were followed by spatial intelligence, and bodily-kinesthetic intelligence. While the third grade students' most dominant intelligences preferences were interpersonal, spatial, logical-mathematical, and linguistic intelligence the fifth and eighth grade students' preferences were interpersonal intelligence, bodily-kinesthetic intelligence, musical intelligence and spatial intelligence. Similarly, Uysal (2004) reports that there was a significant difference between 7<sup>th</sup> and 10<sup>th</sup> grade students' Multiple Intelligence preferences.



#### 4.2.4 School Differences in MI Preferences

**RQ4-** Is there a difference between students from different socio-economic areas in terms of dominant multiple intelligence types?

To answer this question each intelligence field was examined one by one according to mean values of schools. ANOVA was computed to find out whether the mean differences among schools and multiple intelligence preferences were statistically significant.

##### *Verbal/Linguistic Intelligence*

Firstly, schools were compared to each others in terms of linguistic intelligence. Mean values of schools for Verbal/Linguistic Intelligence can be seen in Table 4.4.

**Table 4.4 Mean Values of Schools for Verbal/Linguistic Intelligence**

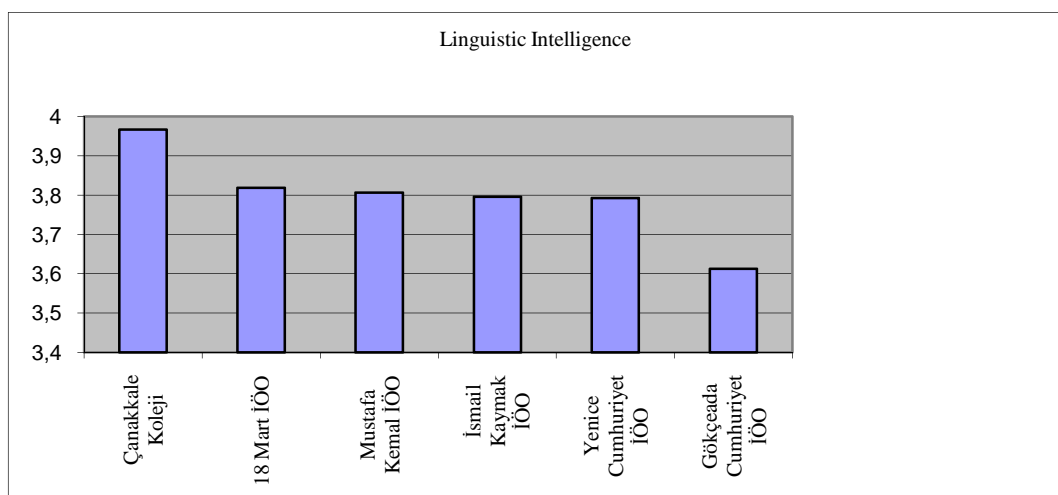
School	N	Mean	SD
Çanakkale College	21	3.9667	.3596
18 Mart Primary School	22	3.8182	.5645
Musatafa Kemal Primary School	31	3.8065	.6588
İsmail Kaymak College	22	3.7955	.6506
Yenice Cumhuriyet Primary School	67	3.7925	.6664
Gökçeada Cumhuriyet Primary School	74	3.6122	.5814

According to table 4.4, there was a statistically significant difference ( $p < .019$ ) between the mean scores of students at Çanakkale College and students at Gökçeada Cumhuriyet Primary School. There was no significant difference among the mean scores of other schools. Table 4.5 shows ANOVA results of Verbal/Linguistic Intelligence between Çanakkale College and Gökçeada Primary School.

**Table 4.5. ANOVA results of Verbal/Linguistic Intelligence between schools**

		Sum of Squares	df	Mean Square	F	Sig.	Direction of Differences
VERBAL/ LINGUISTIC INTELLIGENCE	Between Groups	2.751	5	.550	1.492	.193	Çanakkale College > Gökçeada Cumhuriyet PS p< .019
	Within Groups	85.173	231	.369			
	Total	87.924	236				

Figure 4.4 shows the differences among schools in terms of Verbal/Linguistic Intelligence.

**Figure 4.4. School Difference in Verbal/Linguistic Intelligence**

### *Logical/Mathematical Intelligence*

Secondly, the mean scores of schools were analyzed in terms of logical/mathematical intelligence. The students at 18 Mart Primary School were more dominant in logical/mathematical intelligence. They got the highest mean scores. On the other hand, the students at Yenice Cumhuriyet Primary School got the lowest mean scores. Table 4.6 shows the mean values of schools in terms of logical/mathematical intelligence.

**Table 4.6. Mean Values of Schools for Logical/Mathematical Intelligence**

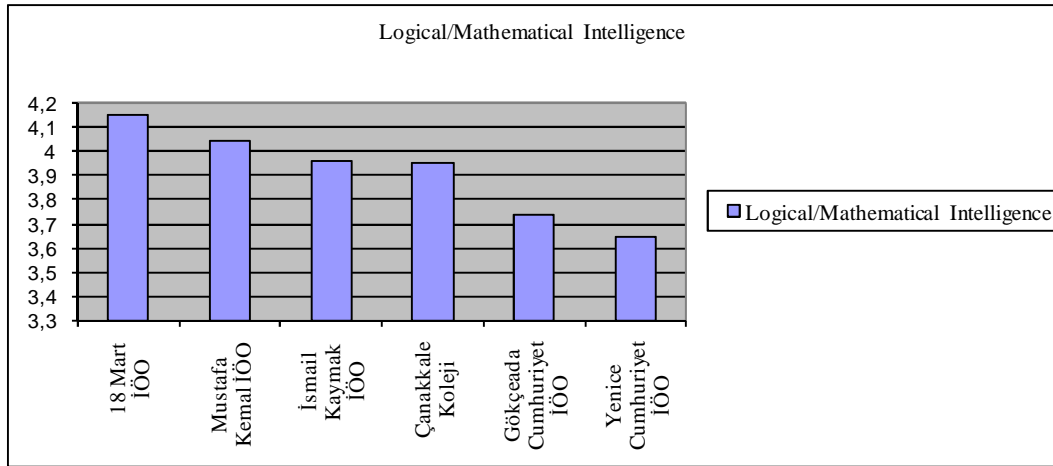
School	N	Mean	SD
18 Mart Primary School	17	4.1529	.6492
Musatafa Kemal Primary School	27	4.0481	.6009
İsmail Kaymak College	20	3.9600	.6676
Çanakkale College	20	3.9500	.6637
Gökçeada Cumhuriyet Primary School	73	3.7397	.7135
Yenice Cumhuriyet Primary School	60	3.6467	.7329

As shown in the table 4.6 , there was a statistically significant difference between the mean scores of students at 18 Mart Primary School and students at Gökçeada Cumhuriyet Primary School, students at 18 Mart Primary School and students at Yenice Cumhuriyet Primary School and also there was a significant difference between the mean scores of students at Mustafa Kemal Primary School and students at Gökçeada Cumhuriyet Primary School, students at Mustafa Kemal Primary School and students at Yenice Cumhuriyet Primary School. Table 4.7 shows ANOVA results of schools in terms of Logical/Mathematical Intelligence.

**Table 4.7. ANOVA results of Logical/Mathematical Intelligence between schools**

		Sum of Squares	df	Mean Square	F	Sig.	Direction of Differences
LOGICAL/ MATHEMATICAL INTELLIGENCE	Between Groups	6.289	5	1.258	2.619	.025	18 Mart > Gökçeada p<.028 18 Mart > Yenice p<.008
	Within Groups	101.312	211	.480			Mustafa Kemal > Gökçeada p<.049 Mustafa Kemal > Yenice p<.013
	Total	107.601	216				

The results of analysis point out that differences between schools were between central schools and schools located in provinces of Çanakkale. Participants at central schools demonstrated stronger preferences than participants at schools in provinces in terms of Multiple Intelligence fields. Figure 4.5 shows the differences between schools.

**Figure 4.5. School Difference in Logical/Mathematical Intelligence**

### *Visual/Spatial Intelligence*

As a third intelligence field, visual/spatial intelligence was examined. The students at Mustafa Kemal Primary School were more dominant in visual/spatial intelligence. They demonstrated strong preference in visual/spatial intelligence. The students at Gökçeada Cumhuriyet Primary School demonstrated weak preference in visual/spatial intelligence. Table 4.8 shows the mean values of schools for Visual/Spatial Intelligence.

**Table 4.8 Mean Values of Schools for Visual/Spatial Intelligence**

School	N	Mean	SD
Mustafa Kemal Primary School	28	4.1429	.5884
18 Mart Primary School	25	4.1040	.6093
İsmail Kaymak College	25	3.9080	.5866
Yenice Cumhuriyet Primary School	73	3.8603	.7041
Çanakkale College	20	3.8450	.7193
Gökçeada Cumhuriyet Primary School	76	3.7974	.6278

As the table 4.8 indicated, there were significant difference between the mean scores of students at 18 Mart Primary School and students at Gökçeada Cumhuriyet Primary School, and also there was a significant difference between the mean scores of students at Mustafa Kemal Primary School and students at

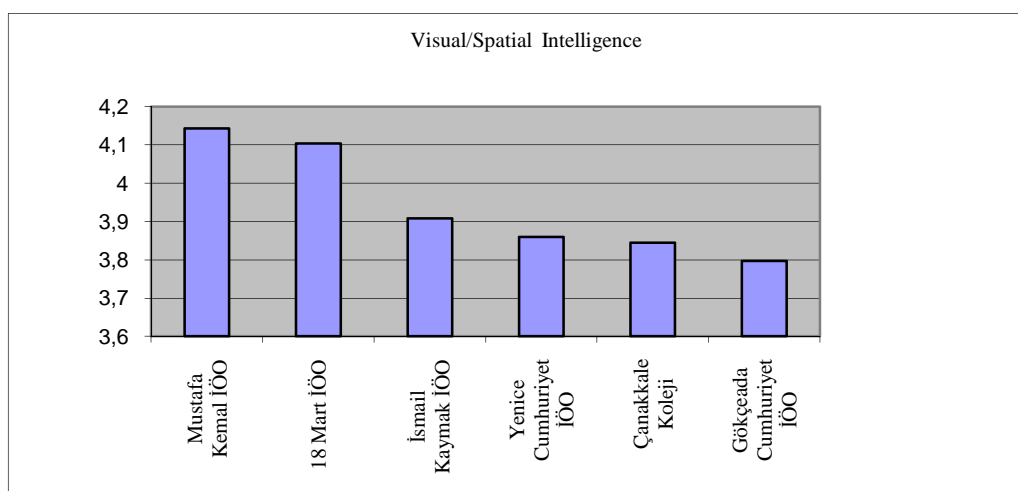
Gökçeada Cumhuriyet Primary School. ANOVA results of Visual/Spatial Intelligence between schools can be seen in Table 4.9.

**Table 4.9. ANOVA results of Visual/ Spatial Intelligence between schools**

		Sum of Squares	df	Mean Square	F	Sig.	Direction of Differences
VISUAL/ SPATIAL INTELLIGENCE	Between Groups	3.669	5	.734	1.741	.126	18 Mart > Gökçeada p<.042
	Within Groups	101.600	241	.422			
	Total	105.270	246				Mustafa Kemal > Gökçeada Cumhuriyet p<.017

Figure 4.6 shows the differences between schools in terms of Visual/Spatial Intelligence.

**Figure 4.6. School Difference in Visual/Spatial Intelligence**



### ***Musical Intelligence***

The fourth intelligence field was musical intelligence. There was a statistical difference among the schools in musical intelligence. The students at İsmail Kaymak Primary School demonstrated strong preference (M=3.85) in musical intelligence. The students at Gökçeada Cumhuriyet Primary School (M=3.4610)

and Yenice Cumhuriyet Primary School ( $M=3.4175$ ) demonstrated weak preference. Mean values of schools for Musical Intelligence can be seen in Table 4.10

**Table 4.10 Mean Values of Schools for Musical Intelligence**

School	N	Mean	SD
İsmail Kaymak Primary School	24	3.8500	.9722
Çanakkale College	19	3.7474	.7199
Musatafa Kemal Primary School	27	3.6148	.8310
18 Mart Primary School	23	3.5826	1.0219
Gökçeada Cumhuriyet Primary School	77	3.4610	.7851
Yenice Cumhuriyet Primary School	57	3.4175	.7854

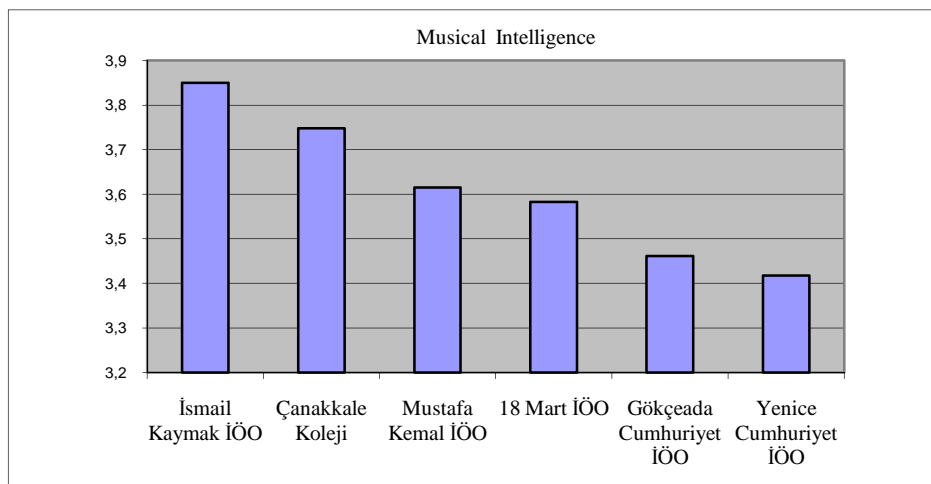
Table 4.11 shows ANOVA results of Musical Intelligence between schools.

**Table 4.11. ANOVA results of Musical Intelligence between schools**

		Sum of Squares	df	Mean Square	F	Sig.	Direction of Differences
MUSICAL INTELLIGENCE	Between Groups	4.643	5	.929	1.338	.249	İsmail Kaymak PS > Gökçeada Cumhuriyet PS
	Within Groups	153.380	221	.694			$p<.047$
	Total	158.024	226				İsmail Kaymak > Yenice Cumhuriyet PS $p<.034$

As shown in the table 4.11, there was a significant difference between the mean scores of the students at İsmail Kaymak Primary School and the students at Gökçeada Cumhuriyet Primary School ( $p<.047$ ) and Yenice Cumhuriyet Primary School ( $p<.034$ ).

School differences in Musical Intelligence can be seen in Figure 4.7 below.

**Figure 4.7. School Differences in Musical Intelligence**

### ***Bodily/Kinesthetic Intelligence***

Bodily/kinesthetic intelligence was the fifth intelligence field which was analyzed. The students at İsmail Kaymak Primary School (M=4.2240) and 18 Mart Primary School (M=4.1083) are dominant in bodily/kinesthetic intelligence. But the students at Yenice Cumhuriyet Primary School (M=3.6525), Gökçeada Cumhuriyet Primary School (M=3.7836) and Mustafa Kemal Primary School (M=3.8357) are not dominant in bodily/kinesthetic intelligence. Mean values of schools for Bodily/Kinesthetic Intelligence can be seen in Table 4.12.

**Table 4.12 Mean Values of Schools for Bodily/ Kinesthetic Intelligence**

School	N	Mean	SD
İsmail Kaymak Primary School	25	4.2240	.4977
18 Mart Primary School	24	4.1083	.7277
Çanakkale Koleji	18	3.9722	.7028
Musatafa Kemal Primary School	28	3.8357	.6178
Gökçeada Cumhuriyet Primary School	73	3.7836	.6212
Yenice Cumhuriyet Primary School	61	3.6525	.7531

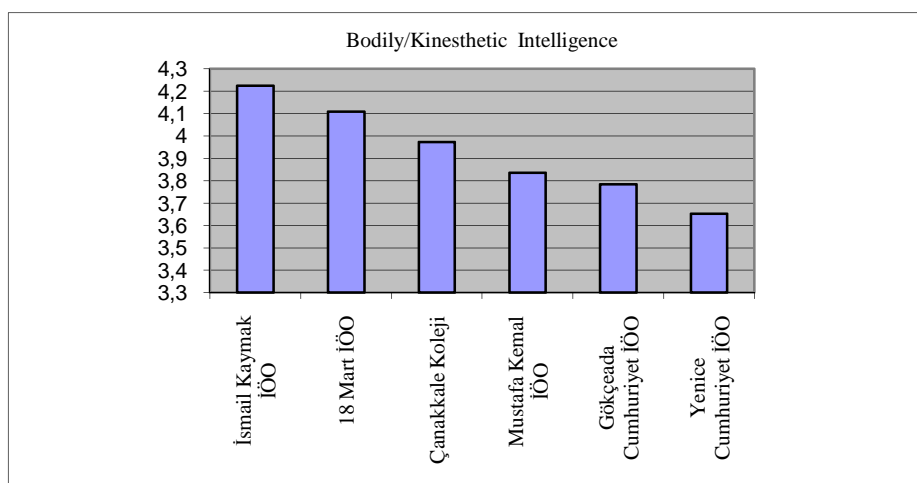
Table 4.13 shows ANOVA results of Bodily/Kinesthetic Intelligence between schools.

