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APPLIED LINGUISTICS

THE EFFECT OF MULTIPLE INTELLIGENCE-BASED INSTRUCTION ON LEARNING AND ATTITUDES OF THE SIXTH GRADERS IN ENGLISH LANGUAGE TEACHING

MASTER'S THESIS

Gülden KOCAKARA

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ABSTRACT

In this research, Howard Gardner's Multiple Intelligence Theory is described and it is investigated how MI-based instruction affected sixth grade students' learning level and attitudes in English language teaching.

This is an experimental study which adopted single group pre-test and post-test design. The research was applied to 28 sixth graders in Akkuş İMKB Regional Boarding School. During the research the "Simple Present Tense" was taught with the traditional teaching methods and the "Present Continuous Tense" was presented with the activities of MI Theory to the students by the researcher. This six week research was administered to determine whether MI-based instruction caused a change on the students' success and attitudes towards English with respect to traditional teaching. In the study, the data which were obtained from English proficiency tests, the attitude scale and multiple intelligences inventory were analyzed by using SPSS (v.15).

This experimental study examined the importance of MI Theory in the process of English language teaching in terms of success and attitude. At the end of the research, the post-test results revealed that MI-based instruction did not create a statistically significant difference on learning level of the students in comparison to traditional teaching methods. However, after the lessons which were equipped with the activities of multiple intelligence positive changes were observed on the attitudes of the students towards English in terms of finding English lessons easy to learn and enjoyable to study, feeling themselves comfortable and successful in the lessons and establishing classroom interaction in the target language more easily.

Key Words: Multiple Intelligence Theory, Traditional Method

ÖZET

Bu çalışmada Howard Gardner'ın Çoklu Zekâ Kuramı tanıtılmış ve bu kurama uygun ders yapılandırmasının 6. sınıf öğrencilerin öğrenme düzeylerine ve tutumlarına nasıl etki ettiği araştırılmıştır.

Bu, tek grup ön-test, son-test desenini benimseyen deneysel bir çalışmadır. Araştırma, Akkuş İstanbul Menkul Kıymetler Borsası (İMKB) Yatılı İlköğretim Okulu (YİBO)'ndaki 28 altıncı sınıf öğrencisine uygulanmıştır. Uygulama boyunca "Geniş Zaman" (Simple Present Tense) yapısı geleneksel öğretim yöntemleriyle, "Şimdiki Zaman" (Present Continuous Tense) yapısı Çoklu Zekâ Kuramı etkinlikleriyle araştırmacı tarafından öğrencilere anlatılmıştır. Altı haftalık bu araştırma çoklu zekâ temelli öğretimin öğrencilerin başarı ve derse karşı tutumlarında geleneksel yönteme nispetle değişikliğe yol açıp açmadığını belirlemek için uygulanmıştır. Araştırmada öğrencilere uygulanan İngilizce yeterlilik testleri, tutum ölçeği ve çoklu zekâ envanterinden elde edilen bilgiler SPSS (v.15) paket programı ile analiz edilmiştir.

Bu deneysel çalışma Çoklu Zekâ Kuramının İngilizce öğretimi sürecindeki önemini tutum ve başarı açısından incelemektedir. Araştırma sonucunda, son-test sonuçları Çoklu Zekâ temelli öğretimin geleneksel öğretim yöntemlerine kıyasla öğrencilerin öğrenme düzeylerinde anlamlı bir fark yaratmadığını ortaya çıkarmıştır. Bununla birlikte Çoklu Zekâ uygulamaları ile şekillenmiş derslerin ardından, öğrencilerin İngilizce dersini kolay ve eğlenceli olarak değerlendirmeleri, kendilerini bu derste rahat ve başarılı olarak görmeleri ve hedef dilde sınıf içi etkileşimini daha rahat kurmaları bakımından İngilizce dersine karşı tutumlarında olumlu değişiklikler gözlemlenmiştir.

Anahtar Sözcükler: Çoklu Zekâ Kuramı, Geleneksel Yöntem

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LIST OF ABBREVIATIONS

İMKB : İstanbul Menkul Kıymetler Borsası

MI : Multiple Intelligence

SPSS : Statistical Package for the Social Sciences

YİBO : Yatılı İlköğretim Bölge Okulu (Regional Boarding School)

CHAPTER ONE

1. INTRODUCTION

1.1. Introduction

This chapter is an introduction to the concepts of language teaching and Multiple Intelligence (MI) Theory, explains the background of the study, highlights the theoretical framework, purpose and significance of the study, identifies the research questions and finally outlines the design of the study.

1.2. Nature of the Study

Learning a foreign language is a vitally important issue especially in today's world. In our modern world, countries need people who are equipped with at least one foreign language to develop better international relations socially, politically and economically. 'English is now the dominant or official language in over 60 countries and is represented in every continent' (Crystal, 1997: 106). The teaching and learning of English is highly encouraged as English has become the lingua franca, in other words, the means of communication among people with different native languages (Kang, 1999). Furthermore, English is the official working language of the United Nations and NATO, of which Turkey is a member. 'Most of the scientific, technological and academic information in the world is expressed in English and over 80% of all the information stored in electronic retrieval systems is in English' (Crystal, 1997:106). These facts which pertain mainly to English in its world-wide use increase the general educational value of English, and make it an indispensable part of the school curriculum.

During the 20th century, the teaching and learning of foreign languages has gained an unprecedented importance. Many developed and developing countries have been giving a great deal of importance to teaching the English language which is a vital means of communication for millions of people around the world in their educational programs. Turkey is one of these countries in which teaching English has been a compulsory part of formal education. Nowadays, from the fourth grade to the eighth grade, English has been taught in the primary education. As three hours in a week are officially devoted in the fourth and fifth grades, four class hours are devoted to language teaching in the secondary education. Also, even if the one-year preparatory class in different Anatolian High Schools has been finalized, language courses still have an important place in the curriculum of high schools and vocational high schools. Additionally, there are lots of colleges and private schools giving a primary focus on teaching foreign languages and they start teaching English at very early ages. Obviously, language teaching still takes a considerable concern in every grade of schooling even if there are some changes in the applications of our educational system.

1.3. Background of the Study

Many countries have a long tradition of foreign language teaching with its own aims and methods but the understanding of language teaching in Turkey is far from satisfying the demand for teaching English for real-life purposes within a pragmatic and functional context. Even if the many new directions opened up by research in linguistics and psychology have provided teachers with many ideas for program development and teaching approaches, as Rivers (1982) stated, language learning has traditionally been seen as a process as a result of the transmission of facts about language or from a succession of rote memorization drills; therefore, most of the time language education does not go beyond rote grammar teaching. As a result, students experience problems in integrating foreign language into their daily life communications and they do not effectively use it in everyday speech.

The philosophy underlying the traditional understanding in education is the attribution of the success to standard intelligence, known as IQ; in other words, the two types of intelligences –verbal-linguistic intelligence and logical-mathematical intelligence–

have primarily been focused as an indicator of being intelligent. On the one hand, intelligence is described as the ability to understand and manipulate facts and ideas by just using language and mathematics (Spillane, 2008). On the other hand, it is really trouble-giving to define the concept of intelligence by minimizing it in two constructions (Christison, 2005). If someone comes to your class and asks you to select the most intelligent student, it will be very hard to select the most intelligent one since students demonstrate so many different individual strengths and skills, and they are constantly changing, learning and growing. According to Abdallah (2009: 20), "For so long time, educators and principals had been so much concerned with implanting knowledge in a uniform way and giving students some previously-prepared courses." This led to creating stereotypes of students.

In most of the Turkish schools, English is taught as an isolated subject in the curriculum; hence, a possible innovation is thought to be teaching English through a cross-curricular model. According to Armstrong (1994), cross-curricular studies can be a way of teaching English through content in which the target language is the vehicle of interaction and knowledge, not the subject matter. Bringing together several disciplines and making content connections across such subjects as mathematics, science, arts, music, social studies in the classroom can show learners that a topic is relevant and related to their real world and previous experience. In addition, integrating all sorts of thinking peculiar to those disciplines into the content area requires caring for the learners' individual differences and learning styles (Christison, 2005). This is a process which both accelerates the transmission of new learning into daily life and respects the diversity of learners, which suggests intelligence as a pluralistic phenomenon rather than a static construct.

In the 1980s, Howard Gardner put forward a new definition and a new approach to the educational notion and assessment with the name of Multiple Intelligence (MI) Theory. In his book, he explained the seven intelligences in *Frames of Mind* (1983) for the first time. The theory of Multiple Intelligence suggests that there are a number of distinct forms of intelligence that each individual possesses in varying degrees. Gardner proposed 'individually configured education' –an education that takes individual differences into consideration and crafts practices that serve different kinds of minds equally well (Berman, 1998). Gardner suggested "different and autonomous intelligence capacities that result in

many different ways of knowing, understanding, and learning about our world" (Christison, 2005: 3). As Gardner (1993: 15) states:

> It is of the utmost importance that we recognize and nurture all of the varied human intelligences, and all of the combinations of intelligences. We are all so different largely because we all have different combinations of intelligences. If we recognize this, I think we will have at least a better chance of dealing appropriately with the many problems we face in the world.

Gardner's claim is that individuals can enhance their educational alternatives and opportunities easily if their intellectual profiles are identified at an early age. Individuals have the chance to improve each type of intelligence to a reasonable level of competency and all types of intelligence can exist together in the same person in complex ways. This is also supported by several researchers that an individual can change, improve and develop his intelligence which he is born with. Lazear (2000) states that people have the ability to develop their intelligences and adds that every person can learn to be more intelligent if s/he discovers how to activate his/her abilities and learn more about his/her level of capacity.

Some people wonder why Gardner calls these categories, especially musical, spatial, and bodily- kinesthetic as intelligences, not *talents* or *aptitudes*. Gardner (1993) says that people always use these terms and say, 'He is not very intelligent, but has a wonderful aptitude for music.' Thus, he uses *intelligence* to stress and describe these categories. In an interview, Gardner states:

> 'I'm deliberately being somewhat provocative. If I'd said that there are seven kinds of competencies, people would say 'yeah, yeah.' But by calling them 'intelligences', I'm saying what we've tended to put on a pedestal one variety called intelligence, and there's actually a plurality of them, and some are things we've never thought about as being 'intelligence' at all' (Weinreich- Haste, 1985: 48, cited in Armstrong, 1994: 3).

Armstrong (1994) claims that children who are good with 'words' and 'logic are best students for teachers; teachers do not much recognize children who are good at dancing, art, music, social relations, intuition, drama, nature and other areas of self expression. However, the result of Armstrong's research is that many children with abilities in these neglected intelligences are tend to be labelled as *learning disabled* or ADHD (attention deficit hyperactivity disorder) if they are not able to perform adequately on assigned worksheets and pop quizzes.

1.4. Theoretical Framework

"All students have different strengths and weaknesses in school, and one of the most important aspect of teaching is using students' strengths to their greatest potentials for learning" (Orden and Milner, 2005: 121). But classic belief is not particularly encouraging to a community of diverse learners. Teaching is not something that is completely performed by the teacher, who is supposed to be the active side all the time. Students are never passive, anyway, because they handle the information they receive. This study focuses on the implementation of the Multiple Intelligence-based instruction which suggests a new tool for effective teaching and learning at all levels. This is a study which is against traditional language teaching methods that still prevails in school which expects that all students learn in a uniform way. The study means conformist understanding of pedagogy and static methods of teaching with traditional language teaching.

For a long time, schools have emphasized the development of logical intelligence and linguistic intelligence (mainly reading and writing). According to Multiple Intelligence Theory, "the students whose strengths are not in the linguistic or logical-mathematical realm may still have an opportunity to succeed if they are taught differently" (Stefanakis, 2002: xxxi). Honouring and embracing children's diversity is crucial in today's schools and the theory of MI treats difference as something to be expected and builds on that. MI-based instruction aims to give students more avenues to succeed in their learning process (Armstrong, 1994). However, the MI theory does not advocate abandoning traditional models of education. Rather it legitimizes methods of instruction in which teachers use different methodologies, exercises and activities to reach all students, not just those who excel at linguistic and logical intelligence with a broader vision of education.

Accepting Gardner's theory of multiple intelligences has several implications for teachers in terms of classroom instruction. The theory of MI states that all eight intelligences are needed to productively function in society. Teachers, therefore, should think of all intelligences as equally important. This is in great contrast to traditional education systems which typically place a strong emphasis on the development and use of verbal and mathematical intelligences. Another implication is that teachers should structure

the presentation of material in a style which engages most or all of the intelligences. If some students learn best by moving, doing or working with others, then it suggests educators allow these children to demonstrate their aptitudes in the arts, music, drama, inter-personal relations, and athletics in the course of daily instruction practices. By activating a wide assortment of intelligences, teaching can facilitate a deeper understanding of the subject material as well as embracing individual differences in students.

1.5. Statement of the Problem

The problematic area that leads to poor academic achievement and learning environment and becomes harder to maintain student motivation and interest high towards the lesson is the ineffective teaching with the available language teaching methods and materials. Language teaching with traditional methods is totally based on the content of textbooks. The textbook which was presented by the Ministry of Education is full of controlled grammar and reading exercises which barely support the development of just one type of intelligence. This is the matter which decreases the level of learning and development of positive attitudes in students under the expected goals and objectives. The formal curriculum guide for the content areas within the textbook which was also used in this study does not provide teachers with a list of methods they can use to adhere to the guidelines of the curriculum's goals and objectives. Therefore, the examination of Multiple Intelligence as a pedagogical organizer in language classroom is worth to study to be able to create a rich teaching and learning environment and honour the diversity of all learners.

1.6. Purpose of the Study

This study describes MI theory, revolves around involving a wide range of MI activities and observes its effects on the students' learning level and attitude when it is applied in teaching of English. Therefore, the objective of this study is to find out whether the sixth grade students achieve higher scores in English and develop positive attitude towards English classes with MI-based instruction rather than traditional teaching methods. In other words, this is a study which aims to illuminate to what extent MI-based instruction serves to enhance student's success and create a positive change in their attitudes.

1.7. Research Questions

In the light of the preceding discussion, in order to test the effects of MI-based activities on students' learning level and attitude towards the foreign language lesson in the sixth grade class, the following main research question has been designed:

"Is Multiple Intelligence-based instruction effective on students' level of learning and does it improve the attitude of students towards the English course?"

This study also seeks answers to the following sub-research questions as well:

1) Are there any differences between the post-test results of the treatments presented with traditional language teaching methods and MI-based activities?
2) Are there any differences between the pre-test and the post-test results of the treatment presented with traditional language teaching methods?
3) Are there any differences between the pre-test and the post-test results of the treatment presented with MI-based activities?
4) Can MI serve as a pedagogical organizer and framework for structuring language lessons?

1.8. Significance of the Study

Multiple Intelligence Theory gained prominence recently in education in Turkey. Even if the teachers are curious about Multiple Intelligence-based activities and their effects, they do not willingly use them in the classroom. This study aims to find out the effects of MI activities and the results which will hopefully be a useful reference to many language teachers especially to those who are working with this age group and give ideas about how the multiple intelligence-based classes differ from the traditional ones.

English is still a difficult subject to learn in Turkey. Therefore, students develop a negative attitude towards English which is inversely proportional with the frequency of their use of English. It seems difficult to achieve success in English classes without overcoming this negative approach because students like a subject as long as they are

successful in it. This research is significant from two perspectives. Firstly, it is significant from the practical point of view because it helps to identify the connection between MI-based instruction and students' level of learning and questions the effects of Multiple Intelligence activities on the attitudes and opinions of the sixth grade students towards English.

The other importance of this study emerges from the fact that there is not much research on teaching English via multiple intelligences in the sixth graders in a boarding school. Obviously, there are lots of studies done on the educational implications of MI all over the world but there are not many experimental studies in the area of foreign language teaching in Turkey. Also, the notification of the Ministry of Education about teaching all courses by means of multiple intelligences revealed that there was a grave lack of use of Multiple Intelligence Theory in the field of language teaching in Turkey. This study aims to find out the effectiveness of MI activities in the process of English language teaching with its immediate outcomes on success and attitude of the participants with respect to traditional teaching. Therefore, the results of the study can also be a useful contribution to the research carried out in this field and help those who are interested in MI activities and their effects on language teaching in schools.

1.9. Outline of the Study

This study includes six chapters.

Chapter One is the introduction of the study and introduces the study to the reader, gives the nature and background of the study and explains the theoretical framework adopted in this study. It also highlights the objectives, presents the research problem with its sub-questions and significance of the study.

Chapter Two, Review of the Literature, provides a general description of the related literature. It considers the notion of intelligence and its developmental history; the definition of Multiple Intelligence, the description and the application of the multiple intelligences into the classroom social environment along with related studies.

Chapter Three is the Methodology part which elucidates both the respondents, instruments and the processes that are adopted for the data collection, and analysis.

Chapter Four, Results and Discussions, stresses on the data analysis and discusses the results and the findings of the study and subsequently, interpretations of the results.

Chapter Five, Conclusions, explains the conclusions, their educational implications for language teaching, and limitations of the study. This chapter also gives suggestions for further research. Finally, the references, the materials used throughout the treatments of traditional teaching and MI-based instruction, and the employed questionnaires, tests and scales are included in the appendices.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Introduction

Since Multiple Intelligences Theory is a relatively recent term for many people, the researcher devotes this section to shed some light on the theory. The theory will be tackled according to these angles: the new concept of intellect; the history and main principles of MI Theory; the Multiple Intelligences with in-depth analysis of each one. Besides, this study makes an overview of English Language Curriculum for Primary Education and highlights the educational implications of MI-based instruction into the language teaching along with relevant studies which provide empirical evidence on the effect of MI on teaching and learning in classroom environment.

2.2. Definition of Intelligence

Intelligence is accepted as an important factor which forms the difference among individuals and has the power of influencing learning. For that reason, it has always been one of the main concepts emphasized in education. However, a common definition of intelligence has not been made yet. There is probably no aspect of contemporary psychology that is more misunderstood by the general public than intelligence (Christison, 2005). A number of different definitions can be found in the literature related to the subject. For instance, according to educators, intelligence is an ability of learning; to biologist an ability of adapting to the environment; to psychologists, an ability of reasoning; and to computer scientists, it is an ability of computing (Oral, 2004).

In 1905, at the beginning of the 20th century, the French psychologist Alfred Binet and his friend Theodore Simon developed a means of determining which primary school

students were *at risk* for failure in Paris and originally designed a test to predict which youngsters in Parisian primary grades would succeed and which would fail. After several years, the first intelligence tests which they prepared began to be used in the United States and they enjoyed great success the world over. The claim of this test which later became known as the *IQ* (intelligence quotient) test that there was something called *intelligence* that could be measured and reduced to a single number or score (Armstrong, 1994: 1).

According to the claim made by Binet, intelligence is a general ability which helps individuals to act in his life and it can be measured reliably with standardized tests. The results of the tests label the students and help the educators to predict their school achievement, and those tests measure primarily verbal, logical- mathematical, and some spatial intelligence (Gardner, 1993). Traditionally, psychologists have looked upon intelligence as a linear concept that can be simply measured by IQ tests. According to Hine (2002: 1), the traditional theory of intelligence has two fundamental assumptions:

- human cognition is unitary; and
- individuals can be adequately described as having a single quantifiable intelligence.

Intelligence has been defined by many researchers for many years. One of these researchers Calvin (1998) claims that there is no universal definition and everybody may have different comments about intelligence since it is an open-ended term (cited in Sezginer, 2000).

Making an overall definition of the traditional theory of intelligence is functional to some extent since it has helped create a mindset or paradigm as to what *smart* or *intelligent* is, who has potential or ability to be smart, and how the person can or cannot become smart (Hine, 2002). How intelligence is defined within any society has a profound effect on the individuals in that society. Even though great importance is attached to intelligence there is no objective, agreed-upon referent either among the general public or contemporary psychologists (Christison, 2005).

The adventure of intelligence can be summarized to the following views:

2.2.1. The Traditional View

Intelligence is defined operationally; as being equal to the ability to answer certain test items correctly**.** This traditional psychometric view of intelligence is supported by the statistical techniques that compare the responses of different subjects who are at different ages on these intelligence tests. According to Hine (2002), this view of intelligence is a single, static construct, an innate attribute that does not change with age, training, or experience. This view describes intelligence as a quantitative, unique and united concept (Selçuk et all, 2004). In this understanding, two ways of learning primarily are put forward: verbal-linguistic and logical-mathematical intelligences.

The general public seems to have adopted a definition of intelligence that is synonymous with a score on the traditional intelligence test. Even if this can be a quite functional approach to compare and contrast individuals, groups, schools, districts in the educational system, it examines the developments of students in a very limited way. The main problem with the traditional IQ test is that even though the IQ test predicts school performance with considerable accuracy, it is only an indifferent predictor of performance and success in a profession after formal schooling (Demirel et all, 2006).

2.2.2. Developmental Views

Jean Piaget (1972) is the founder of the developmental approach to the study of intelligence. According to his theory of cognitive development, intelligence is the basic mechanism of ensuring equilibrium in the relations between the person and the environment. This is achieved through the actions of the developing person on the world. Cameron (2005) states that the child is seen as continually interacting with the world around her/him, solving problems that are presented by the environment. Thus, the development of intelligence is a continuous process of assimilations and accommodations.

Another person to be mentioned in developmental view of intelligence is Vygotsky. His view of development differs from that of Piaget in the importance he gives to language and to other people in the child's world. What underlies Vygotskyan theory is the central observation that intellectual development and learning take place in a social context.

"Although Vygotsky's theory is currently most noted for his central focus on the social, and modern developments are often labelled 'sociocultural theory,' he did not neglect the individual or individual cognitive development" (Cameron, 2005: 5).

2.2.3. Multiple Views of Intelligence

Current researches indicate that the only limit to one's intelligence is what the individual believes is possible and how his or her behaviours either foster or limit his or her intelligence. Researches also indicate that intelligence is not a static structure that can be measured and meaningfully quantified, but an open, dynamic system that can continue to develop throughout life (Hine, 2002). Researchers in the cognitive and neural sciences have proposed different views of intelligence and have offered support for a pluralistic view of cognition. According to Abdallah (2009: 21), "There have been two main theories which appeared in the 20th century and which were an attempt to interpret human differences and to design educational models around these differences." These are *Learning Styles Theory* which has its roots in the psychoanalytical community and *Multiple Intelligences Theory* which is the fruit of cognitive science (Silver et all, 1997: 22). All these conceptions are the beginning and the catalyst of the theory of pluralistic view of intelligence.