**Table 4.13. ANOVA results of Bodily/ Kinesthetic Intelligence between schools**

		Sum of Squares	Df	Mean Square	F	Sig.	Direction of Differences
BODILY/ KINESTHETIC INTELLIGENCE	Between Groups	8.075	5	1.615	3.651	.003	18 Mart > Gökçeada p<.039 18 Mart > Yenice p<.005 İsmail Kaymak > Gökçeada Cumhuriyet PS p<.005
	Within Groups	98.637	223	.442			İsmail Kaymak > Mustafa Kemal p<.035 İsmail Kaymak > Yenice Cumhuriyet PS p<.001
	Total	106.712	228				

As the table 4.13 indicated, there were significant differences among the mean scores of the students at different schools. The students at İsmail Kaymak Primary School and 18 Mart Primary School demonstrated stronger preference than the students at Yenice Cumhuriyet Primary School, Gökçeada Cumhuriyet Primary School and Mustafa Kemal Primary School in bodily/kinesthetic intelligence. Figure 4.8 shows school differences in terms of Bodily/Kinesthetic Intelligence.

**Figure 4.8 School Differences in Bodily/Kinesthetic Intelligence**



### *Naturalist Intelligence*

The mean scores of naturalist intelligence were not very different from each others. All students participated in the study demonstrated strong preference in



naturalist intelligence. But the students at Çanakkale College (M=4.0105) were the most dominant students in naturalist intelligence. Mean values of schools for Naturalist Intelligence are shown in Table 4.14.

**Table 4.14. Mean Values of Schools for Naturalist Intelligence**

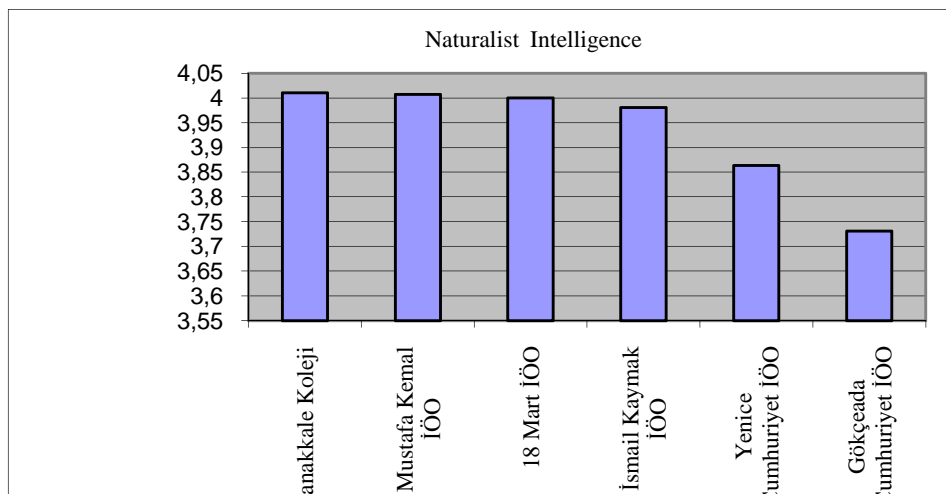
School	N	Mean	SD
Çanakkale College	19	4.0105	.7534
Musatafa Kemal Primary School	28	4.0071	.8576
18 Mart Primary School	26	4.0000	1.0381
İsmail Kaymak College	26	3.9808	.8114
Yenice Cumhuriyet Primary School	68	3.8632	.7842
Gökçeada Cumhuriyet Primary School	75	3.7307	.8896

Table 4.15 shows ANOVA results of Naturalist Intelligence between schools.

**Table 4.15 ANOVA results of Naturalist Intelligence between schools**

		Sum of Squares	df	Mean Square	F	Sig.
NATURALIST INTELLIGENCE	Between Groups	3.105	5	.621	.846	.518
	Within Groups	173.234	236	.734		
	Total	176.340	241			

As shown in the table 4.15, there was no significant difference among the mean scores of the students at different schools in naturalist intelligence. Figure 4.9 shows that the participants at schools demonstrated similar preferences in terms of Naturalist Intelligence.

**Figure 4.9 School Differences in Naturalist Intelligence**

### *Interpersonal Intelligence*

The mean scores of interpersonal intelligence were close to each other. All students participated in the study demonstrated strong preference in interpersonal intelligence. But the students at Çanakkale College (M=3.9935) were the most dominant students in interpersonal intelligence. Comparing other students at different schools, the students at Yenice Cumhuriyet Primary School (M=3.7809) and Gökçeada Cumhuriyet Primary School (M=3.7651) demonstrated weaker preference in interpersonal intelligence. Mean values of schools for Interpersonal Intelligence are shown in Table 4.16.

**Table 4.16 Mean Values of Schools for Interpersonal Intelligence**

School	N	Mean	SD
Çanakkale College	17	3.9935	.6900
İsmail Kaymak Primary School	26	3.9744	.8768
18 Mart Primary School	26	3.8761	.8985
Mustafa Kemal Primary School	27	3.8519	.7174
Yenice Cumhuriyet Primary School	71	3.7809	.6377
Gökçeada Cumhuriyet Primary School	79	3.7651	.7310

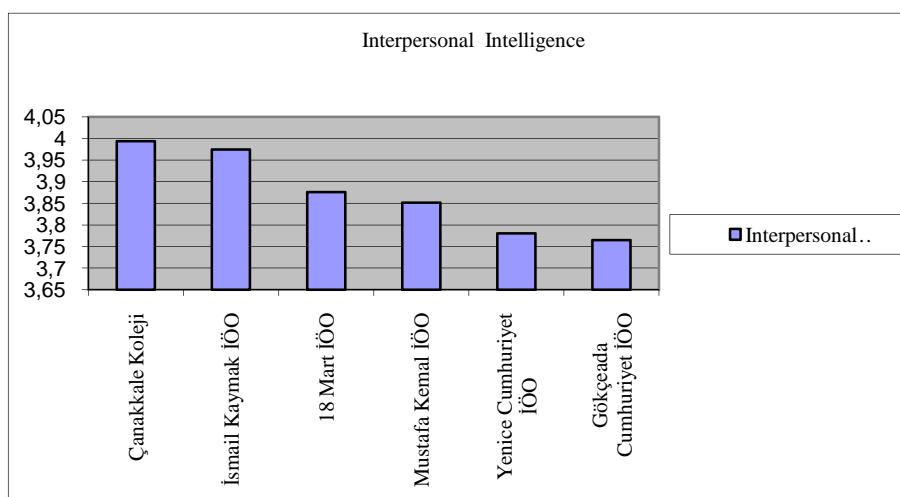
Table 4.17 shows ANOVA results of Interpersonal Intelligence between schools.

**Table 4.17 ANOVA results of Interpersonal Intelligence between schools**

		Sum of Squares	df	Mean Square	F	Sig.
INTERPERSONAL INTELLIGENCE	Between Groups	1.567	5	.313	.576	.718
	Within Groups	130.545	240	.544		
	Total	132.112	245			

As the table 4.17 indicates, there was no significant difference among the mean scores of the students at different schools in interpersonal intelligence.

Figure 4.10 shows school differences in Interpersonal Intelligence.

**Figure 4.10 School Differences in Interpersonal Intelligence**

### ***Intrapersonal Intelligence***

The last intelligence field was intrapersonal intelligence which was analyzed. The students at Mustafa Kemal Primary School (M=3.9167) are dominant in intrapersonal intelligence. The students at Yenice Cumhuriyet Primary School (M=3.4851) got the lowest mean scores in intrapersonal intelligence. Mean values of schools in terms of Intrapersonal Intelligence are shown in Table 4.18.

**Table 4.18. Mean Values of Schools for Intrapersonal Intelligence**

School	N	Mean	SD
Mustafa Kemal Primary School	30	3,9167	.6613
18 Mart Primary School	26	3,8308	.5555
İsmail Kaymak Primary School	25	3,8120	.5869
Çanakklae College	18	3,6889	.5279
Gökçeada Cumhuriyet Primary School	81	3,6432	.6850
Yenice Cumhuriyet Primary School	67	3,4851	.6248

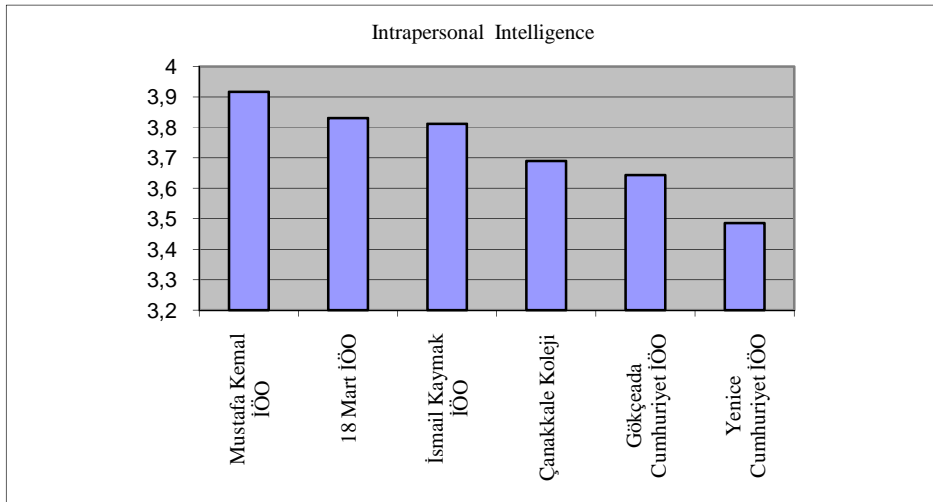
Table 4.19 shows ANOVA results of Intrapersonal Intelligence between schools.

**Table 4.19 ANOVA results of Intrapersonal Intelligence between schools**

		Sum of Squares	df	Mean Square	F	Sig.	Direction of Differences
INTRAPERSONAL INTELLIGENCE	Between Groups	5.354	5	1.071	2.668	.023	18 Mart > Yenice p<.019 Mustafa Kemal PS > Gökçeada Cumhuriyet PS p<.045 İsmail Kaymak > Yenice p<.029 Mustafa Kemal > Yenice p<.002
	Within Groups	96.705	241	.401			
	Total	102.059	246				

As shown in the table 4.19, there was a significant difference among the mean scores of the students at different schools in intrapersonal intelligence. The students at Mustafa Kemal Primary School, 18 Mart Primary School and Ismail Kaymak Primary School demonstrated strong preference while the students at Yenice Cumhuriyet Primary School and Gökçeada Cumhuriyet Primary School demonstrated weak preference in intrapersonal intelligence. Figure 4.11 shows school differences in terms of Intrapersonal Intelligence.

**Figure 4.11 School Difference in Intrapersonal Intelligence**



From the data obtained, students' multiple intelligences showed variety according to their schools. For example, the students at 18 Mart Primary School demonstrated strong preference for almost eight intelligence fields. While the students at Gökçeada Cumhuriyet Primary School and Yenice Cumhuriyet Primary School demonstrated weaker preference for multiple intelligence fields. Apart from Interpersonal and Naturalist Intelligences, the participants of the study showed variety according to their schools. Verbal/Linguistic, Logical/Mathematical, Intrapersonal, Visual/Spatial, Bodily/Kinesthetic, and Musical Intelligences vary according to schools. The important thing is that participants at central schools generally demonstrated stronger preferences in Multiple Intelligence than the participants at schools in provinces. This may be because of socio-economic conditions of schools and locations of schools. The students at central schools have better life standards than the students at peripheral schools. Also, two schools located in centre are private schools. Private school students have got better conditions for both school and daily life. There are very few studies found in literature examining the relationship between socio-economic conditions and the multiple intelligence dimensions, to compare the results with this study and there is no study found in literature examining the comparison of schools in terms of Multiple Intelligence dimensions. The result of this study is supported by Uysal's study(2004). Uysal's study showed that as the

socio-economic status increases, the students' perceptions of strength in Multiple Intelligence fields dimensions increase.

### 4.3 Analysis of the Perception of the Effectiveness of English Classroom Activities

**RQ5-** Which language teaching activities are perceived more useful by students?

In order to answer this question, mean values for each activity item was tabulated on SPSS, which then were put in order of descending order. Classroom activities used in English classes in the inventory were grouped according to the multiple intelligence fields. Table 4.20 shows the mean values of activities in terms of multiple intelligence fields.

**Table 4.20 Activities Perceived To Be Useful In English Classes In Terms Of Multiple Intelligence Fields**

	N	Mean	Std. Deviation
VERBAL/LINGUISTIC INTELLIGENCE	244	4.2225	.69574
INTERPERSONAL INTELLIGENCE	255	4.0753	.83599
VISUAL/SPATIAL INTELLIGENCE	248	3.9718	.95318
INTRAPERSONAL INTELLIGENCE	255	3.9637	.81714
LOGICAL /MATHEMATICAL INTELLIGENCE	252	3.8452	.94963
NATURALIST INTELLIGENCE	251	3.6959	.99489
BODILY/KINESTHETIC INTELLIGENCE	238	3.5623	1.05107
MUSICAL INTELLIGENCE	252	3.3198	1.20877

As the Table 4.20 indicates, students demonstrated strong preference for the activities which present verbal/linguistic intelligence (M= 4.2225), activities which present interpersonal intelligence (M=4.0753), activities presenting visual/spatial intelligence (M=3.9718) and intrapersonal intelligence (M=3.9637) followed. Activities related to the musical intelligence (M=3.3198) and bodily/kinesthetic intelligence (M=3.5623) were preferred least by primary school students. Students preferred different activities as useful. Activities used in

English classes were grouped according to the multiple intelligence fields. Because this study aims to learn which activities are more useful according to the primary school students. To analyze this, activities presenting different multiple intelligence fields were discussed one by one according to the multiple intelligence fields. This was done according to the mean values obtained for each intelligence field above. Namely, findings will be presented in order of activities for verbal/linguistic intelligence; interpersonal intelligence; visual/spatial intelligence; intrapersonal intelligence; logical/mathematical intelligence; naturalist intelligence; bodily/kinesthetic intelligence; musical intelligence.

### *Verbal/linguistic intelligence*

As can be seen in Table 4.21, firstly, activities in verbal/linguistic intelligence were examined. The mean values of activities in verbal/linguistic intelligence shown in the table 4.21.

**Table 4.21. Mean Values of Activities Related to Verbal/Linguistic Intelligence**

	N	Mean	Std. Deviation
taking notes (act 15)	266	4.58	.871
dictionary activities (act 14)	263	4.40	1.061
oral repetition activities (act 21)	267	4.38	.894
reading activities (act 17)	263	4.30	1.075
giving writing activities as a homework (act 13)	263	4.24	1.133
making jokes (act 16)	262	4.21	1.085
listening activities (act 20)	269	4.11	1.162
speaking activities (question& answer) (act 12)	262	4.11	1.156
playing word games (act 22)	268	4.07	1.231
using English stories (act 19)	264	3.62	1.477

According to these mean values (Table 4.21), activity 15- 'keeping notes' was perceived to be the most beneficial activity (M=4.58) whereas activity 19- 'using English stories' was perceived to be the least beneficial (M=3.62) activity by participants of the study. Generally the students thought that the activities in verbal/linguistic intelligence were beneficial.

### *Interpersonal intelligence*

Secondly, the mean values of activities in interpersonal intelligence were analyzed. In interpersonal intelligence, the students preferred the activity 2- 'English speaking activities' in the inventory as the most useful (M=4.27). Activity 3- 'having discussion and debate in English in the classroom' was the least useful activity (M=3.81) in interpersonal intelligence according to the students. Table 4.22 shows the mean values of the activities.

**Table 4.22. Mean Values of Activities Related to Interpersonal Intelligence**

	N	Mean	Std. Deviation
English speaking activities (act 2)	265	4.27	1.019
taking feedback from the teacher (act 5)	263	4.21	1.080
pair work (act 4)	262	4.05	1.182
group work (act 1)	266	3.96	1.178
having discussion and debate in English in the classroom (act 3)	263	3.81	1.302

### *Visual/spatial intelligence*

Visual/spatial intelligence was the next intelligence field which was examined. The participants preferred activity 39- 'drawing graphs, images and tables on the board' as the most useful activity (M=4.08) in visual/spatial intelligence. But the students preferred activity 42- 'imagining and picturing' as the least useful activity (M=3.85). Mean values of activities related to Visual/Spatial Intelligence are shown in Table 4.23.



**Table 4.23 Mean Values of Activities Related to Visual/Spatial Intelligence**

	N	Mean	Std. Deviation
drawing graphs, images and tables on the board (act 39)	268	4.08	1.201
using wall papers, posters and panels (act 43)	261	4.04	1.232
using colourful chalks and board markers (act 38)	263	3.98	1.300
explaining something drawing pictures (act 41)	260	3.96	1.313
using visual materials (flash cards, photographs) (act 40)	269	3.91	1.331
imagining and picturing (act 42)	268	3.85	1.347

### *Intrapersonal intelligence*

Activities in intrapersonal intelligence were the fourth group activities. Activity 29- ‘individual explanation’ was perceived to be the most beneficial activity (M=4.33) but Activity 32- ‘keeping diary in English’ was perceived to be the least beneficial activity (M=3.08) by primary school students. Table 4.24 shows the mean values of activities related to Intrapersonal Intelligence.

**Table 4.24 Mean Values of Activities Related to Intrapersonal Intelligence**

	N	Mean	Std. Deviation
individual explanation (act 29)	267	4.33	1.043
our teacher helps us to decide our personal goals (act 30)	264	4.22	1.016
our teacher encourages us to make exercises (act 31)	262	4.18	1.054
keeping diary in English (act 32)	267	3.08	1.526

### *Logical/mathematical intelligence*

The next group activities were related to logical/mathematical intelligence. The mean values of these activities were shown in the Table 4.25.

**Table 4.25 Mean Values of Activities Related to Logical/Mathematical Intelligence**

	N	Mean	Std. Deviation
our teacher wants us to relate previous subjects and new subjects (act 27)	268	4.13	1.141
making causal relationship (act 28)	262	4.01	1.174
guessing activities (act 25)	269	3.99	1.223
completing an unfinished story (act 24)	265	3.74	1.364
playing logic games (act 23)	269	3.62	1.363
doing jigsaw puzzles (act 26)	263	3.57	1.404

As can be seen in Table 4.25, the students demonstrated strong preference (M=4.13) in activity 27- ‘our teacher wants us to relate previous subjects and new subjects’. But participants demonstrated weak preference (M=3.57) in activity 26- ‘doing jigsaw puzzles.