2.2.3.1. The Triarchic Theory of Intelligence

The Triarchic Theory of Intelligence was formulated by Robert J. Sternberg (Selçuk et all, 2004). The theory by itself was groundbreaking in that it was among the first to go against the psychometric approach to intelligence and take a more cognitive approach. Sternberg's definition of human intelligence is:

> (a) mental activity directed toward purposive adaptation to, selection and shaping of, real-world environments relevant to one's life, which means that intelligence is how well an individual deals with environmental changes throughout their life spans. Sternberg's theory comprises three parts: practical, analytical, creative- establishing a framework conducive to the delineation of cognitive styles. (Combs, 2004: 5)

Robert Sternberg (1985) points the role of meta-cognitive or monitoring strategies in the problem solving process in his triarchic intelligence model (Shepard et all, 1999, cited in Güler, 2004). In his book called *Triarchic Mind*, Sternberg states that the IQ tests include several problems. According to Selçuk et all (2004), Sternberg presents a new

point of view on explaining the intelligence and he defines the intelligence on the dimension of *process* as the capacity of individual for developing mental self-management.

2.3. Multiple Intelligence Theory

The theory of Multiple Intelligence (MI) was proposed by Howard Gardner in 1983 to more accurately define the concept of intelligence and to address the question whether methods which claim to measure intelligence (or aspects thereof) are truly scientific. Gardner's theory argues that intelligence, particularly as it is traditionally defined, does not sufficiently encompass the wide variety of abilities humans display. "In the light of the earlier views of intelligence and their limitations, Gardner supported the new paradigm of intelligence and determined that intelligence was a pluralistic phenomenon, rather than a static structure with a single type of intelligence" (Hine, 2002: 1).

Gardner (1983) fed his view of intelligence with information coming from a wide range of sources –including developmental data, psychometric findings, descriptions of special populations, such as idiot savants and prodigies– to describe each domain of cognition and symbolization. Through current findings in the brain and biological sciences, he became concerned with two issues: flexibility of human development and identity or nature of the intellectual capacities. Gardner's MI Theory, as a multiple approach to intelligence proposes "… a pluralistic view of mind, recognizing many different and discrete facets of cognition and acknowledging that people have different cognitive strengths and contrasting cognitive styles" (Gardner, 1993: 6). The biological evidence made him conclude in his book *Frames of Mind* that:

> There is considerable plasticity and flexibility in human growth, especially during the early months of life. Still, even that plasticity is modulated by strong genetic constraints which operate from the beginning and which guide development along some paths rather that along others. As for the issue of identity, evidence is accumulating that human beings are predisposed to carry out certain specific intellectual operations whose nature can be inferred from careful observation and experimentation. (Gardner, 1993: 32-33)

MI theory is framed in the light of biological origins (Christison, 2005). Gardner (1983), who studied damaged brains as a result of an injury or accident, observed the existence of different and autonomous intelligence capacities in the brain system, which would keep working when any part of brain was out of order. He found out that these various and independent intelligence capacities that resulted in many different ways of

knowing, understanding, and learning about the world became adequate for the person to survive and perform in certain areas with the others spared even if that person loses ability in one area.

Gardner (1993) challenged the common belief of intelligence in his theory of Multiple Intelligence; he sought to broaden the scope of human potential beyond the confines of the IQ score. "Socrates looked upon man as a rational and sophisticated animal, while Freud saw him as an irrational being" (Gardner, 1993: 43). But, he described man as an organism who possesses a basic set of intelligences. He stated in his book *Frames of Mind* (1993: 69) that "… intelligence is such a word; we use it so often that we have come to believe in its existence, as a genuine tangible, measurable entity rather than as a convenient way of labelling some phenomena that may (but may well not) exist." Gardner (1983) defined intelligence as:

- the ability to solve problems that one encounters in real life,
- the ability to generate new problems to solve,
- the ability to make something or offer a service that is valued within one's culture. (Hine, 2002: 1)

Intelligence is a way of knowing the world. It is better to refer to the human intellectual power as it is composed of many talents which are referred to as intelligences. All the people learn, remember, perform, and understand in different ways through a distinctive combination that Howard Gardner (1983) termed the *intelligence profile*. In his view, that profile is a blend of at least eight ways of knowing the world. In his cross-cultural exploration of the ways in which people are intelligent, he has identified eight distinct types of intelligences:

- Verbal-linguistic intelligence = word smart
- Logical-mathematical intelligence = number or logic smart
- Musical-rhythmic intelligence = music smart
- Visual-spatial intelligence = picture smart
- Bodily-kinesthetic intelligence = body, sports or hand smart
- Inter-personal intelligence = people smart
- Intra-personal intelligence = self-smart
- Naturalistic intelligence = nature smart

Originally Gardner listed seven intelligences in his book, Frames of Mind (1983) for the first time, but he added the eighth one *naturalistic intelligence* in 1999. He has also considered *existential intelligence* and *moral intelligence*. He argued that there was not, and there could never be, a single irrefutable and universally accepted list of human intelligences. He claimed that in the case of giving a decisive theory of the range of human intelligence there would never be a master of list of intelligences endorsed by all investigators (Christison, 2005). In other words, this list is open to addition of new intelligences because his model of intelligence is a tentative formulation. This list is not meant to be final or exhaustive.

According to Vural (2004), the principles of MI theory can be summarized as follows:

- People have very different intelligence types.
- Each person has a unique intelligence profile.
- Each intelligence follows a different developmental path in itself.
- All intelligences are dynamic.
- The intelligences in the human being can be identified and developed.
- Each person has the opportunity to know and develop his/her intelligence.
- The development of each intelligence should be judged in its own.
- Each intelligence has its own system for memory, attention, understanding, and problem solving.
- During the use of one intelligence others can also be active.
- Personal background, culture, heredity, beliefs all have influences on the development of intelligences.
- All intelligences are special and different in the realization of oneself.
- All the scientific theories about human development support Multiple Intelligence Theory.
- It is possible to come across more different intelligences than the ones known nowadays.
- There is no single activity in everyday life which addresses only one intelligence type.

2.3.1. History of Multiple Intelligence Theory

Tracing back Multiple Intelligence Theory in the history of education and instruction, one can find that it is not totally a new concept. It appeared in many forms a very long time ago when philosophers and educators began to call for modifying instruction in the light of the learners' personalities. They realized the importance of caring for the learners as individuals who should learn in a peaceful and nonthreatening way. A long time ago –in the early history of education philosophers called for making things easy for the students to learn. As philosophy guiding instruction, the theory is not a new concept (Dorathy, 2001). For example, Plato states his advice to educators saying: "Don't then train youths to learn by force and harshness, but direct them to it by what amuses their minds so that you may be better able to discover with accuracy the peculiar bent of genius of each" (cited in Campbell, 1994: 24).

This ancient call that was made by this great philosopher is considered the origin of the idea of Multiple Intelligence; Plato admitted that each student is smart and has a kind of genius that should be discovered. In order to discover it, teachers should teach their students in an amusing way that appeals to them. This is the core of the educational implications of MI Theory.

More recently, the pioneers of modern education called for basing education on more than verbal teaching. They wanted to develop new systems of education in which the student was to be in focus. Jean Jacque Rousseau, the philosopher of the 18th century declared that "the child must learn not through words, but through experience; not through books, but through the book of life" (Armstrong, 1994).

In the 20th century, innovators like Maria Montessori and John Dewy evolved systems of instruction based upon multiple-intelligences like techniques, including Montessori's tactile letters and other self-paced materials, and Dewey's vision of the classroom as a microcosm of society (Abdallah, 2009).

2.3.2. The Theoretical Basis for MI Theory

The MI Theory is supported by biological evidences. In order to arrive at the list of eight intelligences, Gardner (1983) consulted evidence from several different sources. He wanted to make a clear distinction between an intelligence with its biological origins and a talent or skill that is why he identified the following basic criteria that each intelligence must meet to be considered as 'intelligence' (Christison, 2005). Here then, in unordered fashion, are the eight *signs* of intelligence:

1. Potential isolation by brain damage: When people suffer brain damage as a result of an injury, one intelligence is often damaged. For example, if a person has damage to Broca's area (the left frontal lobe), linguistic intelligence (reading, writing, and speaking) may be greatly damaged but yet the individual may be able to do math, dance, and sing. Gardner is actually proposing the existence of eight autonomous brain systems. "His premise is that because a person can lose ability in one area while others are spared, there cannot simply be a single intelligence" (Christison, 2005: 4).

2. The existence of idiots, savants, prodigies, and other exceptional individuals: In some people, some intelligences operate at high levels. Some individuals can calculate multi-digit numbers in their heads or can play a musical composition after hearing it only once. Savants are people who demonstrate amazing abilities in one intelligence while other intelligences are very low (Christison, 2005). "The existence of these populations allows us to observe the human intelligence in relative –even splendid isolation–" (Gardner, 1993: 63).

3. A distinctive developmental history, along with a definable set of expert "End-State" performances: "An intelligence should have an identifiable developmental history, through which normal as well as gifted individuals pass in the course of ontogeny" (Gardner, 1993: 64). In other words, each intelligence has its own developmental history –its time of arising in childhood, its time of peaking during one's lifetime, and its time of gradual decline (Christison, 2005). Musical intelligence, for instance, peaks early, but linguistic intelligence can peak very late.

4. An evolutionary history and evolutionary plausibility: Each intelligence has roots in the evolutionary history of man. Gardner (1993: 65) states that "the roots of our current intelligences reach back millions of years in the history of the species." For example, archaeological evidence supports the presence of early musical instruments. The cave drawings of Lascaux are good examples of spatial intelligence (Christison, 2005).

5. Support from psychometric findings: Many existing standardized tests support the theory of Multiple Intelligence. According to Gardner (1993: 66), "outcomes of psychological experiments provide one source of information relevant to intelligences; the outcomes of standard tests (like IQ tests) provide another clue." For instance, the Weschsler Intelligence Scale for Children includes sub-tests that focus on several of the different intelligences (Christison, 2005).

6. Support from experimental psychological tasks: Gardner (1993) suggests that by looking at specific psychological studies, it can be seen that intelligences are working in isolation from one another (Christison, 2005). For example, certain individuals may have a superior memory for words but not for faces. Gardner (1993: 65): "To the extent that various specific computational mechanisms –or procedural systems– work together smoothly, experimental psychology can also help demonstrate the ways in which modular or domain-specific abilities may interact in the execution of complex tasks."

7. An identifiable core operation or set of operations: Each intelligence has a set of core operations. Christison (2005) exemplifies with musical intelligence, a person needs to be able to discriminate rhythmic structures and be sensitive to pitch. "Examples would include sensitivity to pitch relations as one core of musical intelligence, or the ability to imitate movement by others as one core of bodily intelligence" (Gardner, 1993: 64).

8. Susceptibility to encoding in a symbol system: "Intelligences are susceptible to being symbolized or encoded" (Christison, 2005: 5). Each intelligence has its own unique symbol or notational systems. For example, there are spoken and written languages, graphic languages, computer languages, musical notation systems, and ideographic languages. Gardner (1993) suggests that the ability to symbolize is one of the most important factors separating humans from most other species.

2.3.3. Activators and Deactivators of Intelligences

"Crystallizing and paralyzing experiences are two key processes in the development of intelligences" (Saban, 2005: 22). Crystallizing experiences, a concept developed by Howard Gardner and his colleagues are the "turning points" in the development of a person's talents and abilities (Armstrong, 1994). Often these events occur in early childhood, although they can occur anytime during the life span. For instance, when Albert Einstein was four years old, his father showed him a magnetic compass. The adult Einstein later said this compass filled him a desire to figure out the mysteries of the universe. Essentially, this experience activated his genius and started him on his journey toward discoveries that would make him one of the towering figures in the 20th century thought (Saban, 2005). "Crystallizing experiences, then, are the sparks that light intelligence and start its development toward maturity" (Vural, 2004: 230).

Conversely, the term *paralyzing experiences* is used to refer to experiences that *shut down* intelligences. "Perhaps a teacher humiliated you in front of your classmates when you showed your latest artistic creation during art period, and that event marked the end of a good part of your spatial development" (Saban, 2005: 23). Possibly a parent yelled at you to *stop making a racket* on the piano, you never went near a musical instrument after that. Or maybe you were punished for bringing your "messy" leaf collection into the house, without any acknowledgement of the spark of the naturalist that you might have displayed (Armstrong, 1994). Paralyzing experiences are often filled with the shame, guilt, fear, anger and other negative emotions that prevent our intelligences from growing thriving (Vural, 2004).

MI Theory offers a model of personal development that can help educators understand how their own profile of intelligences affects their teaching approaches in the classroom. Further, it opens the gate to a broad range of activities that can help us develop neglected intelligences, activate underdeveloped or paralyzed intelligences, and bring well-developed intelligences to even higher levels of proficiency (Armstrong, 1994).

A number of other environmental influences also promote or retard the development of intelligences (Saban, 2005). They include the following:

a) Access to Resources and Mentors: If your family was so poor that you couldn't afford a violin, piano, or other instrument, your musical intelligence might well have remained undeveloped (Armstrong, 1994).

b) Historical-Cultural Factors: If you were a student who demonstrated "proclivities" in mathematics at a time when math and science programs were highly funded, your logical-mathematical intelligence would likely have developed (Armstrong, 1994).

c) Geographic Factors: If you grew up on a farm, you might have well had more opportunity to develop certain aspects of the naturalist or bodily-kinesthetic intelligences then if you were raised on the 62nd floor of a Manhattan high-rise apartment (Armstrong, 1994).

d) Familial Factors: If you wanted to be an artist but your parents wanted you to be a lawyer, their influence might well have promoted to the development of your linguistic intelligence at the expense of your spatial intelligence (Armstrong, 1994).

e) Situational Factors: If you had to help take care of a large family while you were growing up, and you now have a large family yourself, you may have had little time to develop in the areas of promise-unless they were interpersonal in nature (Armstrong, 1994).

2.3.4. Key Points in MI Theory

The MI Theory seems to harbour a number of educational implications that are worth of consideration. Armstrong (1994) has synthesized the ideas into four key points of the model that educators find attractive about the theory:

1) Each person possesses all eight intelligences: MI Theory is not a "type theory" for determining the *one* intelligence that fits. It is a theory of cognitive functioning, and it proposes that each person has capacities in all eight intelligences, which function in a unique way in each person –for example, German poet-statesman-scientist-philosopher

Johann Wolfgang von Goethe (Armstrong, 1994). "Some people have high levels of functioning in all or most of the intelligences; a few people lack most of the rudimentary aspects of intelligence" (Christison, 2005: 7).

2) Most people can develop each intelligence to an adequate level of competency: "Traditional views of intelligence support the notion that we are born with a certain amount of intelligence and that intelligence will not change as a result life experiences" (Christison, 2005: 7). But, Gardner (1983) suggests that virtually everyone has the capacity to develop all eight intelligences to a reasonably high level of performance if given the appropriate encouragement, enrichment, and instruction (Armstrong, 1994). For example, an involved parent, exposure from infancy to classical music, and early instruction can make individuals of relatively modest biological musical endowment achieve a sophisticated level of proficiency in music.

3) Intelligences usually work together in complex ways: Gardner (1983) points out that each intelligence is actually a "fiction," in other words, no intelligence exists by itself in life; intelligences are interacting with each other (Armstrong, 1994). For example, "in order to cook a meal, one must read a recipe (linguistic), perhaps double it (logical/mathematical), and prepare a menu that satisfies others you may cook for (interpersonal) and yourself (intrapersonal)" (Christison, 2005: 7). "Multiple intelligences are combined uniquely in each learner as a profile, they are not seen separately" (Stefanakis, 2002: 4).

4) There are many ways to be intelligent within each category: There is no standard set of attributes that one must have to be considered intelligent in a specific area (Armstrong, 1994). For instance, "a person may not be able to read, yet be highly linguistic because he can tell a terrific story or has a large oral vocabulary" (Armstrong, 1994: 12). MI theory emphasizes the rich diversity of ways in which people show their gifts within intelligences as well as between intelligences (Christison, 2005). "Individuals have unique profiles based on all of the multiple intelligences; areas of strength can become ways to address areas of weakness" (Stefanakis, 2002: 4).

2.3.5. The Factors Affecting MI Development

The key point in MI Theory is that most people can develop all their intelligences to a relatively competent level of mastery. It is a model that values *nurture* as much as, and probably more than, *nature* is accounting for the development of intelligences (Armstrong, 1994). Whether intelligences develop depends on three main factors:

Biological endowment includes hereditary or genetic factors and or injuries to the brain before, during, and after birth (Armstrong, 1994).

Personal life history includes experiences with parents, teachers, peers, friends, and others who either awaken intelligences or keep them from developing (Armstrong, 1994).

Cultural and historical background includes the time and place in which you were born and the nature and state of cultural or historical developments in different domains (Armstrong, 1994).

2.4. The Multiple Intelligences

Gardner's view of intelligence suggests that all human beings possess at least eight different intelligences. Here is a demonstration of the eight intelligences according to five main dimensions: The characteristics and core capacities of each intelligence; the sample activities; the strategies for use in education and examples of the jobs or life fields in which each intelligence appears:

2.4.1. Verbal-Linguistic Intelligence

Verbal-linguistic intelligence involves sensitivity to spoken and written language, the ability to learn languages, and to use language to accomplish certain goals (Gardner, 1993). In other words, it is related to using words and language effectively, both written and spoken. This intelligence includes such skills as the abilities to remember information, to convince others to help you, and to talk about language itself (Armstrong, 1994). It involves all language skills; ‘speaking, writing, reading, listening and understanding.’ It

allows people to understand the meanings of the words and the syntactic structures of sentences and to apply 'metalinguistic' skills to reflect on the use of the language (Campbell, 1994). People having highly developed verbal-linguistic intelligence like reading, telling jokes, making up stories and poetry, playing word games, creative writing, formal speaking, learning new words, and debating. "Linguistic intelligence can be developed by creating a rich print environment; by providing things to look at, listen to, and write about; and by creating many opportunities for interaction among students and between the teacher and students" (Christison, 2005: 5).

Gardner (1993) does not consider linguistic intelligence as an auditory-oral form or intelligence as he claims that deaf people develop a gestural system for communication. By linguistic intelligence, he means the linguistic competence that can be manifested in different forms which enable human beings to communicate. He expresses his claim as follows:

> ...yet I have taken care not to term this capacity as an auditory-oral form of intelligence. There are two reasons. First of all, the facts that deaf individuals can acquire natural language –and can also devise or master gestural systems– serves as decisive proof that linguistic intelligence is not simply a form of auditory intelligence. Second, there is another form of intelligence, with a history of equal longevity, and autonomy of equal persuasiveness, which is also tied to the auditory oral tract. (Gardner, 1993: 98)

Yavuz and Aydınoğlu (2004) summarize the linguistic intelligence by considering its place in ELT as follows:

> Linguistic intelligence relates to the ability to use language effectively; it involves the selection of lexical items, the production of well-formed sentences and their arrangement in discourse for the expression of ideas and feelings. This ability also helps to acquire various languages easily. It is believed that linguistic intelligence is high in lawyers, editors, authors, poets, interpreters and orators. A learner with strong linguistic intelligence, who is good at memorizing language items, learns best by hearing, saying, reading and writing language expressions. (cited in Pekderin, 2006: 10)

Elaborating what is meant by the linguistic intelligence, Lazear (2000: 31–32) describes an inventory of the core capacities comprising the following:

1. The capacity to understand the order and meaning of words is the very complex process of grasping word meanings in a given context and knowing how to shift both meaning and context by rearranging words.

2. Explaining, teaching, and learning mean being able to give accurate verbal or written instructions to another and being able to follow such instructions given to you. This

capacity involves not thoroughly understanding what you are trying to explain or teach, but also understanding what another will hear and understand in your instructions.

3. Linguistically based humour deals with such things as plays on words (puns) and the plays with words (the story with the surprise ending, riddles, jokes that usually involve various 'twists' of the language or misunderstood words and phrases, limericks, double meanings, and so on). Also involved is understanding of the setting in which something is funny. The socio-cultural context of humour is important to understand; something that is funny in one situation may be an insult another.

4. It involves the development of great sensitivity to the subtle meanings of the language and the sounds and rhythms of speech, as well as an understanding of the linguistic context of the listener. It involves an understanding of emphasis in speaking to underscore the most important parts of your communication. It is the ability to use the spoken and written word to influence and motivate people.

5. The capacity of memory and recall is the ability to access verbally stored information from the brain's short-term and long-term memory, which involves a wide variety of techniques specific to an individual.

6. Possibly one of the most interesting and profound aspects of this intelligence is its capacity to engage 'metalinguistic' analysis. This unique ability is the use of language to investigate language.

There have been several attempts to apply the theory of MI to the foreign language teaching. Berman (1998), who is concerned with the use of MI in language teaching, proposes general activities for linguistic students in ELT classes. These activities can be applied at any level or can be capitalized on for the development of additional activities by the ELT teachers. They can also be adapted for use in class to meet the needs of the language learners. The sample activities proposed by Berman (1998: 4) are listed below:

- Group discussions
- Completing worksheets
- Giving presentations
- Listening to lectures
- Reading
- Word building games
- Storytelling

Armstrong (1994) gives emphasis to storytelling and states that it has been in cultures all over the world for thousands of years and seen as an entertainment during some special times in the classrooms. He also suggests such strategies as *brainstorming*, *tape recordings*, *journal writing*, and *publishing* which allow students to share and show their thoughts, feelings, comments, and ideas with writing or speaking activities.

For the development of this intelligence, diverse strategies and classroom activities have been suggested. It is worth of mentioning Campbell's ten linguistic strategies for use in education (1994: 41):

1. For five minutes, students do "quick writes" reacting to lesson information.

2. Students tell stories of how they apply ideas from any discipline to their lives outside of school.

3. To practice accuracy in communication, pairs of students listen to each other giving directions for an assignment.

4. To learn vocabulary for any topic, students create crossword puzzles.

5. Students debate diverse perspectives of any issue.

6. Student describe in writing the most meaningful content they have studied.

7. In small groups, students give impromptu, one minute presentations to each other on topics of the teacher's choice drawn from current lessons**.**

8. When reading classroom material, students review each page by creating keywords or phrases for the content of that page.

9. Student's create mini-talk show programs where they pose as junior experts on classroom topics.

10. Using a word that represents a major concept, such as interdependence, students write a phrase with each letter of the word to explain its meaning.

According to Saban (2005) the target career matches for children having a developed linguistic intelligence are:

- Writer / Poet
- Editor
- Public speaker
- Politician

- Preacher
- Teacher
- Journalist
- Broadcaster
- Actor / Actress
- Tutor

2.4.2. Logical-Mathematical Intelligence

This type of intelligence refers to the ability to use the numbers effectively and to handle chains of reasoning and to recognize patterns and order well (Gardner, 1993). This ability enables people to calculate measure, use logic, and solve math and science problems and affect the social sciences and humanities. It is seen in 'scientists, mathematicians, accountants, and detectives' in general (Campbell, 1994). 'Categorization, classification, inference, generalization, calculation, and hypothesis' testing are the process of logical-mathematical intelligence (Armstrong, 1994). Individuals who have highly developed logical-mathematical intelligence enjoy solving puzzles and other problems, working with numbers and mathematical formulas and operations, figuring things out, analyzing things, and working with abstract patterns and relationships. When people acquire the language, they also obtain abstract verbal symbols that stand for concepts developed as a result of one's experience with the real world, which serves to improve logical- mathematical intelligence (Lazear, 2000).

Logical-mathematical intelligence has been of singular importance in the history of West, and its importance shows no sign of diminishing. Gardner (1993: 167-168) does not agree with the idea that there is, after all, only one logic, and only those with developed logical-mathematical intelligences can exercise it and explains his opinions in this way:

> To my way of thinking, it is far more plausible to think of logical-mathematical skill as one among a set of intelligences –a skill powerfully equipped to handle certain kinds of problem, but one in no sense superior to, or in danger of overwhelming, the others. As we have seen in earlier chapters, there is indeed a logic to language and a logic to music; but these logics operate according to their own rules, and even the strongest dosage of mathematical logic into these areas will not change the ways in which their endogenous "logics" work.

Yavuz and Aydınoğlu (2004) summarize the logical-mathematical intelligence in ELT as follows:

> Logical-mathematical intelligence relates to the ability to use numbers and logic effectively. It helps to measure and calculate, to find solutions to problems, to understand 'cause and effect' relationships to make predictions. Mathematicians, scientists, doctors, programmers, engineers and detectives score higher in this intelligence. A learner with strong logical-mathematical intelligence is good at inductive and deductive reasoning. S/he learns best by classifying, working out relationships, and problem solving, etc. (cited in Pekderin, 2006: 13-14)

To clarify the characteristics of this intelligence, it is beneficial to have a look at the inventory of the core capacities that comprise the logical intelligence suggested by Lazear (2000: 27–28).

1. Abstract pattern recognition is the capacity to discern patterns in the environment around you.

2. The capacity of induction is the logical thought process that moves from the part to an understanding of the whole.

3. The capacity of deductive reasoning is the logical thought process that moves from the whole to an understanding of the parts.

4. Developing your capacities to discern relationships and connections will help you sort through, and make sense out of, the increasingly complex data that bombard you everyday.

5. The capacity of performing complex calculations is the area that most of us have traditionally and probably associated exclusively with logical-mathematical intelligence.

6. Scientific reasoning is a capacity that is in no way limited to pure scientific pursuits! The basic scientific method is the process of observing, judging, weighing up, deciding, and acting.

It is the concern of applied linguists to adapt the MI activities to the foreign language education. To exemplify this, the following activities for use in ELT classes are given by Berman (1998: 4):

- Logic puzzles
- Logical-sequential presentations
- Problem solving
- Guided discovery

Armstrong (1994) states that *calculations* and *quantifications*, *classifications* and *categorizations, Socratic questioning, heuristics, science thinking* strategies make students think and talk about subjects both inside and outside the math and science areas. Their perspectives and critical thinking skills are enriched with these activities.

Diverse strategies and classroom activities can be capitalized on for the development of this intelligence. Campbell lists ten logical-mathematical strategies as follows (1994: 43):

1. When given a problem, students plan strategies for ways to solve the problem before attempting its resolution.

2. Students are asked to discern patterns or relationships in lesson contents.

3. When offering solutions to any problem, students must provide logical rationale to support their answers.

4. Students create or identify categories for sorting diverse data.

5. To extend classroom learning, students conduct surveys and analyze data on topics that they or the teacher have selected.

6. Working in pairs, students make up story problems involving lesson content.

7. Students engage in discussions which include higher level thinking skills, such as comparing and contrasting, providing cause and effect answers, analyzing, hypothesizing, and synthesizing information.

8. As an independent or small group project, students employ the scientific method to answer a question they have about a classroom topic.

9. Students study units focused on math and science themes such as probability, symmetry, randomness, and chaos.

10. Students use a variety of organizers to enhance logical thinking, such as outline charts, Venn Diagrams, flow charts, and mind maps.

According to Saban (2005), the target career matches for children having a developed logical-mathematical intelligence are:

- Scientist
- Mathematician
- Lawyer
- Doctor

- Accountant
- Bookkeeper
- Computer programmer
- Researcher
- Financial planner
- Philosopher
- Logician

2.4.3. Musical-Rhythmic Intelligence

Musical-rhythmic intelligence is the skill in performance, composition, and appreciation of musical patterns (Gardner, 1993). It involves understanding and expressing oneself through music and rhythmic movements or dance, or composing, playing, or conducting music. Armstrong (1994) describes this intelligence as sensitivity to pitch, timbre, and rhythm of sounds, as well as responsiveness to the emotional implications to these elements. Those who possess a highly developed musical-rhythmic intelligence like singing, playing musical instruments, writing songs, listening to a wide variety of music. Composers, conductors, musicians, vocalists, and sensitive listeners exhibit musical intelligence (Campbell, 1994). It may be exercised by using tape recorders for listening, singing along, and learning new songs, engaging in rhythmic games and activities or playing various instruments (Christison, 2005). Gardner claims that from the neurological perspective, it is the first intelligence to develop. Gardner (1993: 124) also noted the universally acknowledged connection between musical performance and the feeling life of persons as in the following:

> Music can serve as a way of capturing feelings, knowledge about feelings, or knowledge about the forms of feeling, communicating them from the performer or the creator to the attentive listener. The neurology that permits or facilitates this association has by no means been worked out. Still, it is perhaps worth speculating that musical competence depends not upon cortical analytic mechanisms alone, but also upon those subcortical structures deemed central to feeling and motivation.

Yavuz and Aydınoğlu (2004) explain how to make use of the musical intelligence in ELT as follows:

> Musical intelligence relates to the ability to hear and produce pitch, rhythm, tone and melody. People with musical intelligence distinguish themselves as musicians, composers

> and singers. A learner with strong musical intelligence is good at picking up sounds, noticing stressed syllables and identifying diverse intonation patterns. S/he can learn a language more easily in an environment where there is music and where songs are utilized. (cited in Pekderin, 2006: 21)

Lazear (2000: 34-35) explains the characteristics of the musical intelligence as follows:

1. The evocative power of music and rhythm is very profound. Certain kinds of music and rhythm can calm us, energize us, and make us feel anxious, and so on. Developing an appreciation for the structure of music mail rhythm and its affective qualities is one of the ways to strengthen your musical-rhythmic intelligence.

2. We have certain schemas or frames for hearing music in our minds. We make conscious and unconscious connections with various kinds of music and rhythm.

3. Sensitivity to sounds deals with "turning up" our hearing capacities and learning to process the wide variety of auditory stimuli that have an impact on us every day of our lives.

4. Recognition, creation, and reproduction of melody, rhythm, and sound comprise the capacity to repeat accurately or mimic a tonal or rhythmic pattern produced by another person.

5. The capacity for utilizing various characteristic qualities of tones and rhythm as a way to enhance and deepen communication is a powerful aspect of this intelligence.

Berman (1998: 4) lists the following examples of the MI activities designed to develop the musical intelligence for use in an ELT class:

- Songs
- Jazz chants
- Background music
- Illustrations with sounds
- Listening
- Lyrics
- Mood music
- Raps
- Percussion

Armstrong (1994) gives further details about the activities for ELT teachers to incorporate them into language classes easily. These activities are *rhythms*, *songs*, *raps*, and *chants*; *discographies*, *supermemory music*, *musical concepts* and *mood music*.

Campbell (1994: 48) suggests the following ten strategies that can be made use of for the development of musical intelligence.

1. Teachers play background music to relax students or to focus their attention at various times during the day.

2. To review information, students compose curriculum songs: replacing the words to well-known songs with content information.

3. Students make their own rhythm instruments to use with curriculum songs or recitations of arithmetic facts, spelling words, or sets of roles or facts.

4. Students select a song and explain how its lyrics relate to a lesson's content.

5. For students with access to musical software, rhythmic accompaniment can be added to multimedia reports and presentations.

6. Students select appropriate background music for book reports or other oral presentations.

7. To demonstrate patterns in mathematics, nature, and the visual arts, students use musical selections that are patterned and repetitive.

8. To become knowledgeable in any subject area, students listen to and analyze pre-recorded songs about the content areas.

9. Students analyze music to understand concepts such as relationships of parts to wholes, fractions, repeating patterns, timing, and harmony.

10. Students use musical vocabulary as metaphors such as crescendo for the climax of a short story; two-pan harmony for interpersonal relations; or cadence for physical exercise.

Saban (2005) lists the target career matches for children having a developed musical-rhythmic intelligence:

- Musician
- Singer
- Conductor

- Composer
- Songwriter
- Music teacher
- Music director
- Choir director
- Record producer
- Instrumentalist
- Vocalist

2.4.4. Bodily-Kinesthetic Intelligence

Bodily-kinesthetic intelligence entails the potential of using one's whole body or parts of the body (like the hand or the mouth) to solve problems or fashion products (Gardner, 1993). It is the ability that makes people produce and transform things by means of their hands. This intelligence includes specific physical skills; coordination, balance, dexterity, strength, flexibility, and speed (Armstrong, 1994). People with the bodily-kinesthetic intelligence use physical skills to express themselves; are good at dancing, running, swimming, working with their hands, using body language and other physical gestures, and demonstrating how to do something. It is generally used by dancers, athletes, surgeons, jugglers, and craftspeople (Campbell, 1994). "It can be developed by playing with blocks and other construction materials, dancing, playing various active sports and games, participating in plays or make-believe, and using various kinds of manipulatives to solve problems or to learn (Christison, 2005: 5).

While considering a variety ways of uses to which individuals put their bodily intelligence, the focus has been on the body as an object. Described in this vein, Gardner (1993: 235) argues his view as in the following:

> … bodily intelligence completes a trio of object-related intelligences: logical-mathematical intelligence, which grows out of the patterning of objects into numerical arrays; spatial intelligence, which focuses on the individual's ability to transform objects within his environment and to make his way amidst a world of objects in space; and, bodily intelligence, which, focusing inward, is limited to the exercise of one's own body and, facing outward, entails physical actions on the objects in the world.

Yavuz and Aydınoğlu (2004) summarize this intelligence and its implications for ELT as follows:

> Bodily-kinesthetic intelligence relates to the ability to use the body effectively. People with the dominance of this intelligence are also characterized by their dexterous use of their hands and fingers. Craftspeople, sportspeople, surgeons and dancers are said to have this type of intelligence. A learner with strong bodily-kinesthetic intelligence, who is good at physical activities, learners best if s/he is provided with opportunities for physical challenges. The Total Physical Response techniques can be catered for this type of intelligence. (cited in Pekderin, 2006: 16)

Lazear (2000: 23-24) describes an inventory of the core capacities that comprise the bodily-kinesthetic intelligence as follows:

1. Remember when you were a kid and you would practice rubbing your stomach and patting your head at the same time, then switch to rubbing your head and patting your stomach. This skill is sometimes called multitracking and is the capacity to learn to control voluntary body movements.

2. Some of our body movements were at one time carefully and methodically learned and practiced but are today second nature to us, such as walking, riding a bike, driving a car, and so on. Learning to control these pre-programmed body movements is one of the capacities of strengthening your bodily-kinesthetic intelligence.

3. Expanding awareness through the body is the capacity of learning to listen to and trust the body. In many ways the body is like a complex radar station that gives us invaluable feedback about what is happening in the external world; for example.

4. This capacity is establishing a strong mind-body connection.

5. Such people as Marcel Marsceau and Red Skelton perfected this capacity, called mimetic abilities, which includes capacity to mime, to role-play, and to act dramatically.

6. The final bodily-kinesthetic capacity is improved body functioning. With bodily-kinesthetic intelligence, almost more than any of the other intelligences, practice makes perfect (or at least improvement).

Berman (1998) points out that the activities are the ideal way of getting students out of their seats. When the students move around the classroom, they provide effective ways of practicing and using the target language. The repetition of movements is also thought to be useful, since kinesthetic students learn through movements. He identifies four activities which are designed for those students who learn through kinesthetic ways. It is easy to apply these kinesthetic activities in ELT classes. Berman (1998: 4) lists:

- Circle dancing
- Brain gym
- Relaxation exercises
- Craftwork

Armstrong (1994) describes some strategies such as *body answers*, *the teacher theatre*, *kinesthetic concepts*, *hands-on thinking*, and *body maps* carried out for those students who have bodily- kinesthetic intelligence. These strategies can be varied in many activities which make students respond to instruction by using their bodies, and bring out the performer in students and translate their knowledge from linguistic or logical systems into pure body language.

Campbell (1994: 44) lists the strategies for bodily-kinesthetic intelligence as follows:

1. Students role play any process such as photosynthesis, making a bill into a law, solving a quadratic equation, or the earths orbit around the sun.

2. Working together, with small blocks, toothpicks, legos, or popsicle sticks, students build models of molecular chains, famous bridges, or towns in history or literature.

3. Teachers can provide quick exercise breaks with simple calisthenics, Tai Chi or yoga stretches, an active game of Simon Says, or even a jog around the playground.

4. In small groups, students can create large floor games that cover important concepts being studied.

5. Student can enact simulations, such as groups representing countries with different resources to trade, or pioneers addressing the challenges of the frontier.

6. Teachers can create "scavenger hunts" as one way for students to gather information on particular topics.

7. Regardless of the content, teachers may provide manipulatives for students to use to solve math problems, create patterns for art work, build replicas of cells or systems, or make storyboards for language and writing experiences.

8. To extend classroom learning into the community, students go on field trips.

9. Students learn physical skills like juggling, dancing, balancing, rope jumping, climbing, hula-hooping, bowling, throwing, catching, or working with tools of various kinds.

10. Students pantomime what they have learned from a day's lesson.

According to Saban (2005), the target career matches for children having a developed bodily-kinesthetic intelligence are:

- Athlete
- Farmer
- Carpenter
- Builder
- Park ranger
- Fire-fighter
- Physical therapist
- Paramedic
- Dancer
- Mechanic
- Actor/Actress
- Performer

2.4.5. Visual-Spatial Intelligence

Visual-spatial intelligence involves visual perception of the environment and manipulating mental images, and the orientation of the body in space. It is the 'sensitivity to colour, line, shape, form,' and the 'relations that exist between these elements' (Gardner, 1993). It entails creating visual-spatial representations of the world and transfer those representations either mentally, or concretely to create. It features the potential to recognize and manipulate the patterns of wide space as well as the patterns of more confined areas (Armstrong, 1994). Visual- spatial intelligence can be developed by providing many opportunities for visual mapping activities and encouraging students to

vary the arrangements of materials in space, such as by creating charts and bulletin boards. Painters, architects, sculptures, sailors, and pilots mostly use this intelligence in their lives (Campbell, 1994). Such people think in pictures, see and create images or designs with shape, colour, and size. The visual-spatial intelligence is the first intelligence which the brain uses, since the brain naturally thinks in images and pictures before attaching the words (Lazear, 2000).

On the basis of this issue, and in light of many factor analyses of intelligence test results, spatial intelligence can be considered as a discrete form of intellect or a collection of related skills. In the view of Gardner (1993: 177):

> … spatial intelligence is the "other intelligence –the one that should be arrayed against, and be considered equal in importance to, "linguistic intelligence." Dualists speak of two systems of representation –a verbal code and an imagistic code: localizers place the linguistic code in the left hemisphere, the spatial code in the right hemisphere.

Yavuz and Aydınoğlu (2004) summarize the visual-spatial intelligence in ELT as follows:

> Visual-spatial intelligence relates to the ability to perceive and create forms, shapes, designs and colours. This heightens the ability to form mental images. Painters, sculptures, architects, decorators, sailors and pilots possess high visual-spatial intelligence. A learner with strong spatial intelligence learns best by visualizing concepts, using the mind's eye, and working with pictures and diagrams. (cited in Pekderin, 2006: 18)

To exemplify this ability, Lazear (2000: 21-22) describes an inventory of the core capacities that comprise the visual-spatial intelligence as follows:

1. Remember when you were a kid and you would lie on you back and look up at the clouds and find animals, faces, objects, and different scenes. This capacity is called active imagination.

2. Forming mental images are the capacity to picture things inside your head. You use this capacity when you are trying to remember where you parked your car, where you last used your glasses when you can't find them, or when you are reading a novel and you create mental images of what is on the written page.

3. How good are you at following directions for getting from one place to another? Some people are never lost! Others are never found! The capacity for finding your way in space is one of the spatial skills of visual-spatial intelligence.

4. Graphic representation is the capacity to create visual illustrations to enhance communication of an idea, concept, emotion, process, or intuition. This capacity includes such things as photography, sculpture, drawing, painting, videos, and collages.

5. Another spatial capacity is recognizing relationships between objects in space. How good are you at parallel parking a car? Can you "sink" a basketball into the hoop more times than not? When playing chess or checkers, can you see the whole board and plan your next move in light of this?

6. When you are looking at an 'optical illusion' such as the classic two faces that are also a vase, or the old woman who is also a beautiful socialite, can you mentally make these images shift back and forth? This capacity is called mental manipulation of images.

7. The capacity of accurate perception from various angles is the very complex, often taken-for-granted, ability to recognize similarities and differences between objects from very different vantage points.

Berman (1998: 4) compiles five activities for use in ELT classes for those students who use their spatial intelligence.

- Charts
- Mind maps
- Visualizations
- Diagrams
- Videos

Armstrong (1994) lists five strategies designed to activate the spatial intelligence. *Visualization, colour cues, picture metaphors, idea sketching* and *graphic symbols* require students to create graphic symbols that represent the concepts to be learned and to transform their knowledge or thoughts in images and pictures. These kinds of strategies enhance students' visual thinking.

The following are the strategies listed by Campbell (1994: 46) that can be exploited in order to enhance visual-spatial intelligence:

1. Students might experiment with imagery to mentally rehearse performing well on a test, speaking in front of the class, or successfully resolving a conflict.

2. Students create a pictorial representation of what they have learned from a unit of study such as a chart, drawing, or mind map.

3. Working independently or with a partner, students create a visual collage to display facts, concepts, and questions they have about a recent unit of study.

4. With access to computer graphics and page-layout programs, students illustrate their lessons.

5. Students diagram the structures of interconnecting systems such as body systems, economic systems, political systems, school systems, or food chains.

6. To communicate their understanding of a topic, students create flow charts, bar graphs, or pie charts.

7. Working in small groups, students create videotape or photograph projects.

8. To work with three-dimensional activities, students design costumes or sets for literature or social studies, tools or experiments for science, and manipulative or new classroom or building designs for math.

9. Students create mobiles or design bulletin boards.

10. To demonstrate their understanding of a topic, students use colour, shape, or rebus-type images in their papers.

Saban (2005) points the target career matches for children having a developed visual-spatial intelligence are:

- Artist
- Architect
- Graphic designer
- Engineer
- Fashion designer
- Interior decorator
- Photographer
- Sculpture
- Navigator
- Pilot
- Sailor
- Painter

2.4.6. Inter-Personal (Social) Intelligence

Inter-personal (social) intelligence denotes a person's capacity to understand other people (i.e. their intentions, motivations, desires, hidden goals, etc.) and consequently to work effectively with others (Gardner, 1993). It is the ability to detect and respond appropriately to the moods, motivations and desires of others. It is the 'capacity for discriminating among many different kinds of inter-personal cues, and the ability to respond effectively those cues in some pragmatic way' (Armstrong, 1994). There is nothing wrong with competition or individualism if they are thought in a wise and reasonable situation; however, the inter-personal capacities are completely different from them (Lazear, 2000). Students with highly inter-personal intelligence enjoy working with others and enter into their inner world and understand their viewpoints. Teachers, social workers, actors, and politicians mostly use this intelligence (Campbell, 1994). An EFL teacher can develop this intelligence of the students through cooperative games, group projects and discussions, multicultural books and materials, and dramatic activities or role-playing (Christison, 2005). Gardner (1993: 239) examines the core capacity of inter-personal intelligence in two levels:

> … examined in its most elementary form, the inter-personal intelligence entails the capacity of the young child to discriminate among the individuals around him and to detect their various moods. In an advanced form, inter-personal knowledge permits a skilled adult to read the intentions and desires –even when these have been hidden– of many other individuals and, potentially, to act upon this knowledge –for example, by influencing a group of disparate individuals to behave along desired line.

Yavuz and Aydınoğlu (2004) summarize the inter-personal intelligence in ELT as follows:

> Inter-personal intelligence relates to the ability to interact and cooperate with other people effectively. It sharpens the sense to understand how the others feel, what they intend to do. Leaders, politicians, teachers, and actors exhibit a high level of inter-personal intelligence. A learner with strong inter-personal intelligence learns best in an environment where pair work and group work activities are capitalized on and where language is used for real exchanges. (cited in Pekderin, 2006: 23)

Lazear (2000: 36-37) describes the characteristics of inter-personal intelligence as follows:

1. The capacity of effective verbal and nonverbal communication with others goes way beyond the simple meanings of the words we use. Think about times when someone's

body language or the tone and rhythm of voice were out of synch with what they were saying.