#### *Naturalist intelligence*

The sixth multiple intelligence field which was examined was naturalist intelligence. The mean values of these activities are shown in Table 4.26. Considering these mean values, activity 49- ‘our teacher wants us to see the differences and similarities among the subjects’ was the most useful (M=4.15) activity but activity 47- ‘using materials related to the nature, animals or plants in English classes’ was the least useful (M=3.34) activity according to the participants.

**Table 4.26 Mean Values of Activities Related to Naturalist Intelligence**

	N	Mean	Std. Deviation
our teacher wants us to see the differences and similarities among the subjects (act 49)	267	4.15	1.183
our teacher wants us to classify the subjects (act 48)	266	3.92	1.273
using photographs related to the nature (animals, mountain, lake, river etc.) (act 44)	266	3.88	1.264
hanging photographs about nature (act 45)	264	3.53	1.337
watching programs about nature (act 46)	266	3.39	1.416
using materials related to the nature, animals or plants in English classes (act 47)	265	3.34	1.469

### ***Bodily/kinesthetic intelligence***

The mean values of activities in bodily/kinesthetic intelligence were analyzed. Activity 10- 'our teacher gives us orders which can be physically done' was chosen as the most useful activity (M=3.92) in this intelligence field. The students preferred activity 9- 'doing calm down exercises' as the least useful (M=3.15) activity. Mean values of activities related to Bodily/Kinesthetic Intelligence are shown in Table 4.27.

**Table 4.27 Mean Values of Activities Related to Bodily/Kinesthetic Intelligence**

	N	Mean	Std. Deviation
our teacher gives us orders which can be physically done (act 10)	264	3.92	1.209
acting, role play (act 11)	258	3.83	1.322
playing board games (act 6)	256	3.52	1.444
group works in which we can walk around the classroom (act 7)	265	3.52	1.414
using materials such as puppets, mascots (act 8)	262	3.34	1.490
doing calm down exercises (act 9)	262	3.15	1.553

### ***Musical intelligence***

The last multiple intelligence field was musical intelligence. According to mean scores of these activities, the students mostly preferred activity 35 (M=3.58)- 'learning English songs'. However activity 34- 'listening to music in the lesson' was perceived to be the least useful (M=3.10) activity in musical intelligence by primary school students. Table 4.28 shows mean values of activities related to Musical Intelligence.

**Table 4.28 Mean Values of Activities Related to Musical Intelligence**

	N	Mean	Std. Deviation
learning English songs (act 35)	266	3.58	1.491
making presentations with music (act 36)	264	3.38	1.480
using rhythms in the lesson (act 37)	267	3.33	1.436
using activities with musical instruments (act 33)	261	3.16	1.489
listening to music in the lesson (act 34)	268	3.10	1.630

Activities were analyzed in terms of multiple intelligence fields. In this part, the mean values of all activities in the inventory were shown in the table 4.29.

**Table 4.29 Activities Preferred in English Classes**

	N	Mean	Std. Deviation	Multiple intelligence field
taking notes (act 15)	266	4.58	.871	Verbal/linguistic intelligence
dictionary activities (act 14)	263	4.40	1.061	Verbal/linguistic intelligence
oral repetition activities (act 21)	267	4.38	.894	Verbal/linguistic intelligence
individual explanation (act 29)	267	4.33	1.043	Intrapersonal intelligence
reading activities (act 17)	263	4.30	1.075	Verbal/linguistic intelligence
English speaking activities (act 2)	265	4.27	1.019	Interpersonal intelligence
writing activities (act 13)	263	4.24	1.133	Verbal/linguistic intelligence
our teacher helps us to decide our personal goals (act 30)	264	4.22	1.016	Intrapersonal activities
making jokes (act 16)	262	4.21	1.085	Verbal/linguistic intelligence
taking feedback from the teacher (act 5)	263	4.21	1.080	Interpersonal intelligence
our teacher encourages us to make exercises (act 31)	262	4.18	1.054	Intrapersonal intelligence
our teacher wants us to see the differences and similarities among the subjects (act 49)	267	4.15	1.183	Naturalist intelligence
our teacher wants us to relate previous subjects and new subjects (act 27)	268	4.13	1.141	Logical/mathematical intelligence
listening activities (act 20)	269	4.11	1.162	Verbal/linguistic intelligence
speaking activities (question & answer) (act 12)	262	4.11	1.156	Verbal/linguistic intelligence
drawing graphs, images and tables on the board (act 39)	268	4.08	1.201	Visual/spatial intelligence
act22 playing word games	268	4.07	1.231	Verbal/linguistic intelligence
using wall papers, posters and panels (act 43)	261	4.04	1.232	Visual/spatial intelligence
making casual relationships (act 28)	262	4.01	1.174	Logical/mathematical intelligence
guessing activities (act 25)	269	3.99	1.223	Logical/mathematical intelligence
using colourful chalks and board markers (act 38)	263	3.98	1.300	Visual/spatial intelligence
group work (act 1)	266	3.96	1.178	Interpersonal intelligence
explaining something drawing pictures (act 41)	260	3.96	1.313	Visual/spatial intelligence

**Table 4.29 Activities Preferred in English Classes (Continued)**

	N	Mean	Std. Deviation	Multiple intelligence field
our teacher gives us orders which can be physically done (act 10)	264	3.92	1.209	Bodily/kinesthetic intelligence
our teacher wants us to classify the subjects (act 48)	266	3.92	1.273	Naturalist intelligence
using visual materials (flash cards, photographs) (act 40)	269	3.91	1.331	Visual/spatial intelligence
using photographs related to the nature (animals, mountain, lake, river etc.) (act 44)	266	3.88	1.264	Naturalist intelligence
imagining and picturing (act 42)	268	3.85	1.347	Visual/spatial intelligence
acting , role play (act 11)	258	3.83	1.322	Bodily/kinesthetic intelligence
having discussion and debate in English in the classroom (act 3)	263	3.81	1.302	Interpersonal intelligence
completing an unfinished story (act 24)	265	3.74	1.364	Logical/mathematical intelligence
using English stories (act 19)	264	3.62	1.477	Verbal/linguistic intelligence
playing logic games (act 23)	269	3.62	1.363	Logical/mathematical intelligence
learning English songs (act 35)	266	3.58	1.491	Musical intelligence
doing jigsaw puzzles (act 26)	263	3.57	1.404	Logical/mathematical intelligence
hanging photographs about nature in the classroom (act 45)	264	3.53	1.337	Naturalist intelligence
playing board games (act 6)	256	3.52	1.444	Bodily/kinesthetic intelligence
group works in which we can walk around the classroom (act 7)	265	3.52	1.414	Bodily/kinesthetic intelligence
watching programs about nature (act 46)	266	3.39	1.416	Naturalist intelligence
making presentation with music (act 36)	264	3.38	1.480	Musical intelligence
using materials such as puppets ,mascots (act 8)	262	3.34	1.490	Bodily/kinesthetic intelligence
using materials related to the nature, animals or plants in English classes (act 47)	265	3.34	1.469	Naturalist intelligence
using rhythms in the lesson (act 37)	267	3.33	1.436	Musical intelligence
using activities with musical instruments (act33)	261	3.16	1.489	Musical intelligence
doing calm down exercises (act 9)	262	3.15	1.553	Bodily/kinesthetic intelligence
listening to music in the lesson (act 34)	268	3.10	1.630	Musical intelligence
keeping diary in English (act 32)	267	3.08	1.526	Intrapersonal intelligence

According to Table 4.29, activity 15- 'taking notes' (M=4.58) was mostly preferred as the most useful activity. Then activity 14- 'dictionary activities' (M=4.40) and activity 21- 'oral repetition activities' (M=4.38) followed. Activities which had mean values above 4.00 (M>4.00) were useful activities according to the students. These were activity 29- 'individual explanation' (M=4.33), activity 17- 'reading activities' (M=4.30), activity 2- 'English speaking activities' (M=4.27), activity 13- 'giving writing activities as a homework' (M=4.24), activity 30- 'our teacher helps us to decide our personal goals' (M=4.22) , activity 16- 'making jokes' (M=4.21) , activity 5- 'taking feedback from the teacher' (M=4.21), activity 31- 'our teacher encourages us to make exercises' (M=4.18), activity 49- 'our teacher wants us to see the differences and similarities among the subjects' (M=4.15), activity 27- 'our teacher wants us to relate previous subjects and new subjects' (M=4.13), activity 20- 'listening activities'(M=4.11), activity 12- 'speaking activities (question& answer)' (M=4.11), activity 39- 'drawing graphs, images and tables on the board'(M=4.08), activity 22- 'playing word games' (M=4.07), activity 4- 'pair work activities' (M=4.05), activity 43- 'using wall papers, posters and panels' (M=4.04), and activity 28- 'making causal relationships' (M=4.01). But activity 32- 'keeping diary in English' (M=3.08) was the least useful activity in English classes. Activities which had mean values below 3.50 (M<3.50) were less useful activities according to the students. These were activity 34- 'listening to music in the lesson' (M=3.10), activity 9- 'doing calm down exercises' (M=3.15), activity 33- 'making activities with musical instruments' (M=3.16), activity 37- 'using rhythms in the lesson' (M=3.33), activity 47- 'using materials related to the nature, animals or plants in English classes' (M=3.34), activity 8- 'using materials such as puppets, mascots' (M=3.34), activity 36- 'making presentations with music' (M=3.38), and activity 46- 'watching programs about nature' (M=3.39).

#### **4.4 Grade Differences in the Activities Perceived To Be Useful By Primary School Students in English Classes**

**RQ6-**‘Is there a difference between 6<sup>th</sup> grade students and 8<sup>th</sup> grade students in terms of perceived usefulness of language teaching activities?’

To answer this question, an independent samples t-test analysis was conducted.

The results of analysis show that 6<sup>th</sup> grade students got higher mean values than the 8<sup>th</sup> graders got in eight multiple intelligence fields and there are significant differences between the two groups in multiple intelligence fields except for verbal/linguistic intelligence and intrapersonal intelligence.

According to the data obtained; 6<sup>th</sup> grade students found activities related to interpersonal intelligence, bodily/kinesthetic intelligence, logical/mathematical intelligence, musical intelligence, visual/spatial intelligence, and naturalist intelligence more useful. Table 4.30 shows grade differences in the Activities Perceived To Be Useful in English Classes in terms of Multiple Intelligence

**Table 4.30 Grade Differences in the Activities Perceived To Be Useful in English Classes in terms of Multiple Intelligences**

	Class	N	Mean	Std. Deviation	Mean Difference	t	Df	Sig.																																																																																														
INTERPERSONAL INTELLIGENCE	6 <sup>th</sup>	160	4.1812	.86317	.28441	2.658	253	.008																																																																																														
	8 <sup>th</sup>	95	3.8968	.75954					BODILY/KINESTHETIC INTELLIGENCE	6 <sup>th</sup>	154	3.6861	1.08999	.35083	2.488	236	.014		8 <sup>th</sup>	84	3.3353	.94014	VERBAL/LINGUISTIC INTELLIGENCE	6 <sup>th</sup>	153	4.2634	.75374	.10955	1.190	242	.235		8 <sup>th</sup>	91	4.1538	.58296	LOGICAL/MATHEMATICAL INTELLIGENCE	6 <sup>th</sup>	154	3.9729	1.00081	.32839	2.710	250	.007		8 <sup>th</sup>	98	3.6446	.82890	INTRAPERSONAL INTELLIGENCE	6 <sup>th</sup>	157	4.0064	.88928	.11096	1.055	253	.292		8 <sup>th</sup>	98	3.8954	.68482	MUSICAL INTELLIGENCE	6 <sup>th</sup>	156	3.5987	1.16298	.73205	4.876	250	.001		8 <sup>th</sup>	96	2.8667	1.14824	VISUAL/SPATIAL INTELLIGENCE	6 <sup>th</sup>	149	4.0884	1.03042	.29207	2.386	246	.018		8 <sup>th</sup>	99	3.7963	.79666	NATURALIST INTELLIGENCE	6 <sup>th</sup>	152	3.8706	1.00334	.44300	3.526	249	.001	
BODILY/KINESTHETIC INTELLIGENCE	6 <sup>th</sup>	154	3.6861	1.08999	.35083	2.488	236	.014																																																																																														
	8 <sup>th</sup>	84	3.3353	.94014					VERBAL/LINGUISTIC INTELLIGENCE	6 <sup>th</sup>	153	4.2634	.75374	.10955	1.190	242	.235		8 <sup>th</sup>	91	4.1538	.58296	LOGICAL/MATHEMATICAL INTELLIGENCE	6 <sup>th</sup>	154	3.9729	1.00081	.32839	2.710	250	.007		8 <sup>th</sup>	98	3.6446	.82890	INTRAPERSONAL INTELLIGENCE	6 <sup>th</sup>	157	4.0064	.88928	.11096	1.055	253	.292		8 <sup>th</sup>	98	3.8954	.68482	MUSICAL INTELLIGENCE	6 <sup>th</sup>	156	3.5987	1.16298	.73205	4.876	250	.001		8 <sup>th</sup>	96	2.8667	1.14824	VISUAL/SPATIAL INTELLIGENCE	6 <sup>th</sup>	149	4.0884	1.03042	.29207	2.386	246	.018		8 <sup>th</sup>	99	3.7963	.79666	NATURALIST INTELLIGENCE	6 <sup>th</sup>	152	3.8706	1.00334	.44300	3.526	249	.001		8 <sup>th</sup>	99	3.4276	.92403										
VERBAL/LINGUISTIC INTELLIGENCE	6 <sup>th</sup>	153	4.2634	.75374	.10955	1.190	242	.235																																																																																														
	8 <sup>th</sup>	91	4.1538	.58296					LOGICAL/MATHEMATICAL INTELLIGENCE	6 <sup>th</sup>	154	3.9729	1.00081	.32839	2.710	250	.007		8 <sup>th</sup>	98	3.6446	.82890	INTRAPERSONAL INTELLIGENCE	6 <sup>th</sup>	157	4.0064	.88928	.11096	1.055	253	.292		8 <sup>th</sup>	98	3.8954	.68482	MUSICAL INTELLIGENCE	6 <sup>th</sup>	156	3.5987	1.16298	.73205	4.876	250	.001		8 <sup>th</sup>	96	2.8667	1.14824	VISUAL/SPATIAL INTELLIGENCE	6 <sup>th</sup>	149	4.0884	1.03042	.29207	2.386	246	.018		8 <sup>th</sup>	99	3.7963	.79666	NATURALIST INTELLIGENCE	6 <sup>th</sup>	152	3.8706	1.00334	.44300	3.526	249	.001		8 <sup>th</sup>	99	3.4276	.92403																								
LOGICAL/MATHEMATICAL INTELLIGENCE	6 <sup>th</sup>	154	3.9729	1.00081	.32839	2.710	250	.007																																																																																														
	8 <sup>th</sup>	98	3.6446	.82890					INTRAPERSONAL INTELLIGENCE	6 <sup>th</sup>	157	4.0064	.88928	.11096	1.055	253	.292		8 <sup>th</sup>	98	3.8954	.68482	MUSICAL INTELLIGENCE	6 <sup>th</sup>	156	3.5987	1.16298	.73205	4.876	250	.001		8 <sup>th</sup>	96	2.8667	1.14824	VISUAL/SPATIAL INTELLIGENCE	6 <sup>th</sup>	149	4.0884	1.03042	.29207	2.386	246	.018		8 <sup>th</sup>	99	3.7963	.79666	NATURALIST INTELLIGENCE	6 <sup>th</sup>	152	3.8706	1.00334	.44300	3.526	249	.001		8 <sup>th</sup>	99	3.4276	.92403																																						
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	8 <sup>th</sup>	98	3.8954	.68482					MUSICAL INTELLIGENCE	6 <sup>th</sup>	156	3.5987	1.16298	.73205	4.876	250	.001		8 <sup>th</sup>	96	2.8667	1.14824	VISUAL/SPATIAL INTELLIGENCE	6 <sup>th</sup>	149	4.0884	1.03042	.29207	2.386	246	.018		8 <sup>th</sup>	99	3.7963	.79666	NATURALIST INTELLIGENCE	6 <sup>th</sup>	152	3.8706	1.00334	.44300	3.526	249	.001		8 <sup>th</sup>	99	3.4276	.92403																																																				
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NATURALIST INTELLIGENCE	6 <sup>th</sup>	152	3.8706	1.00334	.44300	3.526	249	.001																																																																																														
	8 <sup>th</sup>	99	3.4276	.92403																																																																																																		

As can be seen in Table 4.30, there is a significant difference between 6<sup>th</sup> graders and 8<sup>th</sup> graders in activities related to Interpersonal Intelligence, Bodily/Kinesthetic Intelligence, Logical/Mathematical Intelligence, Musical Intelligence, Visual/Spatial Intelligence, and Naturalist Intelligence. Activities used in English classes in the inventory were grouped in terms of multiple intelligence fields, and each multiple intelligence field was analyzed one by one. Consequently, significant differences between the two groups for each activity item could be seen in each multiple intelligence field.

#### *Interpersonal activities*

Firstly, activities related to interpersonal intelligence field were examined. Independent t-test results are presented in Table 4.31.



**Table 4.31. Grade Differences in the Activities Related to Interpersonal Intelligence**

	Class	N	Mean	Std. Deviation	Mean difference	t	df	Sig.																																															
group work (act 1)	6 <sup>th</sup>	164	4.12	1.14	.416	2.838	264	.005																																															
	8 <sup>th</sup>	102	3.71	1.19					English speaking activities (act 2)	6 <sup>th</sup>	163	4.29	1.077	.069	.536	263	.593	8 <sup>th</sup>	102	4.23	.922	having discussion and debate in English in the classroom (act 3)	6 <sup>th</sup>	163	4.04	1.295	.587	3.631	261	.001	8 <sup>th</sup>	100	3.45	1.234	pair work (act 4)	6 <sup>th</sup>	163	4.14	1.211	.242	1.613	260	.108	8 <sup>th</sup>	99	3.90	1.120	taking feedback from the teacher (act 5)	6 <sup>th</sup>	163	4.23	1.156	.047	.342	261
English speaking activities (act 2)	6 <sup>th</sup>	163	4.29	1.077	.069	.536	263	.593																																															
	8 <sup>th</sup>	102	4.23	.922					having discussion and debate in English in the classroom (act 3)	6 <sup>th</sup>	163	4.04	1.295	.587	3.631	261	.001	8 <sup>th</sup>	100	3.45	1.234	pair work (act 4)	6 <sup>th</sup>	163	4.14	1.211	.242	1.613	260	.108	8 <sup>th</sup>	99	3.90	1.120	taking feedback from the teacher (act 5)	6 <sup>th</sup>	163	4.23	1.156	.047	.342	261	.733	8 <sup>th</sup>	100	4.18	.947								
having discussion and debate in English in the classroom (act 3)	6 <sup>th</sup>	163	4.04	1.295	.587	3.631	261	.001																																															
	8 <sup>th</sup>	100	3.45	1.234					pair work (act 4)	6 <sup>th</sup>	163	4.14	1.211	.242	1.613	260	.108	8 <sup>th</sup>	99	3.90	1.120	taking feedback from the teacher (act 5)	6 <sup>th</sup>	163	4.23	1.156	.047	.342	261	.733	8 <sup>th</sup>	100	4.18	.947																					
pair work (act 4)	6 <sup>th</sup>	163	4.14	1.211	.242	1.613	260	.108																																															
	8 <sup>th</sup>	99	3.90	1.120					taking feedback from the teacher (act 5)	6 <sup>th</sup>	163	4.23	1.156	.047	.342	261	.733	8 <sup>th</sup>	100	4.18	.947																																		
taking feedback from the teacher (act 5)	6 <sup>th</sup>	163	4.23	1.156	.047	.342	261	.733																																															
	8 <sup>th</sup>	100	4.18	.947																																																			

As can clearly be seen in Table 4.31 participants had different perceptions of activities in Interpersonal Intelligence field. On two of the activities the 6<sup>th</sup> graders and the 8<sup>th</sup> graders had clearly different perception of how useful activities can be. The 6<sup>th</sup> graders found ‘group work’ and ‘having discussion and debate in English in the classroom’ more useful than the 8<sup>th</sup> graders with a mean difference of 0.416 ( $p < .005$ ) and 0.587 ( $p < .001$ ) respectively. Differences on other activities were not significant.

#### ***Bodily/kinesthetic intelligence***

Secondly, the mean values of activities in bodily/kinesthetic intelligence field were analyzed. Table 4.32 shows grade differences in the activities related to Bodily/Kinesthetic Intelligence.

**Table 4.32. Grade Difference in the Activities Related to Bodily/Kinesthetic Intelligence**

	Class	N	Mean	Std. Deviation	Mean diff.	t	Df	Sig.																																																												
playing board games (act 6)	6 <sup>th</sup>	159	3.77	1.400	.670	3.692	254	.001																																																												
	8 <sup>th</sup>	97	3.10	1.425					group works in which we can walk around the classroom (act 7)	6 <sup>th</sup>	164	3.68	1.378	.435	2.457	263	.015	8 <sup>th</sup>	101	3.25	1.438	using materials such as puppets, mascots (act 8)	6 <sup>th</sup>	162	3.41	1.526	.167	.883	260	.378	8 <sup>th</sup>	100	3.24	1.429	doing calm down exercises (act 9)	6 <sup>th</sup>	161	3.24	1.619	.242	1.230	260	.220	8 <sup>th</sup>	101	3.00	1.435	our teacher gives us orders which can be physically done (act 10)	6 <sup>th</sup>	163	3.96	1.266	.102	.664	262	.507	8 <sup>th</sup>	101	3.86	1.114	acting, role play (act 11)	6 <sup>th</sup>	162	3.97	1.339	.386	2.284	256
group works in which we can walk around the classroom (act 7)	6 <sup>th</sup>	164	3.68	1.378	.435	2.457	263	.015																																																												
	8 <sup>th</sup>	101	3.25	1.438					using materials such as puppets, mascots (act 8)	6 <sup>th</sup>	162	3.41	1.526	.167	.883	260	.378	8 <sup>th</sup>	100	3.24	1.429	doing calm down exercises (act 9)	6 <sup>th</sup>	161	3.24	1.619	.242	1.230	260	.220	8 <sup>th</sup>	101	3.00	1.435	our teacher gives us orders which can be physically done (act 10)	6 <sup>th</sup>	163	3.96	1.266	.102	.664	262	.507	8 <sup>th</sup>	101	3.86	1.114	acting, role play (act 11)	6 <sup>th</sup>	162	3.97	1.339	.386	2.284	256	.023	8 <sup>th</sup>	96	3.58	1.262								
using materials such as puppets, mascots (act 8)	6 <sup>th</sup>	162	3.41	1.526	.167	.883	260	.378																																																												
	8 <sup>th</sup>	100	3.24	1.429					doing calm down exercises (act 9)	6 <sup>th</sup>	161	3.24	1.619	.242	1.230	260	.220	8 <sup>th</sup>	101	3.00	1.435	our teacher gives us orders which can be physically done (act 10)	6 <sup>th</sup>	163	3.96	1.266	.102	.664	262	.507	8 <sup>th</sup>	101	3.86	1.114	acting, role play (act 11)	6 <sup>th</sup>	162	3.97	1.339	.386	2.284	256	.023	8 <sup>th</sup>	96	3.58	1.262																					
doing calm down exercises (act 9)	6 <sup>th</sup>	161	3.24	1.619	.242	1.230	260	.220																																																												
	8 <sup>th</sup>	101	3.00	1.435					our teacher gives us orders which can be physically done (act 10)	6 <sup>th</sup>	163	3.96	1.266	.102	.664	262	.507	8 <sup>th</sup>	101	3.86	1.114	acting, role play (act 11)	6 <sup>th</sup>	162	3.97	1.339	.386	2.284	256	.023	8 <sup>th</sup>	96	3.58	1.262																																		
our teacher gives us orders which can be physically done (act 10)	6 <sup>th</sup>	163	3.96	1.266	.102	.664	262	.507																																																												
	8 <sup>th</sup>	101	3.86	1.114					acting, role play (act 11)	6 <sup>th</sup>	162	3.97	1.339	.386	2.284	256	.023	8 <sup>th</sup>	96	3.58	1.262																																															
acting, role play (act 11)	6 <sup>th</sup>	162	3.97	1.339	.386	2.284	256	.023																																																												
	8 <sup>th</sup>	96	3.58	1.262																																																																

The results in Table 4.32 show that 6th grade students demonstrated strong preference in both activity 10- ‘our teacher gives us orders which can be physically done’ (M=3.96) and activity 11- ‘acting, role play’ (M=3.97) . The 8th grade students preferred activity 10- our teacher gives us orders which can be physically done’ (M=3.86) as the most useful activity. The sixth graders found ‘playing board games’, ‘group works in which we can walk around the classroom’ and ‘acting, role play’ more useful than 8<sup>th</sup> graders with a mean difference of 0.670 (p<.001), 0.435 (p<.015) and 0.386 (p<.023) respectively. Differences on other activities were not significant.

### *Verbal/linguistic intelligence*

The third group activities which were discussed, related to verbal/linguistic intelligence. Table 4.33 shows the mean values of these activities.

**Table 4.33 Grade Difference in the Activities Related to Verbal/Linguistic Intelligence**

	Class	N	Mean	Std. Deviation	Mean dif.	t	Df	Sig.																																																																																																																
speaking activities (question & answer) (act 12)	6 <sup>th</sup>	162	4.10	1.242	-.021	-.144	260	.886																																																																																																																
	8 <sup>th</sup>	100	4.12	1.008					writing activities (act 13)	6 <sup>th</sup>	161	4.19	1.238	-.131	-.913	261	.362	8 <sup>th</sup>	102	4.32	.946	dictionary activities (act 14)	6 <sup>th</sup>	162	4.35	1.100	-.113	-.843	261	.400	8 <sup>th</sup>	101	4.47	.996	taking notes (act 15)	6 <sup>th</sup>	163	4.60	.850	.058	.524	264	.600	8 <sup>th</sup>	103	4.54	.905	making jokes (act 16)	6 <sup>th</sup>	160	4.26	1.089	.119	.865	260	.388	8 <sup>th</sup>	102	4.14	1.081	reading activities (act 17)	6 <sup>th</sup>	162	4.43	1.033	.353	2.618	261	.009	8 <sup>th</sup>	101	4.08	1.111	using English stories (act 19)	6 <sup>th</sup>	163	3.79	1.490	.429	2.311	262	.022	8 <sup>th</sup>	101	3.36	1.425	listening activities (act 20)	6 <sup>th</sup>	165	4.20	1.201	.238	1.644	267	.101	8 <sup>th</sup>	104	3.96	1.088	oral repeating activities (act 21)	6 <sup>th</sup>	164	4.37	.972	-.032	-.286	265	.775	8 <sup>th</sup>	103	4.40	.758	playing word games (act 22)	6 <sup>th</sup>	165	4.06	1.243	-.036	-.236	266
writing activities (act 13)	6 <sup>th</sup>	161	4.19	1.238	-.131	-.913	261	.362																																																																																																																
	8 <sup>th</sup>	102	4.32	.946					dictionary activities (act 14)	6 <sup>th</sup>	162	4.35	1.100	-.113	-.843	261	.400	8 <sup>th</sup>	101	4.47	.996	taking notes (act 15)	6 <sup>th</sup>	163	4.60	.850	.058	.524	264	.600	8 <sup>th</sup>	103	4.54	.905	making jokes (act 16)	6 <sup>th</sup>	160	4.26	1.089	.119	.865	260	.388	8 <sup>th</sup>	102	4.14	1.081	reading activities (act 17)	6 <sup>th</sup>	162	4.43	1.033	.353	2.618	261	.009	8 <sup>th</sup>	101	4.08	1.111	using English stories (act 19)	6 <sup>th</sup>	163	3.79	1.490	.429	2.311	262	.022	8 <sup>th</sup>	101	3.36	1.425	listening activities (act 20)	6 <sup>th</sup>	165	4.20	1.201	.238	1.644	267	.101	8 <sup>th</sup>	104	3.96	1.088	oral repeating activities (act 21)	6 <sup>th</sup>	164	4.37	.972	-.032	-.286	265	.775	8 <sup>th</sup>	103	4.40	.758	playing word games (act 22)	6 <sup>th</sup>	165	4.06	1.243	-.036	-.236	266	.814	8 <sup>th</sup>	103	4.10	1.217								
dictionary activities (act 14)	6 <sup>th</sup>	162	4.35	1.100	-.113	-.843	261	.400																																																																																																																
	8 <sup>th</sup>	101	4.47	.996					taking notes (act 15)	6 <sup>th</sup>	163	4.60	.850	.058	.524	264	.600	8 <sup>th</sup>	103	4.54	.905	making jokes (act 16)	6 <sup>th</sup>	160	4.26	1.089	.119	.865	260	.388	8 <sup>th</sup>	102	4.14	1.081	reading activities (act 17)	6 <sup>th</sup>	162	4.43	1.033	.353	2.618	261	.009	8 <sup>th</sup>	101	4.08	1.111	using English stories (act 19)	6 <sup>th</sup>	163	3.79	1.490	.429	2.311	262	.022	8 <sup>th</sup>	101	3.36	1.425	listening activities (act 20)	6 <sup>th</sup>	165	4.20	1.201	.238	1.644	267	.101	8 <sup>th</sup>	104	3.96	1.088	oral repeating activities (act 21)	6 <sup>th</sup>	164	4.37	.972	-.032	-.286	265	.775	8 <sup>th</sup>	103	4.40	.758	playing word games (act 22)	6 <sup>th</sup>	165	4.06	1.243	-.036	-.236	266	.814	8 <sup>th</sup>	103	4.10	1.217																					
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	8 <sup>th</sup>	103	4.54	.905					making jokes (act 16)	6 <sup>th</sup>	160	4.26	1.089	.119	.865	260	.388	8 <sup>th</sup>	102	4.14	1.081	reading activities (act 17)	6 <sup>th</sup>	162	4.43	1.033	.353	2.618	261	.009	8 <sup>th</sup>	101	4.08	1.111	using English stories (act 19)	6 <sup>th</sup>	163	3.79	1.490	.429	2.311	262	.022	8 <sup>th</sup>	101	3.36	1.425	listening activities (act 20)	6 <sup>th</sup>	165	4.20	1.201	.238	1.644	267	.101	8 <sup>th</sup>	104	3.96	1.088	oral repeating activities (act 21)	6 <sup>th</sup>	164	4.37	.972	-.032	-.286	265	.775	8 <sup>th</sup>	103	4.40	.758	playing word games (act 22)	6 <sup>th</sup>	165	4.06	1.243	-.036	-.236	266	.814	8 <sup>th</sup>	103	4.10	1.217																																		
making jokes (act 16)	6 <sup>th</sup>	160	4.26	1.089	.119	.865	260	.388																																																																																																																
	8 <sup>th</sup>	102	4.14	1.081					reading activities (act 17)	6 <sup>th</sup>	162	4.43	1.033	.353	2.618	261	.009	8 <sup>th</sup>	101	4.08	1.111	using English stories (act 19)	6 <sup>th</sup>	163	3.79	1.490	.429	2.311	262	.022	8 <sup>th</sup>	101	3.36	1.425	listening activities (act 20)	6 <sup>th</sup>	165	4.20	1.201	.238	1.644	267	.101	8 <sup>th</sup>	104	3.96	1.088	oral repeating activities (act 21)	6 <sup>th</sup>	164	4.37	.972	-.032	-.286	265	.775	8 <sup>th</sup>	103	4.40	.758	playing word games (act 22)	6 <sup>th</sup>	165	4.06	1.243	-.036	-.236	266	.814	8 <sup>th</sup>	103	4.10	1.217																																															
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	8 <sup>th</sup>	101	3.36	1.425					listening activities (act 20)	6 <sup>th</sup>	165	4.20	1.201	.238	1.644	267	.101	8 <sup>th</sup>	104	3.96	1.088	oral repeating activities (act 21)	6 <sup>th</sup>	164	4.37	.972	-.032	-.286	265	.775	8 <sup>th</sup>	103	4.40	.758	playing word games (act 22)	6 <sup>th</sup>	165	4.06	1.243	-.036	-.236	266	.814	8 <sup>th</sup>	103	4.10	1.217																																																																									
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	8 <sup>th</sup>	104	3.96	1.088					oral repeating activities (act 21)	6 <sup>th</sup>	164	4.37	.972	-.032	-.286	265	.775	8 <sup>th</sup>	103	4.40	.758	playing word games (act 22)	6 <sup>th</sup>	165	4.06	1.243	-.036	-.236	266	.814	8 <sup>th</sup>	103	4.10	1.217																																																																																						
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	8 <sup>th</sup>	103	4.10	1.217																																																																																																																				

According to the Table 4.33, both 6th grade students and 8th grade students preferred activity 15- ‘taking notes’ as the most useful activity. Activity 19- ‘using English stories’ was the least useful activity for the participants. In activity 17- ‘reading activities’ and activity 19- ‘using English stories’ there is a significant difference with a mean difference of 0.353 ( $p < .009$ ) and 0.429 ( $p < .022$ ) between 6th and 8th grade students.

#### *Logical/mathematical intelligence*

Independent sample t-test results of activities logical/mathematical intelligence presented in table 4.34.

**Table 4.34 Grade Difference in the Activities Related to Logical/Mathematical Intelligence**

	Class	N	Mean	Std. Deviation	Mean dif.	t	Df	Sig.
playing logic games (act 23)	6 <sup>th</sup>	165	3.74	1.374	.316	1.863	267	.064
	8 <sup>th</sup>	104	3.42	1.327				
completing an unfinished story (act 24)	6 <sup>th</sup>	162	3.91	1.350	.441	2.595	263	.010
	8 <sup>th</sup>	103	3.47	1.349				
guessing activities (act 25)	6 <sup>th</sup>	165	4.08	1.230	.233	1.523	267	.129
	8 <sup>th</sup>	104	3.85	1.205				
doing jigsaw puzzles (act 26)	6 <sup>th</sup>	163	3.79	1.358	.571	3.263	261	.001
	8 <sup>th</sup>	100	3.22	1.411				
our teacher wants us to relate previous subjects and new subjects (act 27)	6 <sup>th</sup>	164	4.13	1.216	.019	.131	266	.896
	8 <sup>th</sup>	104	4.12	1.017				
making casual relationships (act 28)	6 <sup>th</sup>	160	4.11	1.169	.253	1.709	260	.089
	8 <sup>th</sup>	102	3.85	1.172				

As can be seen in Table 4.34, in logical/mathematical intelligence, the mean values of activity 24- ‘completing an unfinished story’ and activity 26- ‘doing jigsaw puzzles’ are significantly different. Activity 27- ‘our teacher wants us to relate previous subjects and new subject’ was the most useful activity for both 6th grade students and 8th grade students. Activity 26- ‘doing jigsaw puzzles’ was the least useful activity according to the 8th grade students, but activity 23- ‘playing logic games’ was the least useful activity according to the 6th grade students.