2. The capacity to accurately read others' moods, temperaments, motivations, and feelings is a key to effective and meaningful interpersonal encounters.

3. The capacity of working cooperatively in a group deals with learning how to do your part and allowing others to do theirs for the sake of the group goal.

4. In everyday communication, we often miss what another is saying because our own internal mind chatter gets in the way. Listening to another's perspective is the capacity to listen fully and deeply to another, and to shut off temporarily the inner mental commentary, planning our comments or rebuttal, or thinking about a witty response to what is being said.

5. Passing into the life of another is the capacity to empathize with another's perspective, feelings, values, and beliefs, especially when they are somewhat foreign to our own. This capacity does not necessarily mean agreeing with the other's perspective. But it does mean understanding and appreciating the other perspective.

6. Recall times when you were part of a group effort and the final product was greater than the mere sum of the individual contributions of the various members of the group. This is called synergy (from the Greek syn and ergos), which means a "spontaneous working together." The capacity to create and maintain synergy in a group is one of the capacities of inter-personal intelligence.

Berman (1998: 4) gives four sample activities based on the inter-personal intelligence to be used in an ELT class:

- Group work / Projects
- Brainstorming
- Pair work
- Peer teaching
- Cooperative group games
- Dramatic activities / Role-playing
- Group discussions

Berman (1998) claims that pair and group work provide opportunities for communication and co-operation. On the other hand, teachers should not force students to

work in pairs or groups because their aptitudes and opinions are important in these kinds of activities.

Armstrong (1994) proposes five strategies that awaken students' inter-personal intelligence such as *peer sharing*, *people sculptures*, *cooperative groups*, *board games*, and *simulations* that serve to develop a good rapport between students and provide collaborate learning.

Campbell (1994: 50) suggests ten strategies for the development of inter-personal intelligence as follows:

1. Working in cooperative groups, students teach each other parts of a lesson. Each student is responsible for teaching only one part, while everyone learns the whole lesson collaboratively.

2. To develop the ability to resolve disputes and negotiate conflicts, students practice conflict resolution techniques with either simulated or actual problems.

3. Students practice critiquing one another's work to learn how to give and receive feedback.

4. To build collaborative skills and to share each others areas of expertise, students work on group projects together, each assuming a role according to his or her- strengths.

5. Students engage in school or community service activities to develop values such as empathy, respect, altruism, and sharing.

6. To understand others and appreciate differences, students study diverse cultures, including customs, beliefs and values.

7. Use the "Think-Pair-Share" technique to engage students in reflecting upon a class topic and then discussing their thoughts with a partner.

8. To understand differing points of view, students assume various positions and debate a complex issue.

9. Students interview persons with special talents to learn about their areas of specialty as well as how to interview others effectively.

10. To learn from the expertise of others, students work as apprentices with community experts.

Saban (2005) lists the target career matches for children having a developed inter-personal intelligence are:

- Diplomat
- (Religious / Political) Leader
- Manager
- Politician
- Clergy
- Social worker
- Receptionist
- Sales representative
- Counsellor
- Child care
- Coach
- Teacher
- Psychologist

2.4.7. Intra-Personal (Introspective) Intelligence

Intra-personal (introspective) intelligence is the capacity to understand oneself (i.e. one's own desires, fears, and capacities) in regulating one's own life (Gardner, 1993). It involves understanding one's inner world of emotions and thoughts, and growing in the ability to control them and work with them consciously. It consists of 'having an accurate picture of oneself' and 'self-discipline, self- understanding and self-esteem' (Armstrong, 1994). Being intra-personally intelligent helps people understand who they are in the world. Psychologists, spiritual leaders, philosophers, and playwrights use this intelligence (Campbell, 1994). Intra-personal intelligence of EFL learners can be developed by letting them express their own preferences and help them understand their own styles of learning through independent projects, illuminating books, journals, imaginative activities and games. It is the 'least valued' and 'least understood' of the intelligences, because societies mostly support the verbal-linguistic and logical-mathematical intelligences (Lazear, 2000). The core capacity of intra-personal intelligence is examined in two forms:

> … in its most primitive form, the intra-personal intelligence amounts to little more than the capacity to distinguish a feeling of pleasure from one of pain and, on the basis of such discrimination, to become more involved in or to withdraw from a situation. At its most advanced level, intra-personal knowledge allows one to detect and to symbolize complex and highly differentiated sets of feelings. (Gardner, 1993: 239)

Yavuz and Aydınoğlu (2004) summarize the intra-personal intelligence in ELT as follows:

> Intra-personal intelligence relates to the ability to know and control oneself and his/her talents and limits. Philosophers, psychologists, and playwrights are said to utilize this intelligence. Learners with strong intra-personal intelligence learn best if they work on their own. They are good at developing their learning styles and doing individualized projects. (cited in Pekderin, 2006: 25)

Lazear (2000: 38-39) gives an inventory of the core capacities that comprise intra-personal intelligence:

1. The capacity to concentrate is being able to bring the mind to a single point of focus and hold it there. Think about times when you really got caught up in a novel and were able to block out everything else going on around you.

2. Mindfulness is the exact opposite of mindlessness, but it is another capacity that falls under intra-personal intelligence. So much of our lives are spent on automatic pilot, but this capacity is about training yourself to stop, pay attention, and appreciate the minute details of even the most mundane experiences.

3. Metacognition is the activity of thinking about thinking. Do you have inner conversations with yourself? Think about when you have a problem to solve: do you sometimes talk yourself through it? When you go to the store, do you talk to yourself about things you need to remember to pick up? Do you ever analyze your thinking with the hopes of improving it? Good news! This is not early senility setting in. It is metacognition!

4. Think about the mood swings of a normal day. Do you know what things tend to bring you a high and what brings you low? Developing your capacities of awareness and expression of various feelings helps you "get a grip" on this dynamic and take charge of your feelings rather than let them run you.

5. Transpersonal sense of the self is the capacity to identify and appreciate the self that goes beyond the self as an isolated, solitary entity unto itself. Yes, we are all individuals, but that is not the whole story! We are also part of other people and they are part of us, and we are part of the universe and it is part of us!

6. There are levels within levels within levels to our thinking/reasoning processes. Higher-order thinking and reasoning comprise the capacity to move your thinking consciously from "the facts ma'am, nothing but the facts" to an awareness of your thinking process itself to the higher-order ability to integrate learning and use it in everyday life.

Berman (1998: 4) offers the following intra-personal activities for use in an ELT class:

- Independent project work
- Learner diaries / Journal writing
- Reflective learning activities
- Self-study
- Personal goal settings
- Imaginative activities

Armstrong (1994) offers five strategies for intrapersonal intelligence. *One-minute reflection period*, *personal connections*, *choice time*, *feeling-toned moment* and *goal settings* can help students recognize their intra-personal intelligence. According to him, teachers need to build in frequent opportunities during the day for the students to experience themselves as autonomous beings with unique life histories and a deep sense of individuality.

Campbell (1994: 51) suggests ten strategies for intra-personal intelligence to be used by students:

1. At the beginning of a course, school year or semester, students establish personal short- and long-term learning goals.

2. Students maintain portfolios to evaluate their own learning.

3. Using schedules, timelines, and planning strategies, students choose and direct some of their own learning activities to gain autonomous learning ski1ls.

4. Students keep daily learning logs where they express their emotional reactions to lessons as well as share any insights they have into the content.

5. Students explain why certain units of study are valuable for them both inside and outside of school.

6. Students select a particular value such as kindness or determination and incorporate that value into their behaviour for a week at a time.

7. To enhance self-esteem, students practice giving and receiving compliments from one another.

8. At least once per quarter, students pursue an independent Project of their choice spanning 2–3 weeks.

9. Students write autobiographies to explain how class content has enhanced their understanding of themselves.

10. Students use teacher feedback and self-assessment inventories to reflect on their individual learning, thinking, and problem-solving strategies.

Saban (2005) suggests the target career matches for children having a developed intra-personal intelligence are:

- Psychologist
- Philosopher
- Writer
- Theologian
- Poet
- Efficiency expert
- Religious leader
- Political leader
- Teacher

2.4.8. Naturalist (Naturalistic) Intelligence

The Naturalist intelligence is the ability to discriminate among numerous species of flora and fauna, enjoyment of the natural world and ecological sensitivity (Arnold and Fonseca, 2004). It involves understanding the natural world of plants and animals, noticing their characteristics, and categorizing them. Individuals having naturalistic intelligence are aware of their surroundings and changes in their environment, and they like field trips, expeditionary activities, hiking, camping, and other activities relating to the natural

environment (Hine, 2002). An EFL teacher can help students develop their naturalist intelligence by focusing their attention on the world outside the classroom. When students work to identify parts of real plants or participate in field trips to learn about different trees or animals, they are developing their naturalist intelligence. Activities such as brainstorming on how to contaminate less, or describing the process of recycling paper or tasks involving direct field observation and classification of the vegetal and animal world relate to the naturalist intelligence (Christison, 2005).

The naturalist intelligence deals with sensing patterns in, and making connections to, elements in nature. People possessing nature smarts are keenly aware of their surroundings and changes in their environment, even if these changes are at minute or subtle levels. Children possessing this type of intelligence may have a strong affinity to the outside world or to animals, and this interest often begins at an early age. They may enjoy subjects, shows and stories that deal with animals and natural phenomena or they may show unusual interest in subjects like biology, zoology, botany, geology, meteorology, palaeontology, or astronomy (Saban, 2005). Their heightened senses may help them notice similarities, differences and changes in their surroundings more rapidly than others. Frequently, they may notice things that others might not be aware of. As children these people often like to collect, classify, or read about things from nature –rocks, fossils, butterflies, feathers, shells, and the like (Demirel et all, 2006).

According to Lazear (2000: 24-26), such core operations cover naturalist intelligence:

- Integration with the nature,
- Sensitivity towards to natural flora,
- Interaction with the living things and protecting them,
- Awareness about the responses of the nature,
- Knowing and categorizing plants and animals in the nature,
- Growing plants

Children having naturalistic intelligence may exhibit some characteristics. According to Selçuk et all (2004: 24-26), they:

- Have keen senses and observes and remembers things from his/her environment and surroundings.
- Like animals and likes to know and remember things about them.
- Have keen sensory skills –sight, sound, smell, taste and touch.
- Readily use heightened sensory skills to notice and categorize things from the natural world.
- Like to be outside, or like outside activities like gardening, nature walks or field trips geared toward observing nature or natural phenomena.
- Notice patterns easily from their surroundings –likes, differences, similarities, anomalies.
- Are interested and care about animals or plants.
- Notice things in the environment that others often miss.
- Create, keep or have collections, scrapbooks, logs, or journals about natural objects –these may include written observations, drawings, pictures and photographs or specimens.

- Are very interested, from an early age, in television shows, videos, books, or objects from or about nature, science or animals.
- Show heightened awareness and concern of the environment and/or for endangered species.
- Easily learn characteristics, names, categorizations and data about objects or species found in the natural world.

Naturalists learn best when the subject involves collecting and analyzing, or is closely related to something prominent in nature; they also do not enjoy learning unfamiliar or seemingly useless subjects with little or no connections to nature. It is advised that naturalistic learners would learn more through being outside or in a kinesthetic way. Semantic maps relating to nature can be created to develop learner's lexical knowledge. Tasks that develop sensitivity towards the natural world can be incorporated; for example, learners can describe a scene in nature that they are familiar with or that they imagine (Arnold and Fonseca, 2004).

According to Oral (2004: 11), the naturalistic intelligence may be exercised through:

-Exploring Nature
-Making Collections of Objects
-Studying Objects
-Grouping Objects

According to Mbuva (2003), the target career matches for children having a developed naturalist intelligence are:

- Conservationist
- Gardener
- Farmer
- Animal Trainer
- Park Ranger
- Scientist
- Botanist
- Zookeeper
- Geologist
- Marine Biologist

The following tables (Tables 1, 2 and 3) summarize the characteristics of MI Theory which have been mentioned so far.

Table 1: A Summary of MI Theory

Intelligence	Core Components	Symbol Systems	High-End States
Verbal-linguistic	Sensitivity to the sounds, structure, meanings, functions of words and language	Phonetic languages (e.g. English)	Writer, orator (e.g. Virginia Woolf, Martin Luther King)
Logical-mathematical	Sensitivity to, and capacity to discern, logical or numerical patterns; ability to handle long chains of reasoning	Computer languages (e.g. basic)	Scientist, mathematician (e.g. Marie Curie, Blaise Pascal)
Visual-spatial	Capacity to perceive the visual-spatial world accurately and to perform transformations on one's initial perceptions	Ideographic languages (e.g. Chinese)	Artist, architect (e.g. Frida Kahlo, I.M. Pei)
Bodily-kinesthetic	Ability to control one's body movements and to handle objects skilfully	Sign languages, braille	Athlete-dancer, sculptor (e.g. Martha Graham)
Musical-rhythmic	Ability to produce and appreciate rhythm, pitch, and timbre; appreciation of the forms of musical expressiveness	Musical notations systems, Morse code	Composer, performer (e.g. Stevie Wonder Midori)
Inter-personal	Capacity to discern and respond appropriately to the moods, temperaments, motivations, and desires of other people	Social cues (e.g. Gesture and facial expressions)	Counsellor, political leader (e.g. Carl Rogers, Nelson Mandela)
Intra-personal	Access to one's own *feeling* life and the ability to discriminate among one's emotions; knowledge of one's own strength/weakness	Symbols of the self (e.g. in dreams and artwork)	Psychotherapist, religious leader (e.g. Sigmund Freud, the Buddha)
Naturalist	Expertise in distinguishing among members of a species; recognising the existence of other neighbouring species; and charting out the relations, formally or informally, among several species	Species classification systems (e.g. Linnaeus); habitat maps	Naturalist, biologist, animal activist (e.g. Charles Darwin, E.O. Wilson, Jane Goodall)

Source: Armstrong, 1994: 4

Table 2: MI Theory Summary Sheet

Intelligence	Neurological Systems (Primary Areas)	Developmental Factors	Ways that Cultures Value
Verbal-linguistic	Left temporal and frontal lobes (e.g. Broca's / Wernicke's areas)	*Explodes* in early childhood: remains robust until old age	Oral histories, storytelling, literature
Logical-mathematical	Left frontal and right parietal lobes	Peaks in adolescents and early adulthood: higher math insights decline after age 40	Scientific discoveries, mathematical theories, counting and classification systems
Visual-spatial	Posterior regions of right hemisphere	Topological thinking in early childhood gives way to Euclidean paradigm around age 9–10; artistic eyes stays robust into old age	Artistic works, navigational systems, architectural designs, inventions
Bodily-kinesthetic	Cerebellum, basal ganglia, motor cortex	Varies depending upon component (strength, flexibility) or domain (gymnastics, baseball)	Crafts, athletic performance, dramatic works, dance forms, sculpture
Musical-rhythmic	Right temporal lobe	Earliest intelligence to develop; prodigies often go through developmental crisis.	Musical compositions, performances, recordings
Inter-personal	Frontal lobes, temporal lobe (especially right hemisphere), limbic system	Attachment / bonding during first 3 years critical	Political documents, social institutions
Intra-personal	Frontal lobes, parietal lobes, limbic system	Formation of boundary between *self* and *other* during first 3 years critical	Religious systems, psychological theories, rights of passage
Naturalist	Areas of left parietal lobe important for discriminating *living* from *nonliving* things	Shows up dramatically in some young children; schooling or experience increases formal or informal experiences	Folk taxonomies, herbal lore, hunting rituals, animal spirit mythologies

Source: Armstrong, 1994: 5

Table 3: The Summary of Eight Intelligences

Intelligence Area	Strengths	Preferences	Learns best through:	Needs:
Verbal / Linguistic Intelligence	Writing, reading, memorizing dates, thinking in words, telling stories	Write, read, tell stories, talk, memorize, solving puzzles	Hearing and seeing words, speaking, reading, writing, discussing, debate	Books, tapes, paper diaries, writing tools, dialogue, discussion, debated, stories, etc.
Mathematical / Logical Intelligence	Math, logic, problem solving, reasoning, patterns	Question, work with numbers, experiment, solve problems	Working with the abstract and relationships, patterns, classifying, categorizing	Things to think about and explore, science materials, manipulative, trips to the planetarium and science museum, etc.
Visual / Spatial Intelligence	Maps, reading charts, drawing, mazes, puzzles, imagining things, visualization	Draw, build, design, create, daydream, look at pictures	Working with pictures, colours; visualizing, using the mind's eye, drawing	Video, movies, art slides, mazes, puzzles imagination games, illustrated book, trips to art museums, etc.
Musical / Rhythmic Intelligence	Picking up sounds, remembering melodies, rhythms	Sing, play an instrument, hum, listen to music	Rhythm, singing, melody, listening to music and melodies	Sing-along time, trips to concerts, music playing outside, musical instruments
Inter-personal / Social Intelligence	Leading, selling, organizing, understanding people, communicating, resolving conflicts	Talk to people, have friends, join groups	Comparing, relating, sharing, interviewing, cooperating	Friends, group games, social gatherings, community events, clubs, mentors/ apprenticeships, etc.
Intra-personal / Individual Intelligence	Recognizing strength/weakness, setting goals, understanding self	Work alone, reflect pursue interests	Working alone, having space, reflecting, doing self-paced projects	Secret places, time alone, self-paced projects, choices, etc.
Naturalistic/ Naturalist Intelligence	Understanding nature, identifying flora and fauna	Be involved with nature, make distinctions	Working in nature, exploring living things, learning about plants, etc.	Order,same/different, connections to real life and scienc issues, patterns

Source: Razmjoo, 2008: 8

2.5. English Language Curriculum for 6th, 7th and 8th Grades

This section covered the characteristics of the learners (6th, 7th and 8th grades) in primary teaching, their learning ways, the activity types which are appropriate for their social, mental and physical development and the general information about the syllabus for the 6th grade level. This section ended with the focus on evaluation as an integral part of education by generally making reference to the English Language Curriculum for Primary Education (2008).

2.5.1. The Characteristics of 6th, 7th and 8th Graders

Adolescence which is a fitting term for secondary school graders is a time when an eleven or twelve-year-old embarks upon a complete transformation of mind and body that spans the next 5 or 6 years. In other words, adolescence is a time of change, exploration, and discovery. For most theorists, adolescence is the stage during which a growing individual experiments with and examines personal identity, moral upbringing, social conventions, and cognitive skills (Shayer and Adey, 2002).

Adolescence is a period of transitions. All children normally pass through pre-programmed genetic sequences that produce certain physiological, intellectual, and attitudinal changes at specific stages (Cameron, 2005). During the course of these changes, adolescents worry about their appearances, whether or not they fit in social situations, and try to be different enough to have a sense of identity.

During adolescence, cognitive and physical changes enable most students who are in secondary schools to think outside of themselves. “The adolescent's greater facility with abstract thinking permits the application of advanced reasoning and logical processes to social and ideological matters” (Gregory and Chapman, 2002: 19). In other words, young people are quite ready to engage in the kind of thinking that is crucial for developing the social and the moral consciousness.

2.5.2. The Learning Ways of Adolescents

Teaching adolescents / teenagers is not easy because being a teenager is not easy. Just think back to your adolescence when you were going through all those changes, changes in your body and in your mind: habits and opinions, tastes in clothes and music, relationships with parents and teachers.

Naturally, it is dangerous and difficult to generalize about adolescence from individual to individual, and from culture to culture; levels of maturity can differ significantly from culture to culture and in individuals within the same culture. Effective foreign language learning can always foster language ability and social skills simultaneously.

Below are some suggestions to keep in mind to help you answer the challenge of teaching adolescents / teenagers in English classrooms (English Language Curriculum for Primary Education, 2008: 106):

- It seems that all adolescents / teenagers are interested in pop songs, so exploit that interest by bringing music –and the feelings that can be expressed through songs– into the classroom.
- Adolescents / teenagers like to be seen as cool and up-to-date, so bring in topics of current interest from sports, entertainment and media, and English-speaking cultures that are personally relevant to your learners.
- Adolescents / teenagers are discovering (often with difficulty) a different relationship with others and group work allows individuals to interact with different classmates in a less stressful, collaborative atmosphere.
- Adolescents / teenagers are starting to define their proper personalities (sometimes it seems they have multiple personalities) and role-play activities can allow them to try to express different feelings behind non-threatening, face-saving masks.
- Part of growing up is taking responsibility for one's acts and, in school, for one's learning, so a measure of learner autonomy and individual choice can be helpful for adolescents / teenagers.

- It is amazing how some adolescents / teenagers will have an almost encyclopaedic knowledge of a particular field, so let individual students bring their outside interests and knowledge into the classroom through cross-curricular work.
- Variety –including surprise and humour– is the spice of classroom life, so try out different warmers, starters and fillers to change the pace and enliven the organization of your lessons.
- Adolescents / teenagers are discovering their (often awkward) bodies so use movement by giving students an opportunity to move around during class.
- Teaching in secondary school often means teaching multi-level classes, but effective classroom management can help even with very large classes.
- Use of the mother tongue should be avoided until when the teacher feels that s/he cannot deal with a particular confrontation and potential discipline problems (always a risk with adolescents / teenagers).
- Games can provide not only purposeful contexts in which to use language but also stimulate interaction, provide competition and are fun –as long as rules are clear and clearly followed by all participants. The teacher should make use of cognitively challenging games for this age group.
- Project work offers each individual a chance to use their individual talent to do something personally meaningful and motivating with the language they are learning –and the resulting posters and other visuals can be displayed around the classroom (just as adolescents / teenagers decorate their rooms at home).

2.5.3. The Activity Types Suitable for Adolescents

It is clear that adolescents / teenagers are often less motivated than younger learners. In addition, they frequently present discipline problems. According to Ercan (2002), this is partly because of teachers having missed opportunities to build bridges between what they want to teach and their students' world of thought and experience. It is not hard for teachers to construct these bridges. If teachers achieve this, they can bring students into full and willing participation in classroom learning.