### *Intrapersonal intelligence*

The mean values of activities related to intrapersonal intelligence presented in Table 4.35.

**Table 4.35. Grade Differences in the Activities Related to Intrapersonal Intelligence**

	Class	N	Mean	Std. Deviation	Mean difference	t	df	Sig.																																		
individual explanations (act 29)	6 <sup>th</sup>	163	4.23	1.129	-.273	-2.099	265	.037																																		
	8 <sup>th</sup>	104	4.50	.870					our teacher helps us to decide our personal goals (act 30)	6 <sup>th</sup>	164	4.16	1.070	-.145	-1.129	262	.260	8 <sup>th</sup>	100	4.31	.918	our teacher encourages us to make exercises (act 31)	6 <sup>th</sup>	160	4.28	1.028	.255	1.922	260	.056	8 <sup>th</sup>	102	4.02	1.081	keeping diary in English (act 32)	6 <sup>th</sup>	164	3.29	1.578	.555	2.933	265
our teacher helps us to decide our personal goals (act 30)	6 <sup>th</sup>	164	4.16	1.070	-.145	-1.129	262	.260																																		
	8 <sup>th</sup>	100	4.31	.918					our teacher encourages us to make exercises (act 31)	6 <sup>th</sup>	160	4.28	1.028	.255	1.922	260	.056	8 <sup>th</sup>	102	4.02	1.081	keeping diary in English (act 32)	6 <sup>th</sup>	164	3.29	1.578	.555	2.933	265	.004	8 <sup>th</sup>	103	2.74	1.379								
our teacher encourages us to make exercises (act 31)	6 <sup>th</sup>	160	4.28	1.028	.255	1.922	260	.056																																		
	8 <sup>th</sup>	102	4.02	1.081					keeping diary in English (act 32)	6 <sup>th</sup>	164	3.29	1.578	.555	2.933	265	.004	8 <sup>th</sup>	103	2.74	1.379																					
keeping diary in English (act 32)	6 <sup>th</sup>	164	3.29	1.578	.555	2.933	265	.004																																		
	8 <sup>th</sup>	103	2.74	1.379																																						

As can be clearly seen participants had different perceptions of the activities in intrapersonal intelligence field. On two of the activities the 6<sup>th</sup> graders and the 8<sup>th</sup> graders had clearly different perception of how useful activities can be. There is a significant difference in activity 29- ‘individual explanations’, and activity 32- ‘keeping diary in English’ with a mean difference of 0.273 ( $p < .037$ ) and 0.555 ( $p < .004$ ). Activity 29- ‘individual explanations’ was the most useful activity according to 8th grade students but activity 31- ‘our teacher encourages us to make exercises’ was the most useful activity according to 6th grade students. Activity 32- ‘keeping diary in English’ was the least useful activity for both groups in intrapersonal intelligence.

### ***Musical intelligence***

The mean values of activities in musical intelligence field were different from each other. Table 4.36 shows the mean values activities related to Musical Intelligence. The students in both 8th grade and 6th grade demonstrated weak preference in activity 34- ‘listening to music in English lessons’ but the students in both groups demonstrated strong preference in activity 35- ‘learning English songs’. However activities in musical intelligence were more useful for 6th grade students.

**Table 4.36 Grade Difference in the Activities Related to Musical Intelligence**

	Class	N	Mean	Std. Deviation	Mean difference	t	df	Sig.
making activities with musical instruments (act 33)	6 <sup>th</sup>	163	3.42	1.486	.709	3.821	259	.001
	8 <sup>th</sup>	98	2.71	1.392				
listening to music in English lessons (act 34)	6 <sup>th</sup>	164	3.38	1.641	.721	3.606	266	.001
	8 <sup>th</sup>	104	2.66	1.518				
learning English songs (act 35)	6 <sup>th</sup>	163	3.93	1.350	.907	5.052	264	.001
	8 <sup>th</sup>	103	3.02	1.540				
making presentations with music (act 36)	6 <sup>th</sup>	162	3.62	1.475	.617	3.364	262	.001
	8 <sup>th</sup>	102	3.00	1.414				
using rhythms in the lesson (act 37)	6 <sup>th</sup>	164	3.59	1.431	.689	3.915	265	.001
	8 <sup>th</sup>	103	2.90	1.347				

As can be clearly seen in Table 4.36, on all of the activities the 6<sup>th</sup> graders and the 8<sup>th</sup> graders had clearly different perception of how useful activities can be. The 6<sup>th</sup> graders found ‘making activities with musical instruments’, ‘listening to music in English lessons’, ‘learning English songs’, ‘making presentations with music’ and ‘using rhythms in the lesson’ more useful than the 8<sup>th</sup> graders with a mean difference of 0.709 ( $p < .001$ ), 0.721 ( $p < .001$ ), 0.907 ( $p < .001$ ), 0.617 ( $p < .001$ ) and 0.689 ( $p < .001$ ) respectively.

### *Visual/spatial intelligence*

The next intelligence field was visual/spatial intelligence which was examined. Independent sample t-test results presented in table 4.37.

**Table 4.37 Grade Difference in the Activities Related to Visual/Spatial Intelligence**

	Class	N	Mean	Std. Deviation	Mean difference	t	df	Sig.
using colourful chalks and board markers (act 38)	6 <sup>th</sup>	162	4.21	1.228	.596	3.702	261	.001
	8 <sup>th</sup>	101	3.61	1.334	.596			
drawing graphs, images and tables on the board (act 39)	6 <sup>th</sup>	164	4.27	1.174	.505	3.421	266	.001
	8 <sup>th</sup>	104	3.77	1.184	.505			
using visual materials (flash cards, photographs) (act 40)	6 <sup>th</sup>	165	4.00	1.388	.240	1.446	267	.149
	8 <sup>th</sup>	104	3.76	1.227	.240			
explaining something drawing pictures (act 41)	6 <sup>th</sup>	158	4.12	1.318	.414	2.510	258	.013
	8 <sup>th</sup>	102	3.71	1.271	.414			
imagining and picturing (act 42)	6 <sup>th</sup>	164	3.90	1.408	.127	.752	266	.453
	8 <sup>th</sup>	104	3.77	1.248	.127			
using wall papers, posters and panels (act 43)	6 <sup>th</sup>	158	3.98	1.299	-.155	-.993	259	.322
	8 <sup>th</sup>	103	4.14	1.121	-.155			

Table 4.37 shows that on three of the activities the 6<sup>th</sup> graders and the 8<sup>th</sup> graders had clearly different perception of how useful activities can be. The 6<sup>th</sup> graders found ‘using colourful chalks and board markers’, ‘drawing graphs, images and tables on the board’ and ‘explaining something drawing pictures’ more useful than the 8<sup>th</sup> graders with a mean difference of 0.596 ( $p < .001$ ), 0.505 ( $p < .001$ ) and 0.414 ( $p < .013$ ) respectively. Differences on other activities were not significant. Activity 39- ‘drawing graphs, images and tables on the board’ was the most beneficial activity according to 6th grade students but activity 43- ‘using wall papers, posters and panels’ was the most beneficial activity according to 8th grade students.

### *Naturalist intelligence*

Finally, the mean values of activities in naturalist intelligence were analyzed. Both groups of students thought that activity 49- ‘our teacher wants us to see the differences and similarities among the subjects’ was the most useful activity. 8th grade students perceived activity 47- ‘using materials related to the nature, animals or plants in English classes’ to be the least useful activity but 6th grade students perceived activity 46- ‘watching programs about nature’ to be the least useful activity. Grade differences in the activities related to Naturalist Intelligence are shown in Table 4.38.

**Table 4.38. Grade Differences in the Activities Related to Naturalist Intelligence**

	Class	N	Mean	Std. Deviation	Mean dif.	t	Df	Sig.																																																												
using photographs related to the nature (animals, mountain, lake, river etc.) (act 44)	6 <sup>th</sup>	163	3.97	1.229	.222	1.396	264	.164																																																												
	8 <sup>th</sup>	103	3.75	1.311					hanging photographs about nature in the classroom (act 45)	6 <sup>th</sup>	162	3.71	1.322	.475	2.847	262	.005	8 <sup>th</sup>	102	3.24	1.314	watching programs about nature (act 46)	6 <sup>th</sup>	163	3.64	1.391	.628	3.603	264	.001	8 <sup>th</sup>	103	3.01	1.376	using materials related to the nature, animals or plants in English classes (act 47)	6 <sup>th</sup>	161	3.66	1.415	.803	4.498	263	.001	8 <sup>th</sup>	104	2.86	1.424	our teacher wants us to classify the subjects (act 48)	6 <sup>th</sup>	163	4.03	1.298	.283	1.774	264	.077	8 <sup>th</sup>	103	3.75	1.218	our teacher wants us to see the differences and similarities among the subjects (act 49)	6 <sup>th</sup>	163	4.18	1.257	.072	.485	265
hanging photographs about nature in the classroom (act 45)	6 <sup>th</sup>	162	3.71	1.322	.475	2.847	262	.005																																																												
	8 <sup>th</sup>	102	3.24	1.314					watching programs about nature (act 46)	6 <sup>th</sup>	163	3.64	1.391	.628	3.603	264	.001	8 <sup>th</sup>	103	3.01	1.376	using materials related to the nature, animals or plants in English classes (act 47)	6 <sup>th</sup>	161	3.66	1.415	.803	4.498	263	.001	8 <sup>th</sup>	104	2.86	1.424	our teacher wants us to classify the subjects (act 48)	6 <sup>th</sup>	163	4.03	1.298	.283	1.774	264	.077	8 <sup>th</sup>	103	3.75	1.218	our teacher wants us to see the differences and similarities among the subjects (act 49)	6 <sup>th</sup>	163	4.18	1.257	.072	.485	265	.628	8 <sup>th</sup>	104	4.11	1.060								
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	8 <sup>th</sup>	104	2.86	1.424					our teacher wants us to classify the subjects (act 48)	6 <sup>th</sup>	163	4.03	1.298	.283	1.774	264	.077	8 <sup>th</sup>	103	3.75	1.218	our teacher wants us to see the differences and similarities among the subjects (act 49)	6 <sup>th</sup>	163	4.18	1.257	.072	.485	265	.628	8 <sup>th</sup>	104	4.11	1.060																																		
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	8 <sup>th</sup>	103	3.75	1.218					our teacher wants us to see the differences and similarities among the subjects (act 49)	6 <sup>th</sup>	163	4.18	1.257	.072	.485	265	.628	8 <sup>th</sup>	104	4.11	1.060																																															
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	8 <sup>th</sup>	104	4.11	1.060																																																																

According to analysis in Table 4.38, on three of the activities the 6<sup>th</sup> graders and the 8<sup>th</sup> graders had clearly different perception of how useful activities can be. The 6<sup>th</sup> graders found ‘hanging photographs about nature in the classroom’, ‘watching programs about nature’ and ‘using materials related to the nature, animals or plants in English classes’ more useful than 8<sup>th</sup> graders with a mean difference of 0.475 ( $p < .005$ ), 0.628 ( $p < .001$ ) and 0.803 ( $p < .001$ ) respectively. Differences on other activities were not significant.

From the data obtained, primary school students perceived different activities to be useful in English classes. Useful activities showed variety according to the students’ grade. It is interesting that 6<sup>th</sup> grade students demonstrated stronger preferences in activities related to eight Multiple Intelligence fields. This may be because of their age or lesson topics. Younger learners seem to be more willing to participate in English lessons and 6<sup>th</sup> graders’ effectiveness perception is different from 8<sup>th</sup> graders’. 6<sup>th</sup> graders seem to be more motivated for English lessons. This finding of the study is supported by Demir’s (2005) study. According to the result of his study, younger learners seem to be more motivated and more willing to participate in English lessons than older learners.



#### **4.5 Students' Dominant Multiple Intelligence Types and Activities Perceived To Be Useful By Primary School Students In English Classes**

**RQ7**–‘Are students’ MI preferences and activity preferences similar?’

To answer this question, given answers to previous research questions were required. While answering this question, the mean values of activities perceived to be useful by primary school students in English classes and participants’ dominant multiple intelligence fields were necessary. Activities perceived to be useful by primary school students in English classes in the inventory were grouped in terms of multiple intelligence fields, and each multiple intelligence field was analyzed one by one. The mean values of activities in terms of multiple intelligence fields shown in the table 4.39 and also the mean values of students’ dominant multiple intelligence fields shown in the table 4.40.

**Table 4.39 Activities Perceived To Be Useful in English Classes in terms of Multiple Intelligence Fields**

	N	Mean	Std. Deviation
VERBAL/LINGUISTIC INTELLIGENCE	244	4.2225	.69574
INTERPERSONAL INTELLIGENCE	255	4.0753	.83599
VISUAL/SPATIAL INTELLIGENCE	248	3.9718	.95318
INTRAPERSONAL INTELLIGENCE	255	3.9637	.81714
LOGICAL /MATHEMATICAL INTELLIGENCE	252	3.8452	.94963
NATURALIST INTELLIGENCE	251	3.6959	.99489
BODILY/KINESTHETIC INTELLIGENCE	238	3.5623	1.05107
MUSICAL INTELLIGENCE	252	3.3198	1.20877

As the Table 4.39 indicates, activities related to verbal/linguistic intelligence were perceived to be the most useful activities, but activities related to musical intelligence were perceived to be the least useful activities in English classes by participants. However, the students’ most dominant multiple intelligence field was visual/spatial intelligence. Therefore it can be said that there is no big correlation between students’ dominant multiple intelligence types and activities perceived to be useful in English classes.

On the other hand, musical intelligence was the weakest multiple intelligence type of the participants. And the students preferred activities related to the musical intelligence as the least useful activities. According to this result, there is a correlation between students' dominant multiple intelligence types and activities preferred in English classes.

**Table 4.40. Mean Values of Students' Dominant MI Types**

	N	Mean	Std. Deviation
VISUAL/SPATIAL INTELLIGENCE	247	3,9012	,6542
NATURALIST INTELLIGENCE	242	3,8777	,8554
BODILY/KINESTHETIC INTELLIGENCE	229	3,8520	,6841
INTERPERSONAL INTELLIGENCE	246	3,8288	,7343
LOGICAL/ MATHEMATICAL INTELLIGENCE	217	3,8244	,7058
VERBAL/LINGUISTIC INTELLIGENCE	237	3,7561	,6104
INTRAPERSONAL INTELLIGENCE	247	3,6737	,6441
MUSICAL INTELLIGENCE	227	3,5458	,8362

#### **4.6. Frequently Used Activities in English Classes by Primary School English Teachers**

**RQ8-** 'Do the English teachers at primary schools address all MI fields?'

To answer this question, mean values for each activity item was tabulated on SPSS, which then were put in order of descending size. Classroom activities used in English classes in the inventory were grouped according to the multiple intelligence fields. Table 4.41 shows the mean values of activities in terms of multiple intelligence fields.

**Table 4.41 Activities Used in English Classes in terms of Multiple Intelligence Fields.**

	N	Mean	Std. Deviation
VISUAL/SPATIAL INTELLIGENCE	9	4.5556	.44096
VERBAL/LINGUISTIC INTELLIGENCE	9	4.2667	.48734
INTRAPERSONAL INTELLIGENCE	9	3.9444	.64684
BODILY/KINESTHETIC INTELLIGENCE	9	3.8667	.84261
INTERPERSONAL INTELLIGENCE	9	3.6222	.75130
LOGICAL/MATHEMATICAL INTELLIGENCE	9	3.5556	.78174
NATURALIST INTELLIGENCE	9	3.4815	.71416
MUSICAL INTELLIGENCE	9	2.4222	.83931

As the Table 4.41 indicates, primary school English teachers frequently use activities related to visual/spatial intelligence (M=4.5556) in English classes and activities related to verbal/linguistic intelligence (M=4.2667) are frequently used in English classes. Then activities in intrapersonal intelligence (M=3.9444) and activities in bodily/kinesthetic intelligence (M=3.8667) followed. Primary school English teachers do not frequently use activities related to musical intelligence (M=2.4222).

In this part, the mean values of all activities in the inventory were shown in Table 4.42.

**Table 4.42 Mean Values of Frequently Used Activities in English Classes in terms of Multiple Intelligences**

	N	Mean	Std. Deviation	Multiple intelligence field
using visual materials such as flash cards, photographs, etc. (act 39)	9	4.89	.333	Visual/spatial intelligence
giving written activities as homework to the students (act 13)	9	4.89	.333	Verbal/linguistic intelligence
using wall papers, posters and panels in the classroom (act 42)	9	4.78	.441	Visual/spatial intelligence
individual explanations (act 28)	9	4.78	.667	Intrapersonal intelligence
I want my students to take notes (act 15)	9	4.78	.441	Verbal/linguistic intelligence
drawing graphs, images and tables on the board (act 38)	9	4.67	.707	Visual/spatial intelligence
using colourful chalks and board markers (act 37)	9	4.67	.707	Visual/spatial intelligence

**Table 4.42 Mean Values of Frequently Used Activities in English Classes in terms of Multiple Intelligences (Continued)**

	N	Mean	Std. Deviation	Multiple intelligence field
I encourage my students to use dictionary (act 14)	9	4.67	.500	Verbal/linguistic intelligence
using photographs related to the nature (animals, mountain, lake, river etc.) (act 43)	9	4.56	1.014	Visual/spatial intelligence
I encourage my students to make exercises in exercise book (act 30)	9	4.56	1.014	Intrapersonal intelligence
taking feedback from my students (act 5)	9	4.56	1.014	Interpersonal intelligence
making oral repetition activities (act 20)	9	4.44	.882	Verbal/linguistic intelligence
I give my students orders which can be physically done (act 10)	9	4.44	.726	Bodily/kinesthetic intelligence
explaining something drawing pictures (act 40)	9	4.33	1.000	Visual/spatial intelligence
I want my students to make causal relationships (act 27)	9	4.33	.707	Logical/mathematical intelligence
I want my students to relate previous subjects and new subjects (act 26)	9	4.33	.707	Logical/mathematical intelligence
speaking activities (question& answer) (act 12)	9	4.33	.707	Verbal/linguistic intelligence
reading activities (act 17)	9	4.22	.833	Verbal/linguistic intelligence
making jokes during the lesson (act 16)	9	4.22	.833	Verbal/linguistic intelligence
I help my students to decide their personal goals (act 29)	9	4.11	.782	Intrapersonal intelligence
English speaking activities (act 2)	9	4.11	.782	Interpersonal intelligence
imagining and picturing (act 41)	9	4.00	.707	Visual/spatial intelligence
playing word games (act 21)	9	4.00	1.118	Verbal/linguistic intelligence
playing board games (act 6)	9	4.00	1.118	Bodily/kinesthetic intelligence
guessing activities (act 24)	9	3.89	1.054	Logical/mathematical intelligence
acting, role play (act 11)	9	3.89	.782	Bodily/kinesthetic intelligence
I want my students to see the differences and similarities among the subjects (act 48)	9	3.89	.928	Naturalist intelligence
using materials such as puppets, mascots (act 8)	9	3.78	.972	Bodily/kinesthetic intelligence
I want my students to classify the subjects (act 47)	9	3.67	.866	Naturalist intelligence
hanging photographs about nature in the classroom (act 44)	9	3.56	.882	Naturalist intelligence
listening activities (act 19)	9	3.56	1.130	Verbal/linguistic i.

**Table 4.42 Mean Values of Frequently Used Activities in English Classes in terms of Multiple Intelligences (Continued)**

	N	Mean	Std. Deviation	Multiple intelligence field
using English songs while teaching English (act 34)	9	3.44	1.333	Musical intelligence
pair work (act 4)	9	3.44	1.236	Interpersonal intelligence
doing calm down exercises (act 7)	9	3.22	1.302	Bodily/kinesthetic intelligence
having discussion and debate in English in the classroom(act 3)	9	3.11	1.054	Interpersonal intelligence
playing logic games (act 22)	9	3.00	1.118	Logical/mathematical intelligence
doing jigsaw puzzles (act 25)	9	3.00	1.323	Logical/mathematical intelligence
using materials related to the nature, animals or plants in English classes (act 46)	9	2.89	1.054	Naturalist intelligence
group work (act 1)	9	2.89	1.269	Interpersonal intelligence
making presentations with music (act 35)	9	2.78	1.563	Musical intelligence
completing an unfinished story (act 23)	9	2.78	1.202	Logical/mathematical intelligence
watching programs about nature (act 45)	9	2.33	1.323	Naturalist intelligence
I want my students to keep diary (act 31)	9	2.33	1.225	Intrapersonal intelligence
listening to music in the lesson (act 33)	9	2.22	1.302	Musical intelligence
using rhythms in the lesson (act 36)	9	2.00	.866	Musical intelligence
using activities with musical instruments (act 32)	9	1.67	.707	Musical intelligence

According to Table 4.42, activity 39- ‘using visual materials such as flash cards, photographs, etc.’ (M=4.89) and activity 13- ‘giving written activities as homework to the students’ (M=4.89) were the most frequently used activities. But activity 32- ‘using activities with musical instruments’ (M=1.67) was the least frequently used activity by primary school English teachers in English classes.

Activities which had mean values above 4.50 (M>4.50) were accepted as more frequently used activities in English classes according to primary school teachers. These were activity 42- ‘using wall papers, posters and panels in the classroom’ (M=4.78), activity 28- ‘individual explanations’ (M=4,78) , activity 15- ‘I want my students to take notes’ (M=4.78), activity 38- ‘drawing graphs, images and tables on the board’ (M=4.67), activity 37- ‘using colourful chalks and board markers’ (M=467), activity 14- ‘I encourage my students to use dictionary’

(M=4.67), activity 43- 'using photographs related to the nature (animals, mountain, lake, river etc.)' (M=4.56), activity 30- 'I encourage my students to make exercises in exercise book' (M=4.56), activity 5- 'taking feedback from my students' (M=4.56). Activities which had mean values below 3.00 ( $M < 3.00$ ) were accepted as less frequently used activities in English classes according to primary school English teachers. These were activity 36- 'using rhythms in the lesson' (M=2.00), activity 33- 'listening to music in the lesson' (M=2.22), activity 31- 'I want my students to keep diary' (M=2.33), activity 45- 'watching programs about nature' (M=2.33), activity 23- 'completing an unfinished story' (M=2.78), activity 35- 'making presentations with music' (M=2.78), activity 1- 'group work' (M=2.98), activity 46- 'using materials related to the nature, animals or plants in English classes' (M=2.98).

Activities frequently used in English classes were grouped according to the multiple intelligence fields and activities presenting different multiple intelligence fields were discussed one by one according to the multiple intelligence fields. This was done according to the mean values obtained for each intelligence field above. Namely, findings will be presented in order of activities for visual/spatial intelligence; verbal/linguistic intelligence; intrapersonal intelligence; bodily/kinesthetic intelligence; interpersonal intelligence; logical/mathematical intelligence; naturalist intelligence; musical intelligence.

### ***Visual/spatial intelligence***

Firstly, visual/spatial intelligence was analyzed. Table 4.43 shows mean values of activities related to Visual/Spatial Intelligence.

**Table 4.43. Mean Values of Activities Related to Visual/Spatial Intelligence**

	N	Mean	Std. Deviation
using visual materials such as flash cards, photographs, etc. (act 39)	9	4.89	.333
using wall papers, posters and panels in the classroom (act 42)	9	4.78	.441
drawing graphs, images and tables on the board (act 38)	9	4.67	.707
using colourful chalks and board markers (act 37)	9	4.67	.707
explaining something drawing pictures (act 40)	9	4.33	1.000
imagining and picturing (act 41)	9	4.00	.707

As can be seen in the table 4.43, the participants preferred activity 39- ‘using visual materials such as flash cards, photographs, etc.’ (M=4.89) as the most frequently used activity in visual/spatial intelligence. But the teachers preferred activity 41- ‘imagining and picturing’ (M=4.00) as the least frequently used activity. According to the mean values of activities related to visual/spatial intelligence, primary school English teachers most frequently use activities related to visual/spatial intelligence.

#### *Verbal/linguistic intelligence*

Secondly, verbal/linguistic intelligence was examined. The mean values of activities in verbal/linguistic intelligence shown in the table 4.44.

**Table 4.44. Mean Values of the Activities Related to Verbal/Linguistic Intelligence**

	N	Mean	Std. Deviation
giving written activities as homework to the students (act 13)	9	4.89	.333
I want my students to take notes (act 15)	9	4.78	.441
I encourage my students to use dictionary (act 14)	9	4.67	.500
making oral repetition activities (act 20)	9	4.44	.882
speaking activities (question& answer) (act 12)	9	4.33	.707
reading activities (act 17)	9	4.22	.833
making jokes during the lesson (act 16)	9	4.22	.833
playing word games (act 21)	9	4.00	1.118
listening activities (act 19)	9	3.56	1.130
using English stories in lessons (act 18)	9	3.56	1.130

According to these mean values (shown in Table 4.44), activity 13- ‘giving written activities as homework to the students’ (M=4.89) was the most frequently used activity whereas activity 18-‘using English stories in lessons’ (M=3.56) and activity 19- ‘listening activities’ (M=3.56) were the least frequently used activities.

### *Intrapersonal intelligence*

Activities in intrapersonal intelligence were the third group activities. Table 4.45 shows mean values of activities related to Intrapersonal Intelligence.

**Table 4.45. Mean Values of Activities Related to Intrapersonal Intelligence**

	N	Mean	Std. Deviation
individual explanations (act 28)	9	4.78	.667
I encourage my students to make exercises in exercise book (act 30)	9	4.56	1.014
I help my students to decide their personal goals (act 29)	9	4.11	.782
I want my students to keep diary (act 31)	9	2.33	1.225

As Table 4.45 shows, the teachers mostly preferred activity 28- ‘individual explanations’ (M=4.78) , but the participants demonstrated weak preference for activity 31- ‘I want my students to keep diary’ (M=2.33).



### *Bodily/kinesthetic intelligence*

The mean values of activities in bodily/kinesthetic intelligence were analyzed. Mean values of activities related to Bodily/Kinesthetic Intelligence are shown in Table 4.46.

**Table 4.46 Mean Values of Activities Related to Bodily/Kinesthetic Intelligence**

	N	Mean	Std. Deviation
I give my students orders which can be physically done (act 10)	9	4.44	.726
playing board games (act 6)	9	4.00	1.118
acting, role play (act 11)	9	3.89	.782
using materials such as puppets, mascots (act 8)	9	3.78	.972
doing calm down exercises (act 7)	9	3.22	1.302

According to results of analysis shown in Table 4.46, activity 10- 'I give my students orders which can be physically done' (M=4.44) was chosen as the most frequently used activity in this intelligence field. The teachers preferred activity 7- 'group works in which the students can walk around the classroom' (M=3.78) as the least frequently used activity.

### *Interpersonal intelligence*

As a fifth group, activities in interpersonal intelligence were examined. Table 4.47 shows the mean values of the activities.

**Table 4.47. Mean Values of Activities Related to Interpersonal Intelligence**

	N	Mean	Std. Deviation
taking feedback from the students (act 5)	9	4.56	1.014
English speaking activities (act 2)	9	4.11	.782
pair work (act 4)	9	3.44	1.236
having discussion and debate in English in the classroom (act 3)	9	3.11	1.054
group work (act 1)	9	2.89	1.269

Table 4.47 shows that in interpersonal intelligence, the teachers preferred the activity 5- 'taking feedback from the students' (M=4.56) in the inventory as the most frequently used activity. Activity 1- 'group work' (M=2.89) was the least frequently used activity in interpersonal intelligence according to the teachers.

### *Logical/mathematical intelligence*

The next group activities were related to logical/mathematical intelligence. The mean values of these activities are shown in the table 4.48.

**Table 4.48. Mean Values of Activities Related to Logical/Mathematical Intelligence**

	N	Mean	Std. Deviation
I want my students to make causal relationships (act 27)	9	4.33	.707
I want my students to relate previous subjects and new subjects (act 26)	9	4.33	.707
guessing activities (act 24)	9	3.89	1.054
playing logic games (act 22)	9	3.00	1.118
doing jigsaw puzzles (act 25)	9	3.00	1.323
completing an unfinished story (act 23)	9	2.78	1.202

As shown in Table 4.48, the teachers demonstrated strong preference in activity 27- 'I want my students to make causal relationships' (M=4.33) and activity 26- 'I want my students to relate previous subjects and new subjects' (M=4.33). But participants demonstrated weak preference in activity 23- 'completing an unfinished story' (M=2.78).

### *Naturalist Intelligence*

The seventh multiple intelligence field was naturalist intelligence. The mean values of activities related to Naturalist Intelligence are shown in the table 4.49.

**Table 4.49. Mean Values of Activities Related to Naturalist Intelligence**

	N	Mean	Std. Deviation
using photographs related to the nature (animals, mountain, lake, river etc.) (act 43)	9	4.56	1.014
I want my students to see the differences and similarities among the subjects (act 48)	9	3.89	.928
I want my students to classify the subjects (act 47)	9	3.67	.866
hanging photographs about nature in the classroom (act 44)	9	3.56	.882
using materials related to the nature, animals or plants in English classes (act 46)	9	2.89	1.054
watching programs about nature (act 45)	9	2.33	1.323

Considering these mean values in Table 4.49, activity 43- ‘using photographs related to the nature (animals, mountain, lake, river etc.)’ (M=4.56) was the most frequently used activity but activity 45- ‘watching programs about nature’ (M=2.33) was the least frequently used activity according to the participants.

### *Musical intelligence*

Last multiple intelligence field which was examined was musical intelligence. Table 4.50 shows mean values of activities related to Musical Intelligence.

**Table 4.50. Mean Values of Activities Related to Musical Intelligence**

	N	Mean	Std. Deviation
using English songs while teaching English (act 34)	9	3.44	1.333
making presentations with music (act 35)	9	2.78	1.563
ACT33 using activities with musical instruments (act 33)	9	2.22	1.302
using rhythms in the lesson (act 36)	9	2.00	.866
using activities with musical instruments (act 32)	9	1.67	.707

According to mean scores of these activities shown in Table 4.50, activity 34- ‘using English songs while teaching English’ (M=3.44) was the most frequently used activity but activity 32- ‘using activities with musical instruments’ (M=1.67) was the least frequently used activity in musical intelligence by English teachers.

From the data obtained, English teachers do not address all MI fields. Teachers pay more attention to some MI fields like visual/spatial, verbal/linguistic intelligences while they ignore some fields of MI like musical intelligence.

According to the results, the students' most dominant intelligence type was visual/spatial intelligence and English teachers most frequently use activities related to visual/spatial intelligence. Musical intelligence was the weakest intelligence type for the students and activities related to musical intelligence were least useful activities according to the students. Also the teachers do not frequently use the activities in musical intelligence. But it is interesting that participant students of the study perceived activities related to verbal/linguistic intelligence to be the most useful activities and activities related to visual/spatial intelligence were the third group of activities perceived to be useful. They perceived activities related to musical intelligence to be the least useful activities. Considering these results it can be said that some results are coherent like the results related to musical intelligences but some results are not coherent.

The results of this study related to MI activities could not be compared to previous studies, because there is no study found in literature examining MI activities from this perspective. Studies found in literature related to MI activities are generally experimental studies and they examined the relationships between MI activities and achievement, MI activities and students' attitudes toward lessons. For example; Uysal's study (2004) report that there is a significant positive correlation between 7<sup>th</sup> grade students' science achievement and verbal/linguistic, logical/mathematical, bodily/kinesthetic, and interpersonal intelligence dimensions. As the 7<sup>th</sup> grade students' science achievement increase, their perceptions' of strength in these dimensions and there is a significant positive correlation between 10<sup>th</sup> grade students' physics achievement and logical/mathematical intelligence. As the students' perceptions of strength in logical/mathematical intelligence increases, the physics achievement of 10<sup>th</sup> grade students increases. Also, Akçin (2009), Temel (2008), Hamurlu (2007), Akar (2006), Güler-Karadeniz (2006), Dedeoğlu (2006), Köken-Bilgin (2006), Kuloğlu (2005), Taşezzen (2005), Eke-Demirci (2005), Akbaş (2004), Aşçı (2003), Şahin

(2001), Demirci (1999) report that the MI based instructions caused significantly better results in achievement than traditional lesson instructions. And researchers state that after experiencing lessons with MI activities, the students declared that they had much more enjoyable lessons, and that they could easily remember things they had learned (Dedeoğlu, 2006; Oran, 2006; Eke-Demirci, 2005). However, in Demirel's (1998) study, although most of the students found MI activities and materials pleasant and enjoyable, there was no significant effect of MI Theory on fourth graders Social Science achievement.

#### **4.7 Chapter Summary**

This chapter presented the findings of the study and discussions concerning the outcomes of the study with data from the literature.

## **CHAPTER FIVE**

### **CONCLUSION and IMPLICATIONS**

#### **5.0 Introduction**

This chapter draws an outline of the study; summarize the findings of the study, and then portrays conclusion of the study. Finally it presents some implications for teachers of English as a foreign language and makes suggestions for further research.

#### **5.1 Summary of the Study**

This study aimed to investigate The Theory of Multiple Intelligences. The main concern of this study was to understand 6th and 8th grade students' multiple intelligence perceptions from different primary schools in Çanakkale city centre and provinces of Çanakkale ( Yenice and Gökçeada) and the relationships between multiple intelligence and other variables: gender, class, and school. This study also aimed to explore whether English language teachers implement MI Theory in their classroom activities or not.

In the study three different questionnaires were used. The first one was Armstrong's (1994) Multiple Intelligence Inventory translated into Turkish by Saban (2001), the second was an Inventory for Activities Used in English Classes. This second inventory was developed by the researcher based on current literature. A teacher version, the Inventory for Activities Used in English Classes was also used. The instruments of this study were conducted with two hundred sixty nine (269) students and nine (9) English Language teachers. There were one hundred thirty eight (138) male and one hundred thirty one (131) female students.

There were one hundred seventy one (171) 6<sup>th</sup> grade and ninety eight (98) 8<sup>th</sup> grade students in the study. The data was collected in the spring term of 2008-2009 academic year and the data obtained from the study was analyzed statistically by using both Excel and Statistical Package for Social Sciences Program (SPSS) through use of descriptive statistics, independent Samples T-Test, and Analyses of Variance (ANOVA).

Answers for the following research questions were sought throughout the study:

**RQ1-** Which multiple intelligence types are dominant among primary school students?

**RQ2-** Is there a difference between male students and female students in terms of their dominant multiple intelligence types?

**RQ3-** Is there a difference between 6<sup>th</sup> grade students and 8<sup>th</sup> grade students in terms of their dominant multiple intelligence types?

**RQ4-** Is there a difference between students from different socio-economic areas in terms of dominant multiple intelligence types?

**RQ5-** Which language teaching activities are perceived more useful by students?

**RQ6-** Is there a difference between 6<sup>th</sup> grade students and 8<sup>th</sup> grade students in terms of perceived usefulness of language teaching activities?

**RQ7-** Are students' MI preferences and activity preferences similar?

**RQ8-** Do the English teachers at primary schools address all MI fields?

In this section a brief summary of the findings of the study was presented.

First, the dominant multiple intelligence preferences of 6<sup>th</sup> and 8<sup>th</sup> grade students were provided. According to data obtained, students who participated in the study demonstrated strong preference for visual/spatial intelligence and

naturalist intelligence and two intelligences followed by bodily-kinesthetic and interpersonal intelligence. Musical intelligence and intrapersonal intelligences were preferred least by primary school students. Although there is not a very big difference between the mean values, students showed variety multiple intelligence perceptions.