Activities that are designed to improve language skills can be used for this age group. However, according to Cameron (2005: 21) teachers should be careful to:

- Use prediction and participation;
- Employ simulations and dramatization;
- Use challenging games, popular songs, riddles, puzzles, jokes, etc.;
- Employ pair work and group work;
- Use well-defined, well-experienced activities;
- Employ activities to increase learner autonomy (skill training and critical thinking);

2.5.4. The Syllabus for the 6th Grade: General Information

For the 6th grade, students have 4 hours of compulsory and 2 hours of elective English language courses per week. The syllabus is designed accordingly. Each unit in course books has two sections: Part A and Part B. Part A is designed for those who take 4 hours of compulsory English. Part B is designed for those who take 4 hours of English (4 + 2). Part B does not present any new information but aims to reinforce and enrich the things that have been studied in Part A. Each part is to be covered in approximately two weeks. Teachers who have not finished Part A in the allocated time can skip Part B with the students who study English for 6 hours per week. The aim is not to finish units but to teach English.

According to English Language Curriculum for Primary Education (2008: 115-116) students who complete the 6th grade are expected to show the following linguistic and sociolinguistic competence levels:

They will

a. Have a limited repertoire of short memorized phrases covering predictable survival situations; frequent breakdowns and misunderstandings occur in nonroutine situations.
b. Have a sufficient vocabulary for the expression of basic communicative needs.
c. Have a sufficient vocabulary for coping with simple survival needs.
d. Control a narrow repertoire dealing with concrete everyday needs.
e. Show only limited control of a few simple grammatical structures and sentence patterns in a learnt repertoire.

f. Copy familiar words and short phrases e.g. simple signs or instructions, names of everyday objects, names of shops and set phrases used regularly.
g. Spell his/her address, nationality and other personal details.
h. Establish basic social contact by using the simplest everyday polite forms of greetings and farewells; introductions; saying please, thank you, sorry, etc.
i. Manage very short, isolated, mainly pre-packaged utterances, with much pausing to search for expressions, to articulate less familiar words, and to repair communication.
j. Pronounce a very limited repertoire of learnt words and phrases where pronunciation can be understood with some effort by native speakers used to dealing with speakers of their language group.
k. Expand learned phrases through simple recombination of their elements.
l. Tell a story or describe something in a simple list of points.
m. Link words or groups of words with very basic linear connectors like 'and, then, but'.
n. Communicate what they want to say in a simple and direct exchange of limited information on familiar and routine matters, but in other situations they generally have to compromise the message.

2.5.5. Evaluation

It is a known fact that evaluation procedures must be in line with the teaching methods and techniques. According to English Language Curriculum for Primary Education (2008: 9), the three components of the ELP are defined as follows:

• The *Language Passport* section provides an overview of the individual's proficiency in a foreign language (English, in our case) at a given point in time. The overview is defined in terms of skills and the common reference levels in the Common European Framework. It records formal qualifications and describes language competencies and significant language and intercultural learning experiences. Furthermore, it includes information on partial and specific competence. The Language Passport allows for self-assessment, teacher assessment and assessment by educational institutions and

examinations boards. It requires that information entered in the Passport states on what basis, when and by whom the assessment was carried out.

• The *Language Biography* facilitates the learner's involvement in planning, reflecting upon and assessing his or her learning process and progress. It encourages the learner to state what he/she can do in each language and to include information on linguistic and cultural experiences gained in and outside formal educational contexts. It is organized to promote pluralingualism, i.e. the development of competencies in a number of languages.

• The *Dossier* offers the learner the opportunity to select materials to document and illustrate achievements or experiences recorded in the Language Biography or Passport.

There has been considerable work to find an alternative to conventional ways of monitoring students' language progress and performance. Assumptions like the affective filter theory make people believe that tests as we know them cause anxiety and therefore they are detrimental to learning: All non conventional ways of assessment have come to be known as *alternative assessment* or *authentic assessment*. English Language Curriculum for Primary Education (2008: 10-11) suggests the following types of assessment as authentic:

- writing assessment
- portfolio assessment
- classroom assessment
- self assessment
    - peer assessment
    - collaborative assessment
- teacher observation
    - anecdotal records
    - checklists
    - rating scales
- scoring rubrics
- benchmark standards

2.6. MI Theory as a Pedagogical Organizer

When the theory of multiple intelligences was developed first, Gardner (1983) believed that his work would be of interest chiefly to people trained in his discipline of developmental psychology. "Yet *Frames of Mind* did not arouse much interest within the discipline of developmental psychology; most developmental psychologists ignored it" (Christison, 2005: 7). The reception among educators, however, was quite different. Since Gardner proposed his theory, a great majority of educators have been applying it in education. According to Abdallah (2009), they have considered the idea of Multiple Intelligence as a 'powerful medicine' for the shortcomings that are existent in the educational system. Whether they used it as a teaching approach, method or strategy or as an assessment tool, they agreed on that instruction should be tailored according to the multiple intelligences of the students. They called for considering the strengths of the students that may exist in the 'non-academic' intelligence areas such as musical activities, self-awareness, or visual spatial abilities other than the logical-mathematical and verbal linguistic areas (Gregory and Chapman, 2002).

In the following section, there is an illustration of the points that give value and importance to the application of MI Theory in the educational settings. These points show the advantages of MI Theory in the field of education and encourage all the teachers around the world to use it in their teaching in a way that suits the subject matter they teach and the educational conditions they have.

2.6.1. MI Theory as a Tool to Achieve More Success

Teachers are strongly motivated to help all students to learn. Therefore, they have explored MI Theory as a tool that makes more kids learn and succeed. The great majority of the classrooms are characterized by the existence of scholastic winners and losers (Gregory and Chapman, 2002). MI Theory is important here because it teaches us that all the kids are smart, and that they differ only in the way in which they are smart. "Thus, all children have potential and using MI increases the opportunities for students to learn and succeed, giving adults more ways to grow professionally and personally" (Hoerr, 2000: x).

2.6.2. MI Makes Learning More Enjoyable

Students learn better if they like what they are learning and enjoy it. It is hard for students to learn without interest. When students do not like what they learn, they feel bored and tired even if they are able to learn well and succeed in the final exam. "Therefore, it is better to create an enjoyable classroom atmosphere in which students like what they learn and enjoy it" (Gregory and Chapman, 2002: 6). Using MI Theory in the classroom can help teachers to create such an encouraging atmosphere as Bailey (1999: 37) states "Give them the opportunity to display their talents, learn new skills without fear of embarrassment or failure, and laugh in the process makes the learning experience rewarding for both teacher and student."

2.6.3. MI Cares for Individual Differences in Learning

All students are different. No two persons are exactly the same even the identical twins. Even the same person is different from one period to another or from one situation to another in many ways. Difference is the rule and stability is the exception. This is applied to students while they are learning in the classroom according to Bailey (1999: 36):

> It is a fact of classroom life that what interests one student leaves another bored, literally, to distraction. It is also a fact that the student who is the most enthusiastic on Tuesday is often the one who is the most bored on Wednesday. This phenomenon can leave students feeling short-changed and teachers feeling frustrated and guilty for failing to reach their students. The theory of Multiple Intelligences (MI)…not only helps explain this phenomenon, but helps teachers find ways around the obstacles to learning.

Obviously, it is impossible to reach all the learners, whatever approach to teaching which are adopted, unless instruction is a multi-modal one and caters for all the intelligences in our lessons (Berman, 1998). Therefore, Multiple Intelligence Theory is greatly required so as to deal with the different students who have different minds. It will involve all the students with their different personalities to have more chance for learning and achieving success in spite of these differences that cannot be considered.

2.6.4. MI-based Instruction

Multiple Intelligence Theory and its applications in the educational settings are growing so rapidly. “Many educators began to adopt MI-based instruction as a way to overcome the difficulties which they encountered with their students as a result of their individual differences and their learning styles” (Abdallah, 2009: 32). These difficulties may be represented in their inability to reach most of their students. As a result, they become frustrated and their students lose interest in the teaching-learning process as a whole. These difficulties may be caused by the uniform way in which they teach their students. There are currently thousands of MI teachers and ten thousands of students undergoing MI-based classroom instruction.

Once Multiple Intelligence Theory is understood, it can be applied in education in a variety of ways. There is no one definite way through which the theory can be applied in education. The theory is very flexible and it can be adapted to the context in which it is applied. “The theory can be implemented in a wide range of instructional contexts, from highly traditional settings where teachers spend much of their time directly teaching students to open environments where students regulate most of their own learning” (Armstrong, 1994: 51).

Thus instruction can be modified and organized in the light of MI Theory. The theory in this case acts as a framework for teaching upon which teaching is organized:

> “On a deeper level… MI theory suggests a set of parameters within which educators can create new curricula. In fact, the theory provides a context within which educators can address any skill, content, area, theme, or instructional objectives, and develop at least seven ways to teach it. Essentially, MI Theory offers a means of building daily lesson plans, weekly units, or monthly or year-long themes and programs in such a way that all students can have their strongest intelligences addressed at least some of the time” (Armstrong, 1994: 57).

Gardner presents his newest educational thinking as a unique view of the older emphasis on individual differences. Not only are we not all the same, but we cannot be arrayed on any single dimension. Education must take these differences into account rather than denying or ignoring them. “Using paper and pencil measures as traditional measures limits the students’ capacity to the linguistic skills which they use in writing their answers” (Hoerr, 2000: 12–14). You do not have to use language and logic all the time because people

do not think the same way. However, in our educational system, there have been certain specific focuses to master the domains, which provide a limited learning environment and fewer opportunities for developing the creativity and imagination in students. As New York University Professor Neil Postman stated "Children go into school as question marks and leave school as periods. What do we do in the intervening years to convince children that they're not intelligent?" (cited in Armstrong, 1994: 31-32), it is quiet paradoxical and unfair to make the students believe that they can learn in one way or two when their mind is so fresh and their receptivity is so high.

Under the use of MI-based instruction, the students are treated as individuals. The students' talents and interests are not ignored because it is not fair to concentrate on some students and neglect others whose capacities and talents are not well-identified. This idea is emphasized by Hoerr (2000: 12) who gives a definition of MI approach in the light of which instruction is delivered in a way that considers students' interests and talents: "An MI approach means developing curriculum and using instruction that taps into students' interests and talents. Students are given options, different ways to learn, and they share responsibility in their learning."

In the type of education that was framed by Gardner's view points, the human individual differences are given primacy to anything else. The students are not obliged to learn in a uniform way in which the student who has a different kind of mind is viewed as a stupid one (Berman, 1998). This is a very limited view of this student who is not linguistically or mathematically talented. This unfair view does not allow the other talents to come out. Instead, the individual talents and interests are given more focus, and are also allowed to come out.

Consequently, the teacher's role is different from the one he used to perform in the traditional way of instruction. MI Theory essentially guides the teachers to make their teaching effective by inspiring them to reach beyond the text and the blackboard to awaken students' minds by leaving more time and space to express themselves in the learning environment. "Teachers in classrooms consider the notion that when we want to *catch fish* we bait the hook with what the fish like, not the fisherman likes" (Gregory and Chapman, 2002: 29). So in classroom teachers should use a variety of teaching and learning strategies

as *bait* that will appeal to the learners, not just to the teacher. According to Hoerr (2000: 91):

> The theory of Multiple Intelligences is important in the education field and suggests that teachers be trained to present their lessons in a wide variety of ways of using music, cooperative learning, art activities, role play, multimedia, field trips, inner reflection, and much more because students learn in different ways.

Armstrong (1994) takes attention to the role of teacher in putting MI into action and makes a reference to the time devoted to teacher talk in the traditional classroom environment. Armstrong (1994: 38) states:

> … according to John Goodlad's pioneering "A Study of Schooling" project, which involved researchers in observing 1.000 classrooms nationwide, nearly 70 percent of classroom time was consumed by "teacher" talk mainly teachers talking "at" students (giving instructions, lecturing). "The next most widely observed activity was students doing written assignments, and according to Goodlad (1984, p. 230), "much of this work was in the form of responding to directives in workbooks or on worksheets."

According to Goodlad (1984), the brain is stimulated by novelty and much opportunity for students to become engaged with knowledge should be available so as to employ their full range of intellectual abilities.

Using MI Theory in education involves using it as a content of instruction and as a means of conveying this content at the same time. This indicates that using MI Theory can take many forms. The ultimate goal of any form in which the theory is used is to facilitate instruction as much as possible, and reaching all the students at the same time. As a natural outcome, the teacher's role has to be changed; the new role is completely different from the old one in which instruction is dominated by the teacher who is considered the source of information and the implanter of knowledge.

2.6.4.1. MI-based Instruction and Language Teaching

In teaching English, MI-based instruction can be effective in many ways: first of all, the students are given many options and opportunities to express themselves in the English language. Second, students are not confined to answer their exams using only two types of tests:

> Using MI in curriculum and instruction means that students learn and show their understanding in many different ways. While paper and pencil measures –essays and objective tests– have their role, they invariably limit the students' responses to a few

> intelligences… By limiting students to writing their answers, relying on their linguistic skills, the teacher may find out whether a student has a good command of the English language and writes well, but she may short-change students' understanding in other ways. (Hoerr, 2000: 13–14)

The key points of MI are useful to the English language teaching profession as well as to the other domains. It sees the teaching of English as an integrated and holistic experience and aims to teach communicative competence. It helps us understand the diversity in the students and provides a framework for addressing the differences in the teaching process. According to Ophir (2008: 11);

> How can MI Theory be utilized in integrating English language acquisition into a broader agenda? Educators have explored many ways. These include: embedding curriculum and assessment in activities of greater relevance for students and heightened value in their cultural environment; employing the arts to develop skills and understanding within and across disciplines; promoting higher quality student work by identifying gifted intelligences or specific disabilities; heightening student awareness of the diversity of learning styles.

Students also are able to gain a better understanding of the material that they are covering when the Multiple Intelligences are used in the classroom. "Haley (2004) has shown that in foreign language classes, greater success rates in comprehension of the language was found when the MI Theory was implemented versus when it was not used" (cited Smith and Jones, 2005: 92). Additionally, research has shown that the use of MI Theory allows students to have the chance to explore activities and methods of accomplishing a task that they may have never discovered in a more traditional classroom.

To base the instruction of the English language on MI Theory means that the teacher should use a variety of teaching strategies which should be used in a way that makes this instruction address the intelligences which the students possess. In this way, the English language is taught in a natural atmosphere. This is a model of instruction which applies the MI philosophy.

> On one level, MI Theory applied to the curriculum might be best represented by a loose and diverse collection of teaching strategies. In this sense, MI Theory represents a model of instruction that has no distinct rules other than the demands imposed by the cognitive components of the intelligences themselves. Teachers can pick and choose from (many) activities, implementing the theory in a way suited to their own unique teaching style and congruent with their educational philosophy (as long as that philosophy does not declare that all children learn in the same way). (Armstrong, 1994: 57)

To develop his/her instruction under the MI philosophy, the teacher has to do his best in order to develop the materials in a way that makes them appropriate to address the students' multiple intelligences. In other words, the teacher has to translate the linguistic

materials into activities that cope with MI Theory. The teacher of English, for example, has to consider the linguistic content he is dealing with and try to involve other intelligences and translate this content, not into French for example, but into the languages of these intelligences.

> The best way to approach curriculum development using the theory of Multiple Intelligences is by thinking about how we can translate the material to be taught from one intelligence to another. In other words, how can we take a linguistic symbol system, such as the English language, and translate it –not into other linguistic languages, such as Spanish or French, but into the languages of other intelligences, namely, pictures, physical or musical expression, logical symbols or concepts, social interactions, and intra-personal connections (Armstrong, 1994: 57–58)

According to Armstrong (1994: 58–60), the following procedures suggest one way to create lesson plans or curriculum units using MI Theory as an organizing framework:

1. **Focus on a Specific Objective or Topic:** You might want to develop curricula on a large scale (e.g. for a year-long theme) or create a program for reaching a specific instructional objective (e.g. for a student's individualized education plan).
2. **Ask Key Multiple Intelligence Questions:** Figure 2 shows the kinds of questions to ask when developing in curriculum for a specific objective or topic. These questions can help prime the creative pump for the next steps.
3. **Consider the Possibilities:** Look over the questions in Figure 2, the list of MI techniques and materials in Table 3, and the descriptions of specific strategies in the first part of this chapter. Which of the methods and materials seem most appropriate?
4. **Brainstorm:** Using an MI Planning Sheet like the one shown below in Figure 1, begin listing as many teaching approaches as possible for each intelligence. While doing this, be specific about the topic you want to address. The rule of thumb for brainstorming is *listing everything that comes to mind.*
5. **Select Appropriate Activities:** From the ideas on your completed planning sheet, circle the approaches that seem most workable in your educational setting.
6. **Set up to a Sequential Plan:** Using the approaches you have selected, design a lesson plan or unit around the specific topic or objective chosen.

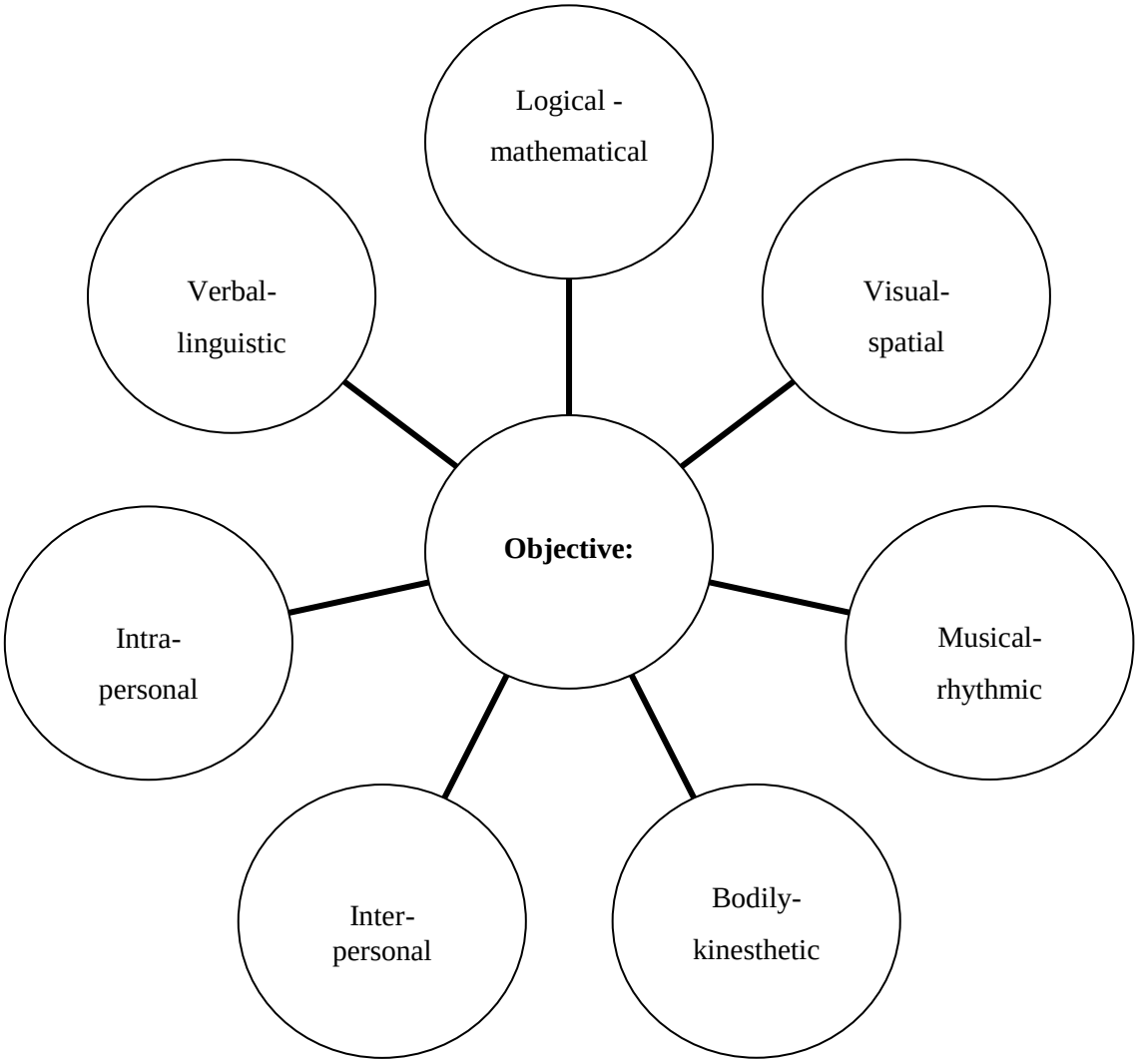
7. **Implement the Plan:** Gather the materials needed, select an appropriate time frame, and then carry out the lesson plan. Modify the lesson as needed to incorporate changes that occur during the implementation.

Vural (2004: 295) adds an eighth item to the above seven-step procedure to create lesson plans using MI Theory as an organizing framework:

8. **Making Assessment:** The basic principal of assessment underlying MI Theory is being authentic and adopting process-oriented approaches. Unlike standardized tests, pupils are *evaluated on what they integrate and produce rather than on what they are able to recall and reproduce* with authentic assessment. For instance, *portfolio assessment* will be a good solution as it is particularly useful with young learners of English because it tells us what they can do.