Second, gender is a significant factor related to students' multiple intelligences. Based on the results of analysis, male students demonstrated strong preference in logical/mathematical intelligence while female students did not demonstrate strong preference in logical/mathematical intelligence. Female students identified visual/spatial intelligence and interpersonal intelligence as their most dominant intelligences. There was a significant difference in verbal/linguistic intelligence, logical/mathematical intelligence, musical intelligence, interpersonal intelligence, and intrapersonal intelligence between male and female students. Female students perceived themselves stronger in verbal/linguistic intelligence, musical intelligence, and interpersonal intelligence while male students perceived themselves stronger in intrapersonal intelligence, and logical mathematical intelligence. Significant difference found between female and male students' multiple intelligence preferences.

Third, grade factor was examined related to multiple intelligence. This study reported significant differences in all multiple intelligence dimensions except interpersonal intelligence between 6<sup>th</sup> grade students and 8<sup>th</sup> grade students. 6<sup>th</sup> graders perceived themselves stronger in all multiple intelligence dimensions than 8<sup>th</sup> graders.

Fourth, school difference was examined. Because the participants were from six different primary schools and these schools located in different socio-economic areas. There was a significant difference between the schools in multiple intelligence. Schools were compared to each others in terms of multiple intelligence dimensions. The students at Çanakkale College are dominant in verbal/linguistic intelligence. The students at Gökçeada Cumhuriyet Primary School were the lowest in linguistic intelligence among schools. There was a



significant difference between these schools' students in verbal/linguistic intelligence. In logical/mathematical intelligence, the students at 18 Mart Primary School demonstrated strong preference while the students at Yenice Cumhuriyet Primary School demonstrated weakest preference. There was a statistically significant difference between the students at 18 Mart Primary School and students at Gökçeada Cumhuriyet Primary School, students at 18 Mart Primary School and students at Yenice Cumhuriyet Primary School and also there was a significant difference between the students at Mustafa Kemal Primary School and students at Gökçeada Cumhuriyet Primary School, students at Mustafa Kemal Primary School and students at Yenice Cumhuriyet Primary School. As a third intelligence field, visual/spatial intelligence was examined. The students at Mustafa Kemal Primary School are more dominant in visual/spatial intelligence. They demonstrated strong preference in visual/spatial intelligence. The students at Gökçeada Cumhuriyet Primary School demonstrated weak preference in visual/spatial intelligence. There was a significant difference between students at 18 Mart Primary School and students at Gökçeada Cumhuriyet Primary School, and also there was a significant difference between the students at Mustafa Kemal Primary School and students at Gökçeada Cumhuriyet Primary School. In musical intelligence, there was a statistical difference among the schools. The students at İsmail Kaymak Primary School demonstrated strong preference in musical intelligence. The students at Gökçeada Cumhuriyet Primary School and Yenice Cumhuriyet Primary School demonstrated weak preference. In bodily/kinesthetic intelligence, there was a significant difference among the students at different schools. The students at İsmail Kaymak Primary School and 18 Mart Primary School demonstrated stronger preference than the students at Yenice Cumhuriyet Primary School, Gökçeada Cumhuriyet Primary School and Mustafa Kemal Primary School in bodily/kinesthetic intelligence. In naturalist intelligence, and interpersonal intelligence there was no significant difference among the students at different schools. But there was a significant difference among the students at different schools in intrapersonal intelligence. The students at Mustafa Kemal Primary School, 18 Mart Primary School and İsmail Kaymak Primary School demonstrated strong preference while the students at Yenice Cumhuriyet Primary

School and Gökçeada Cumhuriyet Primary School demonstrated weak preference in intrapersonal intelligence. These results showed that students from different schools showed variety in multiple intelligence preferences. This may be because of socio-economic conditions of schools and students' families.

Fifth, the activities mostly perceived to be useful in English classes by 6<sup>th</sup> and 8<sup>th</sup> grade students were analyzed. An inventory developed by the researcher was applied to the students. According to data, the activities mostly perceived to be the most useful by the students were related to verbal/linguistic intelligence, and then activities present interpersonal intelligence. Activities related to visual/spatial and intrapersonal intelligence followed. The students demonstrated weakest preference in the activities related to musical intelligence.

Sixth, there are significant differences in the activities mostly preferred in English classes between 6<sup>th</sup> grade students and 8<sup>th</sup> grade students in multiple intelligence fields except for verbal/linguistic intelligence and intrapersonal intelligence. 6<sup>th</sup> grade students found activities related to eight multiple intelligence dimensions more useful.

Seventh, any correlation between students' dominant multiple intelligence types and activities preferred in English classes was tried to analyze. It can be said that there is a correlation between students' dominant multiple intelligence types and activities preferred in English classes. For example; musical intelligence was the weakest multiple intelligence type of the participants. And the students preferred activities related to the musical intelligence as the least useful activities.

Eighth, the activities frequently used in English classes by primary school English teachers were analyzed. An inventory developed by the researcher was applied to the teachers. Students' activity inventory was adapted for English teachers. According to data, primary school English teachers frequently use activities related to visual/spatial intelligence in English classes and activities related to verbal/linguistic intelligence are frequently used in English classes. Then activities in intrapersonal intelligence and activities in bodily/kinesthetic

intelligence followed. Primary school English teachers do not frequently use activities related to musical intelligence.

## **5.2 Conclusion**

This study investigated 6<sup>th</sup> and 8<sup>th</sup> grade students' perceptions of multiple intelligences of different primary schools and this study aimed to understand the relationship between multiple intelligences and other individual difference variables; gender, class and school.

In the view of the results obtained from statistical analysis, it can be stated that primary school students showed variety in multiple intelligence perceptions and this study show that there are relationships between multiple intelligences and other individual differences. Findings of the study revealed that gender differences were significant in verbal/linguistic, logical/mathematical, musical, interpersonal, and intrapersonal intelligences. Students' multiple intelligences showed variety according to their grade. Except for interpersonal intelligence, there are significant differences in multiple intelligences between 6<sup>th</sup> and 8<sup>th</sup> grade students. Another factor which was analyzed was school. Students showed variety in multiple intelligences according to their schools and this result revealed that participants at central schools generally demonstrated stronger preferences in multiple intelligence than the participants at schools in provinces. This may be because of socio-economic conditions of schools and locations of schools.

In this study English classroom activities were examined. Activities were grouped according to eight multiple intelligence fields and participants were asked which activities are useful in English classes. Findings of the study showed that students perceived different activities to be useful and 6<sup>th</sup> grade students perceived all activities to be more useful than 8<sup>th</sup> grade students. This may be because of learners' age. Younger learners seem to be more motivated and they seem to be more willing to participate in the lesson. This result of this study is supported by Demir's (2005) study. According to the results of his study, younger learners seem to be more motivated and they seem to be very willing to learn English

when compared to older learners. To be concluded that, significant differences were found between 6<sup>th</sup> and 8<sup>th</sup> grade students' useful activities perceptions except for activities related to verbal/linguistic, and intrapersonal intelligences.

Lastly, English language teachers were given an inventory to find out which activities they frequently use in English classes and if they address all MI fields or not. Findings of the study show that primary school English teachers most frequently use activities related to visual/spatial intelligence and they least frequently use activities related to musical intelligence. According to these results, it can be stated that English teachers at primary school do not address all MI fields in their lessons, they ignore some fields of multiple intelligence like musical intelligence. This study can tentatively conclude that teachers are not always sensitive to different MI fields in their selection of classroom activities.

### **5.3 Implications**

#### 5.3.1 Methodological implications

This study only investigated perceptions of students regarding their MI preferences as well as effectiveness of classroom activities. The study also explored the use of activities by teachers. The main instrument of data collection was a self-report questionnaire. This study therefore cannot claim any cause and effect relationship. The methodology pursued could be improved by different observation techniques so as to find out whether and which activities are used in real life. A different measure of effectiveness (e.g. learning outcomes) could also give us a better indicator of activity effectiveness.

This study was limited in time. It represents a cross-sectional approach to explore the phenomenon and presents us a snapshot of reality. A longitudinal (e.g. a term) study could give us a better picture of activities used in the classroom and how these activities influence learning.

### 5.3.2 Pedagogical implications

First of all, needs of the students are different from each others. The teachers should be aware of the learner differences and organize their lessons according to these differences. Also, teachers should make the students aware of their strengths and weakness. Students' awareness about strengths and weaknesses of themselves is as important as the teachers' recognition of students' profiles. Therefore, teachers should provide students being aware of their own intelligence profiles.

In order to address students' multiple intelligences, teachers should first learn the theory; for instance, in-service training can guide teachers on the issue of designing activities in the framework of Multiple Intelligence Theory.

The results of this study showed that the students possess different combinations of multiple intelligences. Educators are advised to recognize these different profiles of students in order to view learning differently.

Since the females and males perceived themselves differently, teachers are advised to provide activities that assist in meeting specific gender needs. Also, grade differences should be considered while selecting classroom activities.

Furthermore, teachers are expected to employ various materials in accordance with the needs of each intelligence in the classroom. By the help of materials, it would be easier to invoke or discover an untouched intelligence.

Educators and administrators are required to keep individual differences in mind when designing educational programmes and to combine the traditional and nontraditional approaches to formulate a method of education that is best suited to the students who have different profiles of intelligences. While planning curriculum, it should be considered that, enough time is given for each topic for students to discover it through their many intelligences. Also, the textbooks should be designed in a way that accommodates all intelligences

#### **5.4 Suggestions for Further Research**

This study has some suggestions for further studies. Firstly, this study investigated perceptions of only 6<sup>th</sup> and 8<sup>th</sup> graders. Similar studies with higher and lower grades can help us understand the issues related to MI better. Such studies can also give us a better picture of activity effectiveness.

This study investigated descriptively MI and activities preferred. Further experimental studies under controlled conditions can explore whether there are ineffective or more effective activities for some students with specific MI preferences. Such causal relationships can be explored only in experimental conditions.

Research on human learning involve many individual differences. Therefore, future research on the interaction between MI preferences and individual differences in the process of learning can yield invaluable knowledge to better understand our students. may compare different variables with multiple intelligence.

#### **5.5 Chapter Summary**

This chapter discussed the conclusion of the study, presented implications and gave suggestions for the studies in this area.

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## **APPENDICES**

### **APPENDIX A :**

MULTIPLE INTELLIGENCE INVENTORY

### **APPENDIX B:**

ACTIVITIES USED IN ENGLISH CLASSES FOR STUDENTS

### **APPENDIX C:**

ACTIVITIES USED IN ENGLISH CLASSES FOR ENGLISH TEACHERS

### **APPENDIX D:**

SABAN'S CONSENT E-MAIL

## APPENDIX A

## ÇOKLU ZEKA ALANLARI ENVANTERİ

Öğrencinin Adı-Soyadı:

Okul:

Cinsiyeti:

Sınıfı:

Sevgili öğrenciler;

Bu anketi uygulamamızın nedeni sizlerin sahip olduğunuz Çoklu Zeka Alanlarını öğrenmektir. Ankette **doğru** veya **yanlış** cevap yoktur. Lütfen envanterde yer alan her ifadenin sizin için ne derece uygun olup olmadığını aşağıdaki beşli dereceleme ölçeği üzerinde belirtiniz. Bunun için uygun gördüğünüz rakamın üstüne X işareti koymanız yeterlidir. Her bir rakamın ifade ettiği anlam aşağıda verilmiştir. İçten verdiğiniz cevaplar için teşekkür ederiz.

- 1= hiç uygun değil  
 2= Çok az uygun  
 3= Kısmen uygun  
 4= Oldukça uygun  
 5 = Tamamen uygun

	Hiç uygun değil	Çok az uygun	Kısmen uygun	Oldukça uygun	Tamamen uygun
1. Resimlerden çok, yazılar dikkatimi çeker.	1	2	3	4	5
2. İsimler,yerler,tarihler konusunda belleğim iyidir.	1	2	3	4	5
3. Kitap okumayı severim.	1	2	3	4	5
4. Kelimeleri doğru şekilde telaffuz ederim.	1	2	3	4	5
5. Bilmecelerden,kelime oyunlarından hoşlanırım.	1	2	3	4	5
6. Dinleyerek daha iyi öğrenirim.	1	2	3	4	5
7. Yaşıma göre kelime hazinem iyidir.	1	2	3	4	5
8. Yazı yazmaktan hoşlanırım.	1	2	3	4	5
9. Öğrendiğim yeni kelimeleri kullanmayı severim.	1	2	3	4	5
10. Sözel tartışmalarda başarılıyım.	1	2	3	4	5
11. Ben bir öğrenciyim.	1	2	3	4	5
12. Makinelerin nasıl çalıştığına dair sorular sorarım.	1	2	3	4	5
13. Aritmetik problemleri kafadan hesaplarım.	1	2	3	4	5
14. Matematik ve fen derslerinden hoşlanırım.	1	2	3	4	5

	Hiç uygun değil	Çok az uygun	Kısmen uygun	Oldukça uygun	Tamamen uygun
15. Matematik oyunlarından hoşlanırım.	1	2	3	4	5
16. Satranç ve benzeri strateji oyunlarını severim.	1	2	3	4	5
17. Mantık bulmacalarını, beyin jimnastiğini severim.	1	2	3	4	5
18. Sözel tartışmalarda başarısızım	1	2	3	4	5
19. Bilgisayar oyunlarından hoşlanırım.	1	2	3	4	5
20. Deneylerden ve yeni denemeler yapmaktan hoşlanırım.	1	2	3	4	5
21. Arkadaşıma oranla daha soyut düşünebilirim.	1	2	3	4	5
22. Sebep-sonuç ilişkilerini kurmaktan zevk alırım.	1	2	3	4	5
23. Renklere karşı çok duyarlıyım.	1	2	3	4	5
24. Harita, tablo türü materyalleri daha kolay algıları.	1	2	3	4	5
25. Arkadaşıma oranla daha fazla hayal kurarım.	1	2	3	4	5
26. Resim yapmayı ve boyamayı çok severim.	1	2	3	4	5
27. Yap-boz, lego gibi oyunlardan hoşlanırım.	1	2	3	4	5
28. Daha önce gittiğim yerleri kolayca hatırlarım.	1	2	3	4	5
29. Bulmaca çözmekten hoşlanırım.	1	2	3	4	5
30. Rüyalarımı çok net ve ayrıntılarıyla hatırlarım.	1	2	3	4	5
31. Resimli kitapları daha çok severim.	1	2	3	4	5
32. Kitaplarımı, defterlerimi, diğer materyalleri çizerim.	1	2	3	4	5
33. Şarkıların melodilerini rahatlıkla hatırlarım.	1	2	3	4	5
34. Güzel şarkı söylerim.	1	2	3	4	5
35. Müzik aleti çalarım ya da çalmayı çok isterim.	1	2	3	4	5
36. Müzik derslerini çok severim.	1	2	3	4	5
37. Ritmik konuşurum veya hareket ederim.	1	2	3	4	5
38. Farkında olmadan mırıldanırım.	1	2	3	4	5
39. Çalışırken elimle ya da ayağımla ritim tutarım.	1	2	3	4	5
40. Çevremdeki sesler çok dikkatimi çeker.	1	2	3	4	5
41. Çalışırken müzik dinlemek hoşuma gider.	1	2	3	4	5
42. Öğrendiğim şarkıları paylaşmayı severim.	1	2	3	4	5
43. Koşmayı, atlamayı ve güreşmeyi severim.	1	2	3	4	5
44. Oturduğum yerde duramaz, kıvıldanırım.	1	2	3	4	5

	Hiç uygun değil	Çok az uygun	Kısmen uygun	Oldukça uygun	Tamamen uygun
45. Düşüncelerimi mimik ve davranışlarımla daha rahat ifade ederim.	1	2	3	4	5
46. Bir şeyi okumak yerine, yaparak öğrenmeyi severim.	1	2	3	4	5
47. Merak ettiğim şeyleri elime alarak incelemek isterim.	1	2	3	4	5
48. Boş vakitlerimi dışarıda geçirmek isterim.	1	2	3	4	5
49. Arkadaşlarımla fiziksel oyunlar oynamayı tercih ederim.	1	2	3	4	5
50. El becerilerim gelişmiştir.	1	2	3	4	5
51. Anlatmak istediğimi anlatırken vücut hareketlerimi kullanırım.	1	2	3	4	5
52. İnsanlara ve eşyalara dokunmaktan hoşlanırım.	1	2	3	4	5
53. Arkadaşlarımla oynamaktan hoşlanırım.	1	2	3	4	5
54. Çevremde bir lider olarak görülürüm.	1	2	3	4	5
55. Problemi olan arkadaşlarıma öğütler veririm.	1	2	3	4	5
56. Organizasyonların, etkinliklerin vazgeçilmez elemanıyım.	1	2	3	4	5
57. Arkadaşlarıma bir şeyler anlatmaktan hoşlanırım.	1	2	3	4	5
58. Arkadaşlarımı sık sık ararım.	1	2	3	4	5
59. Arkadaşlarımla sorunlarına yardımcı olmaktan hoşlanırım.	1	2	3	4	5
60. Çevremdekiler benimle arkadaşlık kurmak ister.	1	2	3	4	5
61. İnsanlara selam verir, onların hatırını sorarım.	1	2	3	4	5
62. Hayvanlara karşı çok meraklıyım.	1	2	3	4	5
63. Doğaya karşı duyarsız olanlara kızarım.	1	2	3	4	5
64. Evde hayvan beslerim ya da beslemeyi çok isterim.	1	2	3	4	5
65. Bahçede toprakla, bitkilerle oynamayı çok severim.	1	2	3	4	5
66. Bitki beslemeyi severim.	1	2	3	4	5
67. Çevre kirliliğine karşı çok duyarlıyım.	1	2	3	4	5
68. Bitki ya da hayvanlarla ilgili belgesellere ilgi duyarım.	1	2	3	4	5
69. Mevsimlerle ve iklim olaylarıyla çok ilgiliyim.	1	2	3	4	5
70. Değişik meyve ve sebzelere karşı ilgiliyim.	1	2	3	4	5
71. Doğa olaylarıyla çok ilgilenirim.	1	2	3	4	5
72. Bağımsız olmayı severim.	1	2	3	4	5

	Hiç uygun değil	Çok az uygun	Kısmen uygun	Oldukça uygun	Tamamen uygun
73. Kendimin zayıf ve güçlü yanlarını bilirim.	1	2	3	4	5
74. Yalnız çalışmayı daha çok severim.	1	2	3	4	5
75. Yaptığım işleri arkadaşlarımla paylaşmayı sevmem.	1	2	3	4	5
76. Yaptığım işlerin bilincindeyim.	1	2	3	4	5
77. Pek kimseye akıl danışmam.	1	2	3	4	5
78. Kendime saygım yüksektir.	1	2	3	4	5
79. Yoğun olarak uğraştığım bir ilgi alanı, hobim vardır.	1	2	3	4	5
80. Yardım istemeden kendi başıma ürünler ortaya koyarım.	1	2	3	4	5
81. Yalnız oynamayı severim.	1	2	3	4	5

## APPENDIX B

## İNGİLİZCE DERSLERİNDE YAPILAN ETKİNLİKLER ENVANTERİ

Öğrenci adı/soyadı:

Okulu:

Cinsiyeti:

Sınıfı:

Sevgili Öğrenciler;

Aşağıdaki ankette İngilizce derslerinde kullandığımız bazı ders içi aktivitelere yer verilmiştir. Bu anketle sizlerin hangi aktiviteleri yapmaktan daha çok hoşlandığınızı öğrenilmeye çalışılacaktır. Ankette yer alan aktivitelerle ilgili üç cevap seçeneğinden ( **faydalı buluyorum, çok faydalı buluyorum.emin değilim,faydalı bulmuyorum, hiç faydalı bulmuyorum**) kendiniz için en uygun olanı seçmeniz istenmektedir. Ankette **doğru** veya **yanlış** cevap yoktur. Lütfen envanterde sizin için uygun olan cevap seçeneğinin altına X işareti koyunuz. İçten cevaplarınız için teşekkür ederiz.

YABANCI DİL SINIFLARINDA SIKÇA KULLANILAN ETKİNLİKLER	Hiç Faydalı bulmuyorum	Faydalı bulmuyorum	Emin değilim	Faydalı buluyorum	Çok faydalı buluyorum
1.Öğretmenimiz derslerde grup çalışmalarına yer verir.	1	2	3	4	5
2.Öğretmenimiz bizden İngilizce konuştuğumuz etkinlikler yapmamızı ister.	1	2	3	4	5
3.Derslerde arkadaşlarımızla İngilizce iletişimi destekleyen tartışma, münazara, panel gibi etkinlikler yaparız.	1	2	3	4	5
4. Arkadaşlarımızla eşli çalışmalar yaparız.	1	2	3	4	5
5. Öğretmenimiz yaptığımız çalışmalarla ilgili bize dönüt verir.	1	2	3	4	5
6.Derslerimizde tahta oyunları oynarız.	1	2	3	4	5
7.Arkadaşlarımızla grup halinde sınıf içerisinde dolaşmamıza imkan sağlayan İngilizce etkinlikler yaparız.	1	2	3	4	5
8.Öğretmenimiz konuyu kukla, maskot vb. materyallerin yardımıyla dramatize ederek sunar.	1	2	3	4	5
9.Öğretmenimiz bize ders esnasında bazı fiziksel rahatlama egzersizleri(oturup kalkma, boynu sağa sola çevirme gibi) yaptırır.	1	2	3	4	5
10.Öğretmenimiz bize fiziksel olarak yerine getireceğimiz İngilizce komutlar verir.	1	2	3	4	5
11. Öğretmenimiz bize canlandırma etkinlikleri yaptırır.	1	2	3	4	5



	Hiç Faydalı bulmuyorum	Faydalı bulmuyorum	Emin değilim	Faydalı buluyorum	Çok faydalı buluyorum
12.Derslerde zincirleme İngilizce soru-cevap etkinlikleri yaparız.	1	2	3	4	5
13. Öğretmenimiz bize yazılı performans ödevi verir.	1	2	3	4	5
14.Öğretmenimiz bizi sözlük kullanmaya teşvik eder.	1	2	3	4	5
15.Öğretmenimizin tahtaya yazdıklarını veya anlattıklarını not alırız.	1	2	3	4	5
16. Öğretmenimiz ders esnasında bize espri ve şakalar yapar.	1	2	3	4	5
17.Sınıf içerisinde okuma etkinlikleri yaparız.	1	2	3	4	5
18.Öğretmenimiz bize yazılı performans ödevi vermez.	1	2	3	4	5
19.Derslerde İngilizce hikayeler kullanırız.	1	2	3	4	5
20.Öğretmenimiz sınıfta dinleme etkinlikleri yaptırır.	1	2	3	4	5
21.Derslerde öğretmenimizle birlikte sözlü tekrar çalışmaları yaparız.	1	2	3	4	5
22.Derslerde kelime oyunları oynarız.	1	2	3	4	5
23.Öğretmenimiz bize İngilizce mantık oyunları oynatır.	1	2	3	4	5
24.Öğretmenimiz bizden yarım bırakılan İngilizce bir hikayeyi tamamlamamızı ister.	1	2	3	4	5
25.Öğretmenimiz bizden anahtar kelimeler veya resimler kullanarak İngilizce okuma/dinleme etkinliklerinde tahminlerde bulunmamızı ister.	1	2	3	4	5
26.Öğretmenimiz bize İngilizce mantık bulmacaları çözdürür.	1	2	3	4	5
27.Öğretmenimiz bizden derste işlediğimiz konularla eski konular arasında bağlantı kurmamızı ister.	1	2	3	4	5
28.İşlediğimiz konularda sebep-sonuç ilişkileri kurmaya çalışırız.	1	2	3	4	5
29.Anlayamadığımız konularda öğretmenimiz bize bireysel olarak açıklamalarda bulunur.	1	2	3	4	5
30.Öğretmenimiz bizim bireysel hedefler belirlememize yardımcı olur.	1	2	3	4	5
31.Öğretmenimiz bizi alıştırma kitaplarındaki alıştırmaları yapmaya teşvik eder.	1	2	3	4	5
32.Öğretmenimiz bizden İngilizce günlük tutmamızı ister.	1	2	3	4	5
33.Derslerde çeşitli müzik enstrümanları kullandığımız etkinlikler yaparız.	1	2	3	4	5
34.Derslerde müzik dinleriz.	1	2	3	4	5
35. İngilizce şarkılar öğreniriz.	1	2	3	4	5
36.Öğretmenimiz derslerde fonda müzik bulunan İngilizce sunumlar yapar.	1	2	3	4	5
37. Öğretmenimiz İngilizce derslerini ritimler kullanarak anlatır.	1	2	3	4	5
38.Öğretmenimiz derslerinde renkli tebeşirler, kalemler kullanır.	1	2	3	4	5

	Hiç Faydalı bulmuyorum	Faydalı bulmuyorum	Emin değilim	Faydalı buluyorum	Çok faydalı buluyorum
39.Öğretmenimiz derslerinde tahtaya şekil/ tablo/ grafikler çizerek açıklamalar yapar.	1	2	3	4	5
40.İngilizce derslerinde görsel materyaller (kartlar, resimler, fotoğraflar vb.) kullanırız.	1	2	3	4	5
41. Öğretmenimiz bazı İngilizce kavramları tahtaya resim çizerek anlatır.	1	2	3	4	5
42.Öğretmenimiz bizden ders esnasında hayal etmemizi, konularla ilgili zihnimizde canlandırma yapmamızı ister.	1	2	3	4	5
43. Sınıfı görsel materyallerle (İngilizce afişler, duvar panoları, resimler) süsleriz.	1	2	3	4	5
44.Görsel materyallerimizde doğadaki canlı, cansız varlıkların (hayvan, bitki, dağ, nehir vb.) resimlerini kullanırız.	1	2	3	4	5
45.Öğretmenimiz sınıfta doğa resimlerine yer verir.	1	2	3	4	5
46.Öğretmenimiz bize doğayı tanıtan İngilizce programlar seyrettirir.	1	2	3	4	5
47.Öğretmenimiz sınıfa doğa, hayvanlar, veya bitkilerle ilgili materyaller getirir.	1	2	3	4	5
48.Öğretmenimiz bizden öğrendiklerimizle ilgili sınıflamalar yapmamızı ister.	1	2	3	4	5
49.Öğretmenimiz bizden konular arasındaki farklılık ve benzerlikleri görmemizi ister.	1	2	3	4	5

## APPENDIX C

## İNGİLİZCE DERSLERİNDE YAPILAN ETKİNLİKLER ENVANTERİ

Görev yaptığı okulun adı:

Dersine girdiği sınıflar / şubeler :

Değerli öğretmen arkadaşım;

Aşağıdaki ankette İngilizce derslerinde kullandığımız bazı ders içi aktivitelere yer verilmiştir. Bu anketle sizlerin ders esnasında hangi aktiviteleri, ne kadar sıklıkta kullandığımız öğrenilmeye çalışılacaktır. Ankette yer alan aktivitelerle ilgili beş cevap seçeneğinden (**1=hiç, 2=nadiren, 3=ara sıra, 4=genellikle, 5=her zaman**) kendiniz için en uygun olanı seçmeniz istenmektedir. Ankette **doğru** veya **yanlış** cevap yoktur. Lütfen envanterde sizin için uygun olan cevap seçeneğinin altına X işareti koyunuz. Vereceğiniz içten cevaplar araştırmanın daha sağlıklı sonuçlar vermesine katkıda bulunacaktır. İlginize teşekkür ederiz.


YABANCI DİL SINIFLARINDA SIKÇA KULLANILAN ETKİNLİKLER					
	Hic	Nadiren	Ara sıra	Genellikle	Her zaman
1.Öğrencilerin birbirinin yüzünü görecektir şekilde oturduğu grup çalışmalarına yer veririm.	1	2	3	4	5
2.Öğrencilerin birbiriyle İngilizce konuştuğu etkinlikler kullanırım.	1	2	3	4	5
3.Derslerimde öğrenciler arası İngilizce iletişimi destekleyen tartışma, münazara, panel gibi etkinliklere yer veririm.	1	2	3	4	5
4. Öğrencilerin birbirinin yüzünü görecektir şekilde oturduğu eşli çalışmalara yer veririm.	1	2	3	4	5
5. Öğrencilerimden yaptığımız çalışmalarla ilgili dönüt alırım.	1	2	3	4	5
6.Öğrencilerime eğitsel nitelikte tahta oyunları oynatırım.	1	2	3	4	5
7.Öğrencilerin grup halinde sınıf içerisinde dolaşabilmesine imkan sağlayan İngilizce etkinliklere yer veririm.	1	2	3	4	5
8.Bir konuyu kukla, maskot vb. materyallerin yardımıyla dramatize ederek sunarım.	1	2	3	4	5

	Hic	Nadiren	Ara sıra	Genellikle	Her zaman
10.Öğrencilerin fiziksel olarak cevap vermesini gerektiren İngilizce komutlar veririm.(Sit down, stand up, vb.)	1	2	3	4	5
11. Öğrencilerime beden dillerini kullanabilecekleri canlandırma etkinlikleri yaptırım.	1	2	3	4	5
12.Derslerimde zincirleme İngilizce soru-cevap etkinliklerine yer veririm.	1	2	3	4	5
13. Öğrencilerime yazılı performans ödevi veririm.	1	2	3	4	5
14.Öğrencilerimi sözlük kullanmaya teşvik ederim.	1	2	3	4	5
15.Öğrencilerimden tahtaya yazdıklarını veya anlattıklarını not almalarını isterim.	1	2	3	4	5
16. Ders esnasında öğrencilerime espri ve şakalar yaparım.	1	2	3	4	5
17.Öğrencilerime sınıf içerisinde okuma etkinlikleri yaptırım.	1	2	3	4	5
18.Derslerde İngilizce hikayelere yer veririm.	1	2	3	4	5
19.Öğrencilerime dinleme etkinlikleri yaptırım	1	2	3	4	5
20.Derslerde öğrencilerime sözlü tekrarlar yaptırım.	1	2	3	4	5
21.Derslerde kelime oyunlarına yer veririm.	1	2	3	4	5
22.Öğrencilerime İngilizce mantık oyunları oynatırım.	1	2	3	4	5
23.Öğrencilerimden yarım bırakılan İngilizce bir hikâyeyi tamamlamalarını isterim.	1	2	3	4	5
24.Anahtar kelimeler veya resimler kullanarak İngilizce okuma/dinleme etkinliklerinde tahminlerde bulunmalarını isterim.	1	2	3	4	5
25.Öğrencilerime İngilizce mantık bulmacaları çözdürürüm.	1	2	3	4	5
26.Öğrencilerimden derste işlediğimiz konularla eski konular arasında bağlantı kurmalarını isterim.	1	2	3	4	5
27.Öğrencilerimden işlediğimiz konularda sebep-sonuç ilişkileri kurmalarını isterim.	1	2	3	4	5
28. Bazı öğrencilerime bireysel olarak açıklamalar yaparım.	1	2	3	4	5
29.Öğrencilerimin bireysel hedefler belirlemesine yardımcı olurum.	1	2	3	4	5
30.Öğrencileri alıştırmaya kitaplarındaki alıştırmaları yapmaya teşvik ederim.	1	2	3	4	5
31. Öğrencilerimden İngilizce günlük tutmalarını isterim.	1	2	3	4	5

	Hic	Nadiren	Ara sıra	Genellikle	Her zaman
32.Derslerimde öğrencilerime çeşitli müzik enstrümanlarının kullanıldığı etkinlikler yaptırım.	1	2	3	4	5
33.Rahatlama egzersizi olarak müzik dinletirim.	1	2	3	4	5
34.İngilizce öğretiminde İngilizce şarkılardan faydalanırım	1	2	3	4	5
35.Derslerimde fonda müzik bulunan İngilizce sunumlar yaparım.	1	2	3	4	5
36. Öğrencilerime İngilizce derslerini ritim eşliğinde anlatırım.	1	2	3	4	5
37.Derslerimde renkli tebeşirler, kalemler kullanırım.	1	2	3	4	5
38.Derslerimde tahtaya şekil/tablo/ grafikler çizerek açıklamalar yaparım.	1	2	3	4	5
39.İngilizce anlattığım şeyleri görsel materyallerle (kartlar, resimler, fotoğraflar vb.) desteklerim.	1	2	3	4	5
40.Bazı İngilizce kavramları tahtaya resim çizerek anlatırım.	1	2	3	4	5
41. Öğrencilerimden ders esnasında hayal etmelerini, konularla ilgili zihinlerinde canlandırma yapmalarını isterim.	1	2	3	4	5
42. Sınıfı görsel materyallerle (İngilizce afişler, duvar panoları, resimler) süsleriz.	1	2	3	4	5
43.Görsel materyal hazırlarken doğadaki canlı, cansız varlıkların (hayvan, bitki, dağ,nehir vb.) resimlerini kullanmaya gayret ederim.	1	2	3	4	5
44.Sınıfta doğa resimleri kullanırım.	1	2	3	4	5
45.Öğrencilere doğayı tanıtan İngilizce programlar seyrettiririm.	1	2	3	4	5
46.Öğrencilerime doğa, hayvanlar, veya bitkilerle ilgili materyaller getiririm.	1	2	3	4	5
47.Öğrencilerimden öğrendiklerimizle ilgili sınıflamalar yapmalarını isterim.	1	2	3	4	5
48.Öğrencilerimden konular arasındaki farklılık ve benzerlikleri görmesini isterim.	1	2	3	4	5

Anket bitti, katılımlarınız için teşekkürler

**APPENDIX D: SABAN'S CONSENT E-MAIL**

Re: Çoklu Zeka Alanları anketi  
From:  **Ahmet SABAN** (asaban@selcuk.edu.tr)  
Sent: Wed 6/23/10 8:05 PM  
To: asli senbas (aslisenbas@hotmail.com)

Tabii ki kullanabilirsiniz. A Saban

----- Original Message -----

From: asli senbas <aslisenbas@hotmail.com>  
Date: Wednesday, June 23, 2010 9:22 pm  
Subject: Çoklu Zeka Alanları anketi  
To: asaban@selcuk.edu.tr

Merhaba sayın hocam;

Sayın Ahmet Hocam, ben Çanakkale Onsekiz Mart Üniversitesi Sosyal Bilimler Enstitüsü İngilizce Öğretmenliği bölümünde Yüksek Lisans yapmaktayım. Yüksek Lisans tez çalışmam olarak Çoklu Zeka Kuramı ile ilgili bir çalışma yapmaktayım. Bu çalışma için çoklu zeka alanları envanterine ihtiyaç duyuyorum. Bunun için Thomas Armstrong tarafından geliştirilen ve Türkçe'ye çevirisini sizin yaptığınızı öğrendiğim bir envanter kullanmak istiyorum. Envanteri kullanmamda bir sakınca olup olmadığını size sormak istedim. Envanteri tez çalışmam için kullanabilir miyim acaba? Mailimi cevaplarsanız çok sevinirim ve envanter için onayınız olursa tabii ki. Teşekkür eder, çalışmalarınızda kolaylıklar dilerim. İyi akşamlar.

ASLI ŞENBAŞ FİLİZ

İngilizce öğretmeni ve yüksek lisans öğrencisi

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