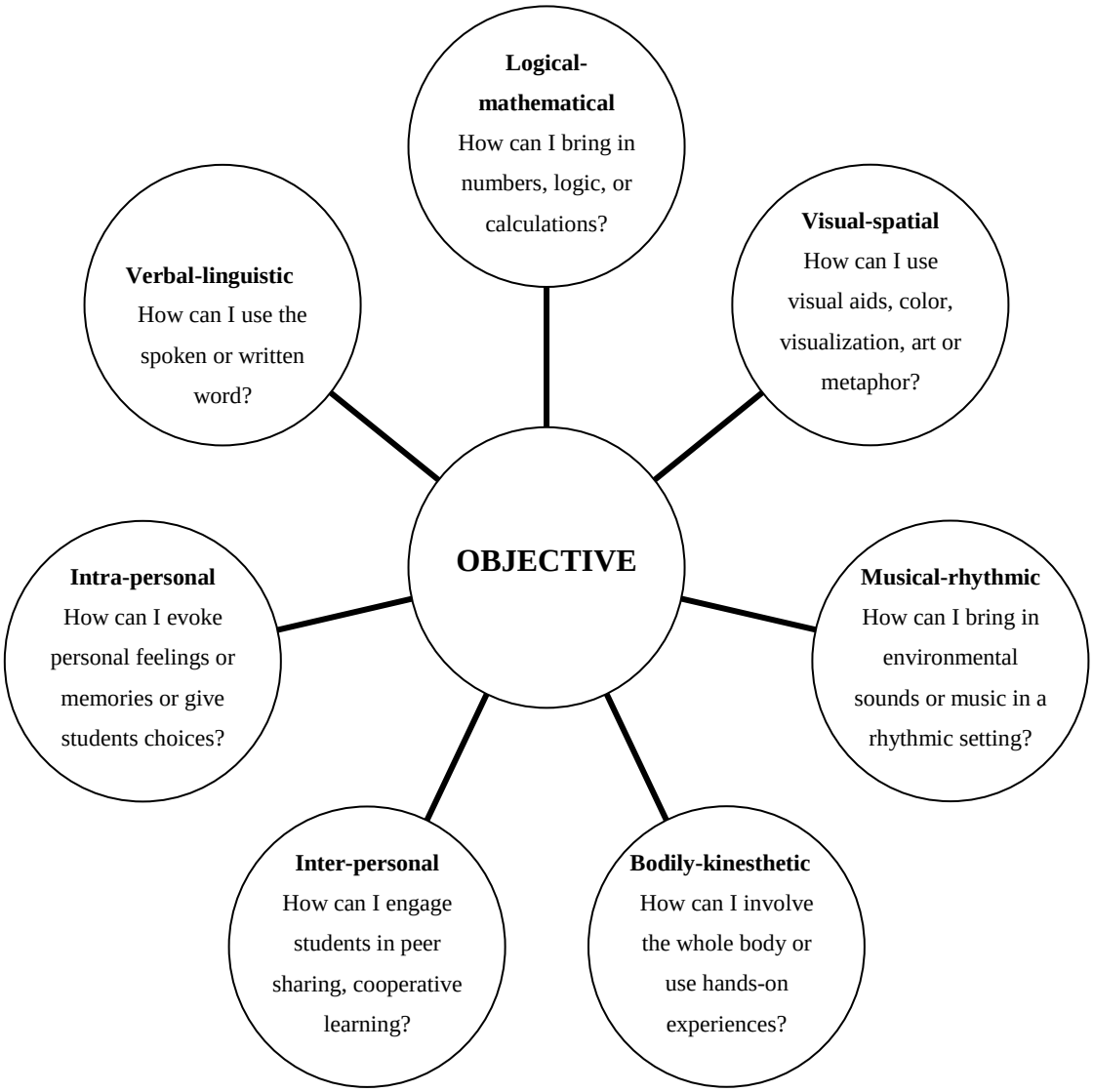
It should be kept in mind that MI Theory is not a rigid model that must be applied in a certain way. The teacher can adapt the theory in a way that serves his/her stated objectives and carry out his/her goals. The teacher should be thoughtful and creative so as to use it effectively inside the classroom. This means that the theory is very flexible and has many ways of application in the teaching process. To begin lesson planning, the teacher should reflect on a concept to be taught and identify the intelligences that seem most appropriate for communicating the content (Campbell, 1997). This is the main strategy which the teacher will adopt in order to teach and develop the language skills. However, it is not obligatory to use all the intelligences to teach certain content. This may take so much time. Also, this makes the learning process boring instead of making it interesting to the students. Therefore, it should always be asked about the main idea of this model in the teaching-learning process. The main idea lies in the fact that we can teach anything in a variety of ways.

Figure 1: MI Planning Sheet



Source: Armstrong, 1994: 59

Figure 2: MI Planning Questions



Source: Armstrong, 1994: 58

2.6.4.2. Applying MI Theory in the Language Classroom

MI Theory offers EFL teachers a way to examine their best teaching techniques and strategies in the light of human differences. There are several important steps to follow in applying the theory in your own classroom. According to Christison (2005: 8-10),

Step 1: Introduce yourself to the basic theory. It involves using a simple, interesting, and unique way to introduce MI Theory. Before you start talking about the details, it is important to capture the teachers' attention and spark their interest.

Step 2: Use an MI inventory. Armstrong (1994) believes that before teachers apply a model of learning in the classroom, they should apply it to themselves as educators first. Therefore, the next step in helping teachers apply MI Theory in the classroom is to help them determine their own MI profile. The purpose of taking an MI inventory is to connect one's life experiences to the ideas presented in Multiple Intelligence Theory.

Step 3: Categorize familiar EFL activities. In order to begin lesson planning, it is important for teachers to be able to identify the activities they would normally use in their lessons and identify the intelligences the activities represent. This is another step in making informed choices. Campbell (1998) suggests creating menus, asking the teachers to identify their linguistic menu, logical menu, musical menu, and so forth for each lesson.

Step 4: Conduct a personal audit of your own teaching strategies. The activity is reflective in nature and requires that teachers look at the activities they typically include in their lessons over a given period of time, say one week. The activities are then categorized according to the different intelligences.

Step 5: Develop different assessment techniques that address the intelligences. Another important component of applying MI Theory in the language classroom is assessment. The two paradigms –teaching and assessment– must evolve if you want to make any significant changes in your curriculum and in the ways in which your students learn and respond to your classes (Lazear, 2000). There are a number of assessment challenges that an MI curriculum brings to the forefront.

2.7. Some Studies with MI

This section will briefly review some of studies on MI.

One of the studies about the effectiveness of MI Theory on language education is Güler's (2004) study which was applied as an experiment on 24 students in the fifth grade at the Private Elementary School of Sakarya University Foundation. The aim of the study was to determine the influence of MI theory in the process of English language teaching. At the end of the research it is stated that the success of the students increased with the instruction based on MI Theory. In addition, the lessons in which MI activities were practiced positively influenced the attitudes of the students.

Another study carried out by Pekderin (2006) sought to reveal the efficacy of the teaching activities based on the MI Theory on the pupils' vocabulary learning and retention. The study took place in Manisa Saruhanbey Primary School. The quasi-experimental research design was used to test the effectiveness of the MI activities on the retention of vocabulary items. At the end of the study, the findings revealed that there was a significant difference between the two groups in achievement tests in favour of the experimental group. In other words the activities related to the MI Theory have a positive influence on the pupils' vocabulary learning and retention in the experimental group.

Amanda Pociask and Jeri Settles (2007) carried out a study in two schools simultaneously and investigated whether MI strategies worked well in teaching disabled students and seventh and eighth grade science students who had poor test scores and low self-esteem and motivation. The purpose of the study was to determine if the incorporation of Multiple Intelligences would help raise test scores and improve student behaviours. This research indicated that incorporating MI into daily lessons improved students' self esteem, increased retention rates, enhanced motivation for learning, and decreased incidences of off-task behaviours. Students appeared to be more focused and engaged on assessments at the end of the study as a result of the use of various MI strategies.

In an extended literature review carried out by Johnson (2007) in Dominican University of California, the researcher aimed to explore the effect of MI-based curriculum

on student achievement in core curriculum at the elementary school level. At the end of the study, MI was found to be an innovative and inclusive way to explore scientific content in accordance with state standards and frameworks. MI-based instruction had a positive effect on engaging students through their natural curiosity, monopolize on teachable moments, and increase student participation through their own excitement. The literature also revealed that MI was a useful philosophy and practical framework for structuring curriculum and learning experiences according to each student's needs.

Concerning the MI issue, another action research project targeted to increase reading motivation in elementary and middle school students through the use of MI Theory. This project was conducted by four teacher researchers (Mary E. Buschick, Tracey A. Shipton, Laurie M. Winner, and Melissa D. Wise) who taught in the second, fourth, sixth, and eighth grade levels. In this comprehensive work, the teacher researchers obtained notable findings. One of the most notable results of this study was that there was a major decrease in non-movement and movement behaviours during silent reading session. Students became skilled in selecting books and choosing activities that suited their dominant intelligence. The results of the student survey showed that there was an increase of student reading at home, visiting a library, and feeling comfortable and confident when approaching a new word in reading.

Another interesting work related to MI is titled as *Perceived Multiple Intelligences and Learning Preferences among Chinese Gifted Students in Hong Kong* carried out by David W. Chan (2005). This study examined the relationships between self-perceived Multiple Intelligences and five learning preferences among 604 Chinese gifted students in Hong Kong. All the nominated students who volunteered to participate with the consent of their parents were requested to come to the university campus for assessment on their self-perceived Multiple Intelligences and their learning preferences. This study served to expand past findings on perceived MI and those on learning preferences of Chinese gifted students in Hong Kong and sought to make connection between the two research traditions.

Discover in Lebanon: A Pilot Study in Lebanese American University submitted by Ketty M. Sarouphim is one of the studies which questioned the effectiveness of recent trends in instructional models in educational studies. The purpose of this study was to

investigate the effectiveness of *Discover*, a performance-based assessment, in identifying gifted students in Lebanon. *Discover* is grounded on Gardner's MI Theory and consists of tasks involving problem-solving and creative abilities. At the end of the study, high correlations were found between the participants' Discover ratings and their corresponding school grades in mathematical, spatial-analytical, and written linguistic intelligences, but discrepancies were found between students' grades and their corresponding *Discover* ratings in spatial artistic and oral linguistic intelligences.

Although there are lots of articles in support of the MI Theory, not all the empirical evidence is in favour of its success. One of these studies belongs to Razmjoo (2008) who investigated the strength of the relationship between language proficiency in English and the nine types of intelligences. In his study, the objectives were three-fold. The primary objective of the study was to investigate the relationship between MI and language proficiency among the Iranian PhD candidates who enrolled in Shiraz University PhD Entrance Exam. The second objective of the study was to explore whether one of intelligences or combination of intelligences were predictors of language proficiency. Finally, the study aimed at investigating the effect of sex on language proficiency and types of intelligences. The results indicated that there was not a significant relationship between language proficiency and the combination of intelligences in general and the types of intelligences in particular. Similarly, the results revealed no significant difference between male and female participants regarding language proficiency and types of intelligences. Moreover, none of the intelligence types was diagnosed as the predictor for language proficiency. The results of this investigation pointed to no significant relationship between Multiple Intelligences and English language proficiency in the Iranian context.

Another study which is not in favour of MI Theory was conducted by Şen in 2004. The purpose of the study was to investigate the effects of MI-based English lessons on students' motivation, self efficacy, self-esteem and multiple intelligences. The results indicated that English lessons based on the Multiple Intelligences Theory caused positive change especially in intrinsic and extrinsic motivation, self-efficacy, persistence and self-esteem. However, the program did not cause any change in the students' performance goals, learning goals and self-regulation after the eight week program. Moreover, there was no change in students multiple intelligences except bodily- kinesthetic intelligence.

CHAPTER THREE

3. METHODOLOGY

3.1. Introduction

This chapter of the study presents the methodology adopted in order to answer the research questions. It proceeds with the participants of the study, the instruments developed, and finally the procedures used in the stages of data collection and analysis.

The main purpose of this study is to shed light on the influence of MI-based instruction on the attitude and learning level of the students towards English in comparison to the traditional language teaching methods. The other purposes of the study are to determine whether there are any differences between the pre-test and the post-test results of the treatments which are presented with traditional teaching methods and MI-based activities and finally to decide whether MI Theory can serve as a pedagogical organizer and framework for structuring language lessons.

3.2. Overall Research Design

This study is descriptive in nature. A descriptive study design is one in which your primary goal is to assess a sample at one specific point in time without trying to make inferences or causal statements. Descriptive studies are helpful in revealing patterns and connections that might otherwise go unnoticed. Descriptive statistics include measures of central tendency (averages –mean, median and mode) and measures of variability about the average (range and standard deviation) all of which give the reader a *picture* of the data collected and used in the research project (Cohen and Manion, 1994). Descriptive studies (such as a cross-sectional study) help in generating hypotheses on which further research may be based.

One of the most commonly used descriptive methods in educational research is the survey (Cohen and Manion, 1994). According to Cohen and Manion (1994: 83) a survey helps the researcher to gather data at a particular point in time to describe "the nature of existing conditions, or identifying standards against which existing conditions can be compared, or determining the relationships that exist between specific events." In order to describe these standards and conditions, a survey is conducted. A survey, according to Kane (1984, cited in Varlı, 2001: 100), is a descriptive method "to find out what is happening or what has happened. This involves describing attitudes, behaviours, or conditions, and is called descriptive research." A *survey* can be anything from a short paper-and-pencil feedback form to an intensive one-on-one in-depth interview. Using surveys, it is possible to collect data from large or small populations.

The existing condition in this study is the traditional language teaching methods with its reflections on learning level and attitude of the students towards English classes and this study tries to make a comparison between traditional teaching and MI-based instruction. The motive behind the researcher is interest in examining this issue is the popularity of MI Theory as a recent term to which nearly all educational lesson programmes have been reconstructed, and curiosity about the effect of MI-based instruction on success and attitude of students towards English. It is plausible that MI-based instruction does utilize abilities of students, strengths and weaknesses that traditional classrooms do not permit. Based on the researcher's personal teaching experience with her students, the level of student engagement and achievement was not satisfying at all. The researcher had some hesitations in whether or not the MI Theory as a new trend in education was really able to create a positive change in student's attitude and success in a state-run boarding school. In order to satisfy this curiosity, the researcher decided that a survey would be appropriate to examine the influence of MI-based instruction on student's attitude and success with respect to the existing condition which was shaped with the implications of traditional language teaching environment.

Even if the above-mentioned condition seems to require a true experimental research, the present study is a quasi-experimental one as in most empirical studies in educational settings. When the groups are chosen from clustered classrooms, the study becomes quasi-experimental as the subjects are not selected randomly (Ekmekçi, 1997). A

true experimental study generally involves the random selection of participants for the research. According to Cohen and Manion (1994: 164), "the single most important difference between the quasi-experiment and the true experiment is that in former case, the researcher undertakes his study with groups that are intact, that is to say, the groups have been constituted by means other than random selection." When it is not possible to meet the conditions of true experiments; in other words, when it becomes inevitable to base the study on the clustered classrooms, the research becomes quasi-experimental. Often in educational research where the random selection or random assignment of schools and classrooms is quite impracticable, it is simply not possible for investigators to undertake true experiments (Cohen and Manion, 1994); therefore, the experimental and control groups might involve intact groups as a classification design as in this study.

In order to investigate if incorporating MI activities into language lesson will raise test scores and improve student's attitude, this study mostly makes use of the quantitative approach for the evaluation of the pre-test and the post-test results. However, because the nature of social sciences inherently requires a combination of both quantitative and qualitative data analysis most of the time, the observations of the teacher about the attitude of the students towards English classes were interpreted by making use of the qualitative approach. As Ekiz (2003) states, "the most significant principle of the quantitative method is to express data with numerical values and to test hypotheses" (2005, cited in Zibande: 101). According to Ekiz (2003),

> The quantitative method is based on the paradigms of the positivism and realism. The positivism paradigm considers the reality and knowledge as right or wrong and posits that there is no choice between these two. Realism suggests that in order to create knowledge, reality should be analyzed in an objective way. (cited in Zibande, 2005: xx)

Broadly speaking, quantitative research is thought to be objective whereas qualitative research often involves a subjective element. It is thought that in gaining, analyzing and interpreting quantitative data, the researcher can remain detached and objective. Often this is not possible with qualitative research where the researcher may actually be involved in the situation of the research. Quantitative research is inclined to be deductive. In other words it tests theory.

This is in contrast to most qualitative research which tends to be inductive. In other words, it generates theory. Quantitative designs of research tend to produce results that can

be generalized. As Hitchcock and Hughes (1995: 26) state, the qualitative approach emphasizes 'the qualification of actions, ideas, values and meanings through the eyes of participants rather than quantification through the eyes of an outside observer.' According to Ekiz (2003), "The most important characteristic of the qualitative method is to investigate the subject of the study through the eyes of the survey participants" (cited in Zibande, 2005: 100). On the other hand, quantitative approach counts and measures the data; it does not deal with interpreting it.

The design of the experiment is "One group Pre-test-Post-test Design" which includes a pre-test measure followed by a treatment and a post-test measure for a single group. (Creswell, 1994)

Group A	O1----------X----------O2

X represents the traditional teaching treatment and the treatment with MI-based instruction; O1 represents the attitude scale and proficiency test; O2 represents the post-test measure (the attitude scale and proficiency test).

This is a descriptive study and survey data collection techniques were applied. The main objective of this research is to find out the effects of MI-based instruction on students' learning and attitude towards English. For this, mostly quantitative data analysis was employed and also the findings on students' attitude were qualitatively interpreted by the researcher. As the subjects were not randomly selected, the quasi-experimental research design was used to test the efficacy of MI activities on the learning level and attitudes of the sixth graders.

3.3. Participants

This research was done in Akkuş İstanbul Menkul Kıymetler Borsası (İMKB) Regional Boarding School [Yatılı İlköğretim Bölge Okulu (YİBO)] in Ordu. This school has been in the claim of being a remarkable institution among boarding primary schools in Turkey with its educational opportunities and qualified personnel. A total of 28 students at the age of 12 participated in the study and the group of the participants (6/A class) had

equal number of male and female students (Table 4). The study was conducted with only 6/A class throughout six weeks.

Table 4: Participants of the Study

CLASS 6/A	
Female	14
Male	14
Total	28

The reasons for choosing this group of students are: (1) It was easy for the researcher to get access to them for data collection as the researcher was already a regular teacher of that class; and (2) it was a homogeneous class where the researcher did not have to worry about extreme variations in student performances. There were almost no students whose performance would negatively affect the normal distribution of the scores in English tests.

3.3.1. Sample Selection

Sample selection is one of the most intimidating stages of conducting a survey. As it is not always possible and practical to collect data from a population, the researcher tries to collect information from a smaller group in such a way that the gained knowledge represents the total population. According to Cohen and Manion (1994), a population is a set of entities concerning which statistical inferences are to be drawn, often based on a random sample taken from the population. However, the population is very large, making a census or a complete enumeration of all the values in the population impractical or impossible; therefore, smaller groups are assigned as sample in researches. Cohen and Manion (1994) describe *sample* as a subset of a population. The sample represents a subset of manageable size. Samples are collected and statistics are calculated from the samples. This process of collecting information from a sample is referred to as sampling. There are two types of sampling: probability sampling and non-probability sampling. Probability sampling refers to the fact that "the probability of selection of each respondent is known"

and non-probability sampling refers to the fact that "the probability of selection of each respondent is unknown." According to Hatch and Lazaraton (1991: 85):

> Sometimes, especially in classroom research, neither random selection nor random assignment possible. The majority of classroom research involves the use of classes where students have already been assigned on the basis of some principles. The researcher must work with an established class of students. This is called an intact group.

The study employed convenience sampling which is one type of non-probability sampling; it simply involves using the people who are the most available or the most easily selected to be in the study (Cohen and Manion, 1994). This was a study with an intact group as a classification of design. As Hatch and Lazaraton (1991: 86) note, "in classroom research where researchers wish to see the effects of a teaching learning treatment, the intact group design allows the researcher to give evidence in support of links between variables for these particular classes." Hatch and Lazaraton (1991: 87) also state that "intact designs are often the only practical way of carrying out research which will help find answers to questions."

3.4. Data Collection Instruments

The most commonly used descriptive method in educational research is the survey (Cohen and Manion, 1994). Surveys may be further differentiated in terms of their scope. According to Cohen and Manion (1994: 83):

> Whether the survey is large-scale and undertaken by some governmental bureau or small-scale and carried out by the lone researcher, the collection of information typically involves one or more of the following data-gathering techniques: structured or semi-structured interviews, self-completion or postal questionnaires, standardized tests of attainment or performance, and attitude scales.

The latter two techniques were used to determine the change in student attitude and success in English regarding the MI-based instruction with respect to traditional teaching methods. The data were gathered through three different tools: (1) an attitude scale, (2) proficiency tests and (3) multiple intelligences inventory.

3.4.1. The Attitude Scale

The attitude scale used in the study was adapted to English lesson from the book "Elementary Science Methods: A Constructivist Approach" which was prepared by David

Jerner Martin and translated into Turkish with the arrangement of the professionals. The adapted version translated into Turkish for determining students' attitudes towards English was used in Güler's research (2004) for the fifth grade students.

This is a 5 point Likert scale, requiring participants to choose one answer among completely agree, agree, neither agree nor disagree (no idea), disagree and completely disagree. It contains a set of statements designed to elicit student actual reflections about the treatments (see Appendix 1). The scale consists of 24 statements about students' self-esteem and self-confidence, perception of their opinions about the necessity of English as a course and perception of their feelings about the atmosphere in English classes. The participants are expected to read the statements and respond by choosing the alternative that is exactly describing what they think. In the scale, the order of the statements is arranged in a way that completes each other so as to protect the objectivity of the data. The attitude scale was administered three times: first at the beginning, second after the first treatment with traditional teaching and the treatment equipped with MI-based activities.

3.4.2. Proficiency Tests

In the study, two proficiency tests were administered to the students; one before and after the treatment with traditional teaching methods and the other before and after the treatment with MI-based instruction. These tests were about the "Simple Present Tense" (see Appendix 3) and the "Present Continuous Tense" (see Appendix 4). These tests were prepared from the textbooks which were appropriate for OGES (Orta Öğretime Geçiş Sistemi) and from the other additional sources for their school, which were recommended by educators. The test items were taken from the test books of Morpa, Özer, Açı, Vision ELT, Birey Eğitim and Zambak Publications. These tests were prepared by taking into account the goals and objectives of the English course curriculum for these two subject matters as well as paying attention to the fact that the chosen items completely covered the subjects in a harmony. Each test consisted of 20 multiple choice items. Attention was also paid to the scope of test questions; those that were directed to comprehension, vocabulary and grammatical performance beyond just grammatical competence. Students were given thirty minutes to respond to the questions which consisted of four options by just marking the correct options.

3.4.3. Multiple Intelligences Inventory

Multiple intelligences inventory which was named as "What I like" (see Appendix 2) was administered only once in the beginning of the study in order to specify the dominant intelligence types of the students. It was taken from Güler's research (2004) in which it was administered to the fifth graders. This questionnaire which was prepared to the Thomas Armstrong's Multiple Intelligence Scale [1994] was placed in the publication of F. Dilek Gözütok (Başkent Üniversitesi Kolej Ayşe Abla Okullarında Çoklu Zekâ Uygulaması). It consisted of 48 items. As it did not cover statements addressed to the *Naturalistic Intelligence* in the original version, six statements were added afterwards by the researcher Güler (2004) for her study. The present researcher used this version of the inventory with the statements on naturalistic intelligence in this study to determine the intelligence profile of the students.

3.5. Procedures

The sample in this research contained 28 sixth graders in Akkuş İMKB YİBO in Ordu in the Eastern Black Sea Region. The most leading reason for choosing this school for the study was the familiarity of the sample since the researcher had been working in this school for four years and it had good conditions and opportunities technically and physically in order to reach the expected outcomes of the study. The school that was efficiently equipped with the technology provided a rich teaching and learning environment in which individual differences among students were respected and they could spontaneously become an active participant of the lesson.

In order to compare the effect of the two treatments on the attitude and learning of the students, these language points were focused throughout the research: the *Simple Present Tense* and the *Present Continuous Tense*. The reason for choosing them is that they they have nearly the same level of complexity and equal time is allocated to each subject in the syllabus. This study was conducted with the same group of students throughout 6 weeks; 3 weeks were devoted to the treatment that was implemented with the rules of traditional teaching; 3 weeks were devoted to the treatment that was equipped with MI-based activities. Each treatment took 12 class hours.

Data was collected through English proficiency tests that were administered as the pre-test and the post-test, and through an attitude scale that was administered at the beginning of the study and after the two treatments and a multiple intelligences inventory to determine the intelligence profiles of the group in order to construct the MI-based treatment which was fitting for the dominant intelligence areas of the students.

In order to analyse the data obtained through the proficiency tests, t-test was employed to compare two means. T-test indicates whether the means of two groups are statistically different from each other. For t-test calculations, SPSS (v.15) programme was used.

Two main procedures were used in this part. These are intervention phase and data analysis. The intervention phase covers two processes: (1) the treatment of the *Simple Present Tense* that was instructed with traditional teaching methods and (2) the treatment of the *Present Continuous Tense* that was grounded on MI-based instruction.

3.5.1. Treatment Regarding Traditional Teaching Methods

Traditional language teaching is a methodological approach to language teaching. It means deductive application of explicit grammar rules as a useful pedagogical technique, which provides good mental exercise (Larsen-Freeman, 1986). Traditional language teaching shares basic principles with grammar-translation method which was called Classical Method at one time (Larsen-Freeman, 1986) and was described as "a way of studying a language that approaches the language first through detailed analysis of its grammar rules, followed by application of this knowledge to the task of translating sentences and texts into and out of the target language" (Richard and Rodgers, 1986: 3). Students should be conscious of the grammatical rules of the target language; in other words, grammatical competence is the main concern. From this respect, it is also closer to Structural Approach. According to Keskil (2000: 22), "The Structural Approach to foreign language teaching focuses attention on formal properties of the language being learnt and lays stress on the importance of manipulating sentence patterns." In a traditional language classroom, learners are kept quite busy speaking in pairs and groups, reading passages, forming sentences, doing all kinds of mechanical drills to practise the four language skills:

listening, speaking, reading and writing (Keskil, 2000: 22). The roles of the teacher are very traditional as well as an authority in the classroom. Course content is mostly loyal to the textbooks used. Seating arrangements of the students are in classical type. Most importantly, different learning styles and studying habits of the students are ignored.

The treatment of the Simple Present Tense with traditional teaching was entirely organized according to the course book content *Build up Your English for Grade 6 Student's Book* and *Workbook* (Erin, 2006), which was presented by the Ministry of Education. The treatment lasted total 12 class hours as blocks of 2 lessons throughout three weeks. After the attitude scale and English proficiency test were administered as the pre-test, the first week intervention started with a reading passage entitled *David and John Are Close Friends* in Unit Five / Lesson One, and each student was called on to read a few lines from the passage (Appendix 5). Then, the passage was translated into Turkish with the help of the teacher about new vocabulary items. After finishing the text, their level of comprehension was checked and reinforced with a true-false exercise. Besides that, the students were asked to make true sentences according to the text with the clues given and put words into correct order by adding necessary items. In the Part Two, there were pictures related to some jobs and sentences in the Present Simple like *I am English teacher and I teach English*. Then, students were instructed to match the pictures with the sentences expressing what the doer of that job did in the target language. Part Three contained yes-no and wh-questions in the Present Simple and students were asked to read the dialogues given and to translate them into Turkish as well. The teacher announced the next activity in which the students were asked to match the names of the jobs with their descriptions and to produce questions and answers using the prompts given. The first week intervention ended with oral explanations of the teacher so that the students could comprehend the main concerns of the subject matter in a deductive way.

The focus of the second week intervention was *How Often* and *Adverbs of Frequency (always, usually, often, sometimes, rarely* and *never)* as a subtopic in the Present Simple, which was in Lesson Two / Part One in the textbook (Appendix 6). The first class hour started with dialogue reading and it was translated into Turkish with the help of the teacher for the meanings of new vocabulary items. Then, true-false exercise that asked for information contained within the dialogue and table completion according to it

were instructed to the students in order to both reinforce their understanding about frequency adverbs and enable them to make some kinds of inferences from the text. The next type of the exercise required them to relate the issue with their own experiences; they were told to produce true sentences for themselves and their parents by using frequency adverbs. After that, the teacher asked them to write true answers to the questions given using the right frequency adverbs and make true sentences about themselves and their friends sitting next to them by putting a tick on the table which appeared on the next page of the textbook. When they finished these exercises, the teacher attracted their attention to the pictures and example sentences on the next page and told them to look at the pictures and make sentences as in the previous one. The students were instructed to write the answers on the book firstly, and then the class orally checked the answers together under the supervision of the teacher. Regarding the exercises, when students were confused with how to do them, the teacher did the first one as an example. At the end of the intervention, the last page of this part which covered the visualization of frequency adverbs with example sentences was overviewed so that the students could encode the meanings of the new vocabulary items.

The next section, Lesson Three in Unit Five, dealt with telling the time in the Present Simple (Appendix 7). It started with reading the example utterances of telling the time. The teacher called the students' attention to the expressions *o'clock, half past, quarter to, quarter past* which indicated the time in the sentences and the usage of *at* with the expression of time. The teacher asked them to read the sentences one by one and to translate into Turkish. Next, the students were told to match the pictures visualizing the actions and their time with the sentences in the Present Simple. On the next page, the students were asked look at the pictures and do the same, in other words, to produce sentences expressing the action and its time. When the students finished this exercise, they read their answers aloud. The end of the unit included in three kinds of activities. First, there was a formation (restoration) drill in which "the students are instructed to form sentences with the given words by changing the order and supplying whatever item is missing" (Keskil, 2000: 30). After reading over the answers, there was a writing task in which the students were assigned to write a few sentences about their typical day beginning with *I get up* ... After that, they were instructed to ask their friend next to them, and write a few things about his / her day beginning with *She / He gets up* ...

The third week intervention session was over with the administration of the attitude scale to which ten minutes were devoted and then English test leaving thirty minutes as the post-test in the last class hour. The reason for administering the attitude scale earlier than the test is to eliminate the possible negative effects of the test in case they experience trouble with the questions while performing in the test. Clearly seen, learning through games, songs, puzzles, group works and total-physical responses was not supported by the textbook; it was full of the same kinds of exercises such as guided activities and mechanical drills, which were mostly directed to verbal-linguistic intelligence with a little attention to meaningful exercises like matching, true-false and inferential questions.

3.5.2. Treatment Regarding MI-based Instruction

"All students have different strengths and weaknesses in school, and one of the most important aspect of teaching is using students' strengths to their greatest potentials for learning" (Orden and Milner, 2005: 121). MI-based instruction is the incorporation of multiple learning ways into the daily lesson. Howard Gardner encouraged teachers to employ a balanced instruction that emphasizes a variety of the intelligences which are different ways of perceiving the world. "Schools based on Gardner's theory are student-cantered, project-oriented, give the student choices in almost all their lessons, provide ample opportunities to employ the different intelligences, and offer assessments and evaluations based on the theory" (Armstrong, 1994). The theory of MI is against one-sidedness in teaching; no one set of teaching strategies will work best for all students at all times; it suggests techniques, tools and strategies beyond the typical linguistic and logical intelligences in a wide range instructional context.

Before the first week intervention that would be implemented with MI-based instruction, English proficiency test on the Present Continuous Tense was administered as the pre-test. The processing of MI Theory in the treatment was mostly shaped by the result of multiple intelligences inventory which was administered at the very beginning of the study to determine the students' dominant intelligence areas and to choose the activities in a way that addresses their dominant intelligence areas and improves the least developed ones as well. The materials which were used throughout MI-based treatment were adapted from such sources as *Time for English Student's Book* (Ersöz et all, 2007), *New Hotline*

Starter and *Elementary Student's Book* by Tom Hutchinson (1999). According to the intelligence profiles of the students, MI-based instruction was equipped with primarily pair-works and group works oriented to the interpersonal intelligence (the dominant intelligence); dialogue reading, storytelling, completing worksheet including a wide range of language exercises like word order, gap filling, matching, multiple choice and online vocabulary exercises (verbal-linguistic intelligence); individual tasks (intra-personal intelligence); solving word puzzles and structure problems and information gap activities (logical-mathematical intelligence), pictures and examples from the nature (naturalistic intelligence); power point presentations and visual materials (visual-spatial intelligence); role playing and games requiring physical gestures and miming (bodily-kinesthetic intelligence) and songs and background music (musical-rhythmic intelligence). As an activity can contribute to the development of more than one intelligence simultaneously, categorization of them in fact is not very functional.

The first week intervention was in the computer class and started with the power point presentation which served to develop all the intelligence areas of the students simultaneously by calling their attention to the language point (Appendix 8). First of all, the presentation began with example sentences in positive, negative and interrogative forms with different subjects, spelling rules of verbs with -ing, short answers, time expressions in the Present Continuous Tense and the comparison of it with the Simple Present Tense with colourful and dynamic animations and background sound effects. All the rules concerning the Present Continuous Tense were not given directly; the students were asked to elicit the form from the examples in a whole class interaction based on brainstorming. The students participated in almost all the activities both orally and physically by raising their hands in their seats and coming to the board to point the correct answer with mouse as in the multiple choice exercise and write the answer as in the gap filling. Online tests and vocabulary games covering the commonly used verbs were assigned to the students individually. Online tests were mostly gap filling and multiple choice type which they answered and saw the errors rapidly. Vocabulary games were like hangman and scrambled letters which were both enjoyable and useful as they were refreshing their knowledge of words. The next activity was a guessing game in which the class was divided into two. One student from each group came to the board, turned their

back to the board and tried to guess the animal shown to his / her group members on the screen in one minute.

The first class activity of the second week intervention was scrambled pictures visualizing a dialogue (Appendix 9) from the course book called *New Hotline Starter* by Tom Hutchinson (1999). The pictures were handed out to the students without giving the original text. Students were asked to put those pictures into a logical order in their own way of thinking and imagination individually. After that, they were asked to list to the dialogue itself and they were asked to check the order with the actual flow of dialogue. Then, there was a matching activity in which a few short reading paragraphs taken from the same textbook were distributed to students (Appendix 10). The paragraphs were about people and their clothing with their pictures nearby. The students were asked to read the paragraphs and match the pictures with them. Also, they were asked to read those paragraphs as a whole and elicit the sentences in the Present Continuous Tense in order to grasp the usage of the target language point. Then, for language work, another colourful picture was distributed to the students from *New Hotline Elementary* by Tom Hutchinson (1999) (Appendix 11). The picture was visualizing a house with its different rooms where people were doing different activities at the same time. Here, the students were supposed to act out the person in the picture and produce sentences in the target language at the same time. To reinforce the structure, a word order activity was assigned in which they were told to rewrite the sentences after putting the words into the correct order. For this, the class was divided into three and the words were given to the members of the each group in a mixed way. Each group member was to find the correct place in their own group to introduce the whole sentence to the class correctly (Appendix 12). Then, the teacher finished the class by providing two short puzzles; in one, they found out the person in the picture by reading the clues (Appendix 13) and in the other, they found the differences between the given pictures (Appendix 14). At the end of the session, they listened to a song named *London Bridge is Falling Down* by watching its animation clip at the same time (Appendix 15) a few times.

The third week intervention was just like a drama session. Here, the students were given a short story named *Little Red Hen* that was taken from a publication of Ministry of Education, *Time For English Student's Book* (Ersöz et all, 2007) (Appendix 16). Silent

reading was done firstly. The aim was to find out the main idea of the story. Brainstorming was done in order to make them find the main point of the story by encouraging them to think freely and writing every single word on the board that they produced for the main idea. Then, in the second silent reading the students filled in the blanks according to the story. The third reading was loud and the aim was to improve both students' pronunciation and self confidence by enabling them to hear their own voice. After all these activities, the students were put in groups of five and each was assigned a role in the story in order to act out the story in the second part of the week. Additionally, the decoration of the role-play was students' own responsibility. In the second part of the last week's intervention, they acted their roles as a group in the decoration that they prepared during the ten minutes allocated. Even if this was a structured role-play (Keskil, 2000) in which the teacher told students their new identities and what they would say, this activity gave students an opportunity to practise communicating in different social contexts and in different social roles. After acting out, the students were reminded the song *London Bridge is Falling Down* that they previously learnt and sang as individually and small scale groups.

In the last class hour, the attitude scale and the test on the Present Continuous Tense was administered as the post-test. Throughout the three-week intervention in which MI-based instruction was implemented, great attention was paid to integrating each type of intelligence into the lesson plan. In order to increase the reliability of the pre-test and the post-test results and make the students take these tests into serious, they were informed that the scores of these tests were very significant for the marks in their school report at the end of the semester.

3.6. Data Analysis

The data collected through the English proficiency tests, which are the scores of the tests, for the learning level of the students, were of interval type. According to Hatch and Lazaraton (1991: 58),

> Interval scale data tell us 'how much' of the variable to attribute to a person, text, or object like ordinal scale measurement. The difference between the interval data and other types of data is that the measurement in the former one is much more precise. The intervals of measurement can be described.

Hatch and Lazaraton (1991: 62) note that "a common example of interval data are scores obtained from a test, score data show how much of a variable is present in the data. The data are continuous but the intervals of the scale may be either ordinal or interval measurements of how much."

The score data collected through the English tests for determining the effect of MI activities on success were analyzed using the t-test statistics, as it was considered to be the most appropriate test for interval data. Hatch and Lazaraton (1991) define t-test as a procedure that tests the difference between two groups for normally distributed interval data. The t-test assesses whether the means of two groups are *statistically* different from each other. Mean is the measure of central tendency most frequently used in the case of comparing performance or responses of different groups or measures (Hatch and Lazaraton, 1991). Hatch and Lazaraton (1991) claim that there is no way to look at two means, and conclude that they are statistically same or different without using a t-test.

This study employed t-test statistics with repeated-measure design which is a strong experimental research design. A repeated-measure design is a design in which all research participants receive all experimental treatment conditions. According to Hatch and Lazaraton (1991), if the data come from two or more measures taken from the same group, that is called repeated-measure design. In repeated-measure designs, the comparison is within one group and the means are from the same group of students (Hatch and Lazaraton, 1991). This design has the advantage of requiring fewer participants than other designs because the same participants participate in all experimental conditions. This design also has the advantage of the participants in the various experimental groups being equated because they are the same participants in all of the treatment conditions, which controls the standard threats to internal validity. The aim of this study was to compare the level of change on the attitude and learning of a group of students before and after instruction with MI-based activities and traditional teaching methods. The scores from the same students at two different times were used to make comparisons between measures of the same group of students, which was a repeated-measure design.

The critical level is customarily taken to be ,05 in behavioural science research. Therefore, in this study, the same level of significance was selected to determine whether

MI should be accepted as a pedagogical organizer and framework for structuring language lessons instead of traditional teaching. Then by considering the formula, means and *p* values were calculated. If the obtained t-test statistic was not in the way $p<0.05$, then it means that MI-based instruction did not work well in this study.

The collected data about student attitudes were of ordinal type. Ordinal data, according to Hatch and Lazaraton (1991: 56), are "a way of developing a measurement to show 'how much' of the variable to attribute to a person, text, or object." Hatch and Lazaraton (1991: 57) states that "Ordinal measurement describes a rank order measurement. The rank order can be of two sorts: first, an absolute rank and second, a ranking of persons who score at a similar point on a scale." The second type of ordinal measurement was used in this study by administering a 5-point scale: Completely agree, agree, neither agree nor disagree (no idea), disagree and completely disagree.

In order to analyse the data obtained through the attitude scale, sign test was employed as a nonparametric comparison for repeated-measure design that allows comparing paired data. Such data are those which come from the same students on two different measures. According to Hatch and Lazaraton (1991: 294), "the goal of sign test is similar to that of a Matched-pairs t-test. That is, it is used to discover whether the same students (or matched pairs of Ss) perform in different ways over time (or on two tests)."

In this study, there was no control group since the same students took part both in the pre-test and the post-test of the two subject matters. Hatch and Lazaraton (1991: 295) states that "The sign tests ask whether or not students improved (the +s), regressed (the - s), or whether they showed no change (the 0s). The test does not measure the degree of change but rather the presence of change." The Sign Test tables reflected the changes in students' responses to the statements in the attitude scale between the post-tests of the two treatments; between the pre-test and the post-test of the treatment with traditional teaching and between the pre-test and the post-test of the treatment with MI-based instruction.

The processing of sign test in this study was not complicated. In the attitude scale, the total responses of both positive options "Agree" and "Completely agree" were found. The positive and negative changes were indicated in the tables. The students who did not

show change were discarded. + Changes formed a group in which students had improvements in their attitudes while – changes formed another group in which students did worse. Thus, the total number of changes was found. The next step was to assign the *R* value to the *smaller* total of changes, which was supposed to be equal to or less than that given in the chart to reject the null hypothesis. For this reason, the Sign test table (Hatch and Lazaraton, 1991: 597) was applied to find the critical value at the level of ,05.

The research also employed another type of data collection tool which was called 'Multiple Intelligence Inventory' in order to determine the intelligence profiles of students one by one. The findings were used to construct the MI-based treatment by reinforcing their strengths, in other words, their dominant intelligences as well as improving their weaknesses, that is, their less-developed intelligence areas. The data obtained from the inventory were calculated; the frequencies were expressed as percentages and the result was visualized as graph and table in Chapter 4.

CHAPTER FOUR

4. FINDINGS AND DISCUSSION

4.1. Introduction

This chapter presents the findings and discussion of the study. The findings are organized according to three different outcomes:

(1) Multiple intelligences inventory,

(2) The Attitude scale,

(3) Proficiency tests.

4.2. Findings and Comments about Multiple Intelligences Inventory

Table 5 shows the distribution of the responses which were given by the students to the multiple intelligences inventory called “What I like” at the beginning of the study. The assumption is that the results show the dominant intelligence areas of the samples. According to this table,

- Inter-personal intelligence is the dominant intelligence type with 92,5%
- Verbal-linguistics intelligence is the second most common intelligence type with 70,3%
- Intra-personal intelligence is the third with 62,9%
- Logical-mathematical intelligence and naturalistic intelligence are the next ones with 59,2%
- Visual-spatial intelligence is the sixth with 48,1%.

According to these percents, bodily-kinesthetic intelligence and musical-rhythmic intelligence are the least improved intelligences among students with 40,7% and 33,3%. Graph 1 illustrates the intelligence profiles of the participants.

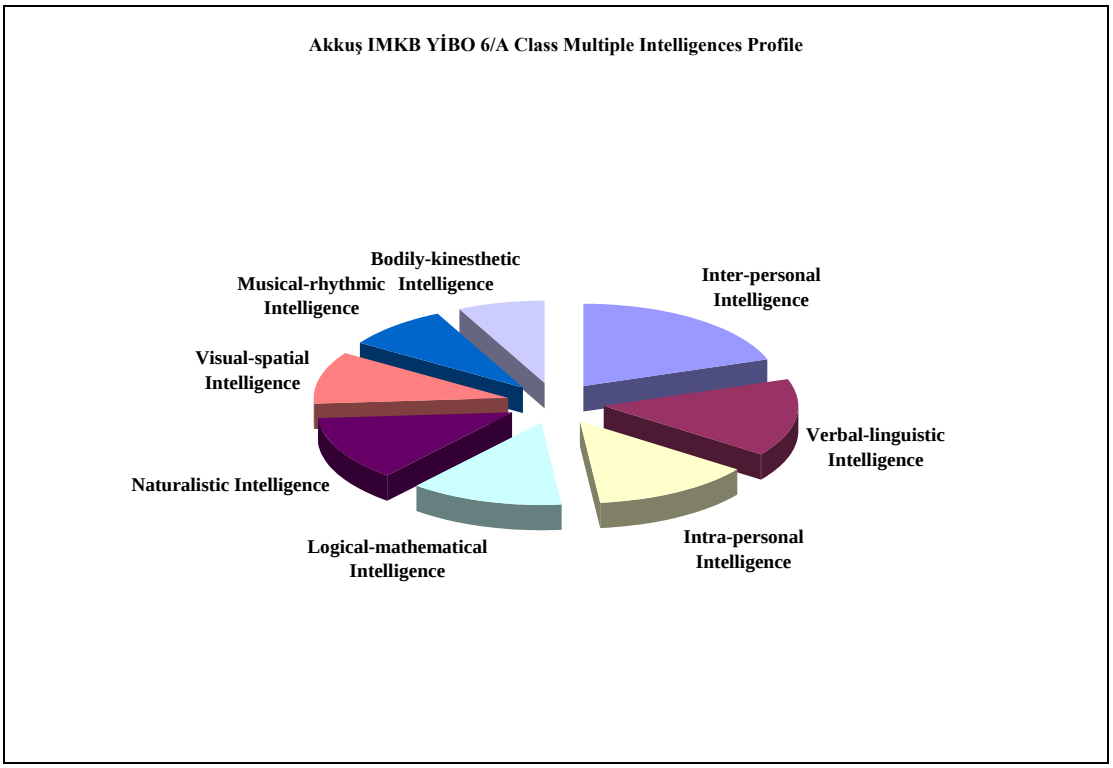


Table 5 indicates the typical behaviours that address each intelligence area and the frequency of the tallies of the students who thought to have those behaviours with numerical values. Each six expression is about one area of intelligence. After each of them, the total number of tallies of the students and the percents were calculated; this determined the dominant intelligence types of the students. The main aim of determining the intelligence type profile is to choose the activities for the experimental treatment in a way that addresses the dominant intelligence areas of the students and improves the least developed ones as well. For that reason, the activities for inter-personal and verbal-linguistic intelligences were primarily employed as they were the dominant ones. In addition to this, in almost each session, students listened to the song many times in order to improve their least developed intelligence. Likewise, physical games and hands-on activities were included in the lesson to improve their bodily-kinesthetic intelligence which is another least improved intelligence according to the result of the inventory. As a result, cooperative learning tasks for the inter-personal intelligence; four language skills and vocabulary exercises for linguistic intelligence; individual works for the intra-personal intelligence; problem-solving tasks and sequencing for the mathematical intelligence; visuals from the nature for the naturalistic intelligence and power point presentations for the visual intelligence were employed during the treatment of the experimental measure.

Table 5: The Results of Multiple Intelligences Inventory

6/A	**Student:**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	TOTAL	Percentage
	Behaviours:																													
1	Telling stories, jokes, tales	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1			1		1		
2	Playing word games	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1		1	1		1		1		
3	Reading books	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1		1	1	1		
4	Telling tongue-twisters	1	1	1	1	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1		
5	Listening to word explanations	1	1	1	1	1	1		1		1	1	1	1	1		1	1		1	1		1	1					
6	Establishing oral communications with others	1	1	1		1	1			1	1	1	1		1		1	1		1	1	1	1	1		1		1		
	Total for Verbal-Linguistic Intelligence	**6**	**6**	**6**	**5**	**6**	**6**	**4**	**4**	**3**	**5**	**6**	**6**	**5**	**5**	**4**	**5**	**6**	**4**	**6**	**6**	**4**	**6**	**5**	**1**	**5**	**1**	**5**	**131**	**70,3**
7	Making calculations fast				1	1	1	1			1	1	1	1		1	1	1		1	1	1	1			1	1	1		
8	Playing computer games and maths	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1		1	1		
9	Solving logic and mind puzzles	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
10	Playing strategical games like chess, draughts	1	1	1	1	1	1		1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
11	Classifying objects to their various features			1			1	1	1			1		1		1	1		1		1		1	1				1		

12	Making experiments that indicate the ways of thinking	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1		1	1	1	1		1	1						
	Total for Logical-Mathematical Intelligence	**4**	**4**	**5**	**5**	**5**	**6**	**5**	**5**	**3**	**5**	**6**	**4**	**5**	**4**	**6**	**6**	**5**	**4**	**5**	**6**	**5**	**6**	**3**	**4**	**3**	**3**	**4**	**126**	**59,2**
13	Analysing maps, charts and graphs		1								1		1	1	1	1	1								1		1					
14	Dreaming	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
15	Attending artistic activities	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1						
16	Watching films, slights, and other visual presentations	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1					
17	Making three-dimensional structures like sandcastle		1	1	1	1		1	1	1	1	1			1	1	1	1	1	1	1	1	1									
18	Doodling on books, notebooks, paper	1			1		1			1	1	1	1					1	1	1	1					1	1					
	Total for Visual-Spatial Intelligence	**4**	**5**	**4**	**5**	**4**	**3**	**4**	**4**	**5**	**6**	**5**	**5**	**4**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**4**	**4**	**2**	**4**	**3**	**1**	**115**	**48,1**
19	Moving constantly, fidgeting	1		1	1		1	1		1		1	1				1				1		1	1	1		1					
20	Imitating others, something					1			1	1		1			1		1		1	1			1			1		1				
21	Running and jumping like activities	1	1		1	1	1	1	1		1	1	1	1	1	1	1			1	1	1	1	1	1	1	1	1				
22	Making hand-made works over their age development	1		1		1	1	1				1	1	1	1	1	1	1	1	1	1	1		1	1							
23	Making different physical movements while thinking and working	1	1	1	1	1	1	1	1		1	1	1			1	1	1	1	1	1	1	1			1		1				
24	Working with tangible objects like mud	1	1		1	1	1	1	1	1	1	1	1		1	1	1	1	1	1			1	1	1	1		1				
	Total for Bodily-Kinesthetic Intelligence	**5**	**3**	**3**	**4**	**5**	**5**	**5**	**4**	**3**	**3**	**6**	**5**	**2**	**4**	**4**	**6**	**3**	**4**	**5**	**4**	**3**	**5**	**4**	**4**	**4**	**2**	**4**	**109**	**33,3**

25	Murmuring song melodies	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1	1	1	1	1	1			1							
26	Playing a musical instrument	1	1	1		1		1	1	1	1	1	1	1	1	1	1	1	1	1			1		1	1		1				
27	Speaking in a rhythmic way	1	1	1			1				1	1	1			1	1															
28	Tapping on the table in a rhythmic way and turning pencil while studying	1	1	1	1		1	1	1	1		1		1	1		1	1	1	1		1	1	1			1					
29	Listening to music and singing	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			1				
30	Murmuring on my own	1		1	1		1		1	1	1	1		1	1					1		1		1		1						
	Total for Musical-Rhythmic Intelligence	**6**	**5**	**6**	**4**	**3**	**5**	**4**	**5**	**5**	**5**	**6**	**3**	**4**	**5**	**4**	**5**	**4**	**4**	**5**	**2**	**4**	**4**	**3**	**2**	**3**	**1**	**2**	**109**	**40,7**		
31	Being together with my peers	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1				
32	Producing solutions to my friends that have problems	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1				
33	Attending group works voluntarily	1	1	1	1	1	1	1	1		1	1	1		1	1	1	1	1	1	1	1	1		1	1		1				
34	Saying something to my friends	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1				
35	Having two or more friends	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1				
36	Understanding others	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1				
	Total for Inter-personal Intelligence	**6**	**5**	**6**	**6**	**6**	**6**	**6**	**5**	**5**	**6**	**6**	**6**	**5**	**6**	**6**	**6**	**6**	**4**	**6**	**6**	**5**	**6**	**5**	**6**	**6**	**3**	**6**	**151**	**92,5**		
37	Be free and strong	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
38	Being aware of my strengths and weaknesses	1	1	1	1	1	1	1			1	1	1		1	1	1	1	1	1	1	1	1	1	1	1		1				
39	Having interests and hobbies	1	1		1	1	1			1	1	1	1	1		1	1	1	1	1	1	1	1	1		1		1				

40	Managing myself	1	1	1	1	1	1	1	1	1	1		1		1	1	1	1			1		1	1	1		1	1		
41	Working alone	1			1	1				1	1		1		1	1		1	1					1	1		1			
42	Protecting self-respect in each situation	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1		1		
	Total for Intra-personal Intelligence	**6**	**5**	**4**	**6**	**6**	**5**	**4**	**3**	**5**	**5**	**4**	**6**	**3**	**5**	**6**	**4**	**6**	**5**	**4**	**5**	**4**	**5**	**6**	**5**	**4**	**3**	**5**	**129**	**62,9**
43	Working on the projects about ecology, nature, animals and plants	1	1	1	1	1	1		1		1	1	1	1		1	1	1		1	1	1	1		1	1	1	1		
44	Going to zoos, historical museums and natural places	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1		
45	Feeding birds; collecting butterflies and insects	1		1	1	1	1		1	1	1	1	1		1	1	1	1		1	1	1	1	1	1	1		1		
46	Dealing with the subjects related to seasons and climate		1	1	1	1	1	1				1	1		1	1		1	1	1	1		1		1			1		
47	Reading books and magazines about living-beings in the nature and watching documentaries			1	1	1	1		1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
48	Getting information about natural events like earthquakes, volcanoes, clouds, etc.	1	1	1	1	1	1	1		1	1	1	1		1	1	1	1	1	1	1		1	1	1	1		1		
	Total for Naturalist Intelligence	**4**	**4**	**6**	**6**	**6**	**6**	**3**	**4**	**4**	**5**	**6**	**5**	**3**	**4**	**6**	**5**	**6**	**4**	**6**	**6**	**4**	**6**	**4**	**6**	**5**	**3**	**6**	**133**	**59,2**
	Total for all ticked items	41	37	40	41	41	42	35	34	33	40	45	40	31	38	41	42	41	34	42	40	33	42	34	30	34	19	33		

Source: Güler, 2004: 93–95

4.3. Findings of the Attitude Scale

The scale which was administered at the beginning of the study and after the two treatments to draw the change of student's attitude towards English consists of five options: Completely disagree, disagree, neither agree nor disagree, agree and completely agree. The items were put under descriptive concepts in order to make the responses of the students organized and easy to compare. Thus, a descriptive analysis was used and 5-point Likert scale was reduced to 3-point Likert scale by combining agree with completely agree and disagree with completely disagree. Table 6 shows the items and their distribution as percentages to the responses related to self-confidence and self-esteem in the attitude scale.

Table 6: Self-confidence and Self-esteem
Percentage

	Disagree			Neither agree nor disagree			Agree		
	Pre-test	Simple P. Post-test	Present C. Post-test	Pre-test	Simple P. Post-test	Present C. Post-test	Pre-test	Simple P. Post-test	Present C. Post-test
I am sure I will learn English.	14,2	21,4	17,8	14,2	14,2	7,14	71,4	64,2	75
English is an easy lesson for me.	25	39,2	35,7	21,4	28,5	10,7	53,5	32,1	53,5
I am a student who will be successful in English.	14,2	28,5	14,2	32,1	28,5	21,4	53,5	42,8	64,2
English is the lesson that I am the best.	42,8	53,5	46,4	28,5	32,1	21,4	28,5	14,2	32,1
I am able to get good marks from English.	39,2	42,8	32,1	7,14	17,8	21,4	53,5	39,2	46,4
I feel successful in English classes.	28,5	39,2	28,5	7,14	21,4	14,2	64,2	39,2	57,1
Knowing English makes me feel important.	17,8	42,8	17,8	28,5	21,4	21,4	53,5	35,7	60,7
My English teachers make me feel that I have the ability in improving in English.	25	25	21,4	10,7	28,5	7,14	64,2	46,4	71,4

As Table 6 shows, while the percentages of the negative responses of the students for almost all the statements in the pre-test increased with the treatment which was implemented through traditional language teaching methods, the level of negative perception of the participants consistently decreased after the treatment equipped with MI-based instruction. For the positive responses, although the participants seem to have a high self-esteem towards English with a percent over fifty in the pre-test, traditional teaching lowered this proportion under fifty percent. Clearly seen, adopting MI-based instruction improved students' self esteem and confidence that they will succeed in English.

Table 7 below presents the items and their distribution as percentages to the responses which cover their perception about English as a course in the attitude scale.

Table 7: Perception of Their Opinions about English as a Course
Percentage

	Disagree			No idea			Agree		
	Pre-test	Simple P. Post-test	Present C. Post-test	Pre-test	Simple P. Post-test	Present C. Post-test	Pre-test	Simple P. Post-test	Present C. Post-test
English is an essential lesson which is worth studying.	7,14	21,4	14,2	14,2	10,7	7,14	78,5	67,8	78,5
I study English hard as it is useful.	21,4	28,5	21,4	17,8	21,4	7,14	60,7	50	71,4
More time should be devoted to English classes in the school.	10,7	28,5	21,4	32,1	35,7	35,7	57,1	35,7	42,8
I know that I can use what I learn in English classes.	10,7	21,4	14,2	7,14	3,57	3,57	82,1	75	82,1
The things that I learn in English classes will be helpful for me in the future.	3,57	10,7	10,7	10,7	3,57	14,2	85,7	85,7	75
I want to specialize in English in the future.	14,2	50	17,8	42,8	28,5	28,5	42,8	21,4	53,5
Becoming successful in English is significant for my future.	7,14	17,8	10,7	14,2	7,14	3,57	78,5	75	85,7
I believe to study English at a high level.	14,2	25	21,4	25	25	21,4	60,7	50	57,1

Table 7 deals with the participants' opinions about the necessity of English as a course. As can be seen in the table, it is remarkable to note that the consciousness of the students towards English is high in favour of MI-based treatment with respect to the treatment that was equipped with traditional teaching methods. A very great deal of the participants seems positive towards learning English because they believe that it is essential for a good future. Apart from one statement in which the result is not in the favour of MI-based instruction, the comparison between the two treatments show that incorporating MI activities into daily lesson enhanced student's motivation for studying and learning English as they believe the importance of learning language for their futures.

Table 8 shows the items and their distribution as percentages to the responses which cover their perceptions about the atmosphere in English classes in the attitude scale.

Table 8: Perception of Their Feelings about the Atmosphere in English Classes Percentage

	Disagree			No idea			Agree		
	Pre-test	Simple P. Post-test	Present C. Post-test	Pre-test	Simple P. Post-test	Present C. Post-test	Pre-test	Simple P. Post-test	Present C. Post-test
English classes are enjoyable.	14,2	17,8	14,2	3,57	3,57	3,57	82,1	78,5	82,1
English classes are attractive.	17,8	25	17,8	14,2	10,7	3,57	67,8	64,2	78,5
English classes are exciting.	21,4	35,7	14,2	10,7	21,4	17,8	67,8	42,8	67,8
I feel comfortable in English classes.	25	28,5	21,4	10,7	21,4	17,8	64,2	50	60,7
English classes make me feel curious.	21,4	32,1	25	17,8	21,4	7,14	60,7	46,4	67,8
I think that dealing with English is fun.	32,1	21,4	17,8	7,14	32,1	14,2	60,7	46,4	67,8
I ask questions to my teachers in English classes.	35,7	39,2	42,8	3,57	17,8	10,7	60,7	42,8	46,4
I answer the questions in English classes enthusiastically.	39,2	39,2	21,4	3,57	10,7	10,7	57,1	50	67,8

Table 8 presents perception of the students' feelings about the atmosphere in English classes and their positive point of view remarkably appears with high percents. The majority of the participants seem pleased with learning environment in language classes. Clearly that incorporating MI-based activities into lesson contributes to the friendly atmosphere, which accelerates interaction in the target language among students.

4.3.1. The Analysis of the Attitude Scale Results

In order to analyse the data obtained from the attitude scale, sign test was employed to discover whether the same students perform in different ways over time. Hatch and Lazaraton (1991) notes that the sign test asks whether or not participants improved, regressed or whether they showed no change. In other words, degree of change is not the main concern of sign test but rather the presence of change itself. The procedure of sign test is simple. In the attitude scale, the total frequencies of both the positive responses *agree* and *completely agree* were used and the data were expressed in tables. The comparison was made three times: (1) between post-tests of the two treatments, 2) between the pre-test and the post-test of the Simple Present Tense treatment and (3) between the pre-test and the post-test of the Present Continuous Tense treatment.

Table 9 shows the post-test ratings of the students' positive responses to the statements in the attitude scale administered after the two treatments that employed traditional teaching methods and MI-based instruction.

Table 9: The Post-test Ratings of the Treatments with Traditional Teaching and MI-based Instruction

Statement	Simple P. Post-test	Present C. Post-test	Change
1	18	21	+
2	9	15	+
3	19	22	+
4	12	18	+
5	4	9	+
6	11	13	+
7	14	20	+
8	10	12	+
9	22	23	+
10	18	22	+

11	12	19	+
12	14	17	+
13	11	16	+
14	13	19	+
15	14	19	+
16	12	13	+
17	21	23	+
18	24	21	–
19	6	15	+
20	13	19	+
21	10	17	+
22	13	20	+
23	21	24	+
24	14	16	+

As we see in the Table 9, the + symbols for improvements and the – symbols for regressions were tallied under the column *change*. Positive changes formed a group in which statements had improved scores while negative changes formed another in which students did worse. While twenty-three statements had positive changes (23 + changes) only one statement showed negative change. The total number of changes was equal to 24 as there was no statement that did not show any change to be discarded. The next step was to assign *R* to the *smaller* total of changes; as the group of 1 is smaller, *R*=1. Next, the Sign test table (Hatch and Lazaraton, 1991) was applied to find the critical value α= .05 for an *N* of 24, it was in the 24 row and checked the .05 column. It was necessary that the *R* value must be equal to or less than that given in the chart. The *R* critical value for an *N* of 24 is 6. The *R* value found in the study was 1 so it can be concluded that the statistical test confidently reports that a highly significant number of students showed improvement in their ratings on the post-test of the Present Continuous Tense treatment when the comparison was made between traditional teaching and MI-based instruction.

Table 10 shows the pre-test and post-test ratings of the students' positive responses to the statements in the attitude scale with the treatment that employed traditional teaching methods.

Table 10: The Pre-test and Post-test Ratings of the Treatment with Traditional Teaching

Statement	Pre-test	Simple P. Post-test	Change
1	20	18	-
2	15	9	-
3	22	19	-
4	15	12	-
5	8	4	-
6	15	11	-
7	17	14	-
8	16	10	-
9	23	22	-
10	19	18	-
11	19	12	-
12	18	14	-
13	18	11	-
14	17	13	-
15	16	14	-
16	17	12	-
17	23	21	-
18	24	24	0
19	12	6	-
20	17	13	-
21	15	10	-
22	18	13	-
23	22	21	-
24	17	14	-

This table is nearly the opposite of the previous one. The Sign test on the gains after the treatment indicated that there was no improvement (no + change) but all their responses were regressed (– 23 change). Only one statement in the scale did not carry any change to be discarded. The next step was to assign *R* to the *smaller* total of changes; *R*=0. Next, the Sign test table (Hatch and Lazaraton, 1991) was applied to find the critical value α= .05 for an *N* of 23, it was in the 23 row and checked the .05 column. It was necessary that the *R* value must be equal to or less than that given in the chart. The *R* critical value for an *N* of 23 is 6 as in the *N*=24. The *R* value found in the study was 0 so it can be concluded that the statistical test confidently reports that a highly significant number of students regressed in their ratings on the post-test of the Simple Present Tense in comparison to its own pre-test.

The Table 11 shows the pre-test and post-test ratings of the students' positive responses to the statements in the attitude scale with the treatment that employed MI activities.

Table 11: The Pre-test and Post-test Ratings of the Treatment with MI-based Instruction

Statement	Pre-test	Present C. Post-test	Change
1	20	21	+
2	15	15	0
3	22	22	0
4	15	18	+
5	8	9	+
6	15	13	-
7	17	20	+
8	16	12	-
9	23	23	0
10	19	22	+
11	19	19	0
12	18	17	-
13	18	16	-
14	17	19	+
15	16	19	+
16	17	13	-
17	23	23	0
18	24	21	-
19	12	15	+
20	17	19	+
21	15	17	+
22	18	20	+
23	22	24	+
24	17	16	-

As the table indicates, there were improvements in twelve statements (12 + changes) while students were regressed in seven statements (7 – changes). 5 statements to which students assigned no change were discarded. The *N* for total changes was equal to 19. The next step was to assign *R* to the *smaller* total of changes. 7 – Changes formed one group and 12 + changes formed another. Since the group of 7 was smaller than 12, *R*=7. Next, the Sign test table (Hatch and Lazaraton, 1991) was applied to find the critical value α=.05 for an *N* of 23, it was located the 23 row and checked the .05 column. The *R* critical value for an *N* of 19 is 4. It should be kept in mind that the *R* value must be equal to, or

less than, that given in the chart. The *R* value found in the study was 7, greater than the value given in the distribution chart. Therefore, it can be concluded that the statistical test gives confidence in reporting that a significant number of students did not improve in their ratings on the post-test of the Present Continuous Tense in comparison to the pre-test results.

The aim of the study was to test whether MI-based instruction yielded any change in the attitude of the students towards language lessons and this was to be accomplished by incorporating Multiple Intelligence activities into English lessons. To this end, an attitude scale was used as a method of determining students' perceptions about English classes before and after interventions. It was a 5–item Likert scale and it was covering behaviours and opinions about students' self-perceptions and the English lesson itself. The results obtained from the attitude scale showed that incorporation of the Multiple Intelligences into the lessons yielded a noticeable increase in the positive responses of the students as well as it decreased their negative point of view in comparison to traditional teaching except for only one item out of twenty-four. In comparing the two post-test results, the results of the treatment with MI-based activities were found to be significantly higher than the results of the treatment that was introduced with traditional language teaching methods. The analysis of the post-test scores showed that students who learnt through MI-based instruction scored significantly more positive responses than the traditional lesson.

Another important comparison worth mentioning is between the pre-test and the post-test of the two treatments. When the results of the Sign Test on gains after treatments were considered, it was found that the positive responses of the students consistently decreased after the presentation of the Simple Present Tense. However, it was clearly seen that the negatively-affected attitudes of the participants turned into positive in the post-test of the Present Continuous Tense treatment. In the comparison of the pre-test and the post-test of first treatment, the Sign Test results showed that all the students regressed in their positive responses with only one exception and provided no positive change in favour of traditional instruction. In the case of comparison of the pre-test and the post-test of the next treatment, the Sign Test results did not provide strong evidence in favour of MI-based instruction; there was no statistically significant difference between the pre-test and the post-test scores of the students.

4.4. The Results of Proficiency Tests

In this section, the data on the learning level of the participants were collected through an examination of the scores of the English proficiency tests on the Simple Present Tense and the Present Continuous Tense, administered as the pre-test and the post-test; the frequencies and percentages of those scores were calculated and displayed in tables. These data served as a basis for comparing the students' success in traditional teaching with their performance in MI-based instruction.

Table 12 shows the frequencies and percentages of the pre-test scores for the Simple Present Tense that was instructed with traditional teaching methods.

Table 12: The Frequency Table of the Pre-test Results of Traditional Teaching

Scores	***f***	***%***
15	1	3,5
25	1	3,5
35	1	3,5
40	3	10,7
45	3	10,7
50	5	17,8
55	5	17,8
60	1	3,5
65	3	10,7
70	1	3,5
75	3	10,7
85	1	3,5
Total	28	100,0

Considering the pre-test results for the traditional instruction of the Simple Present Tense usage, it was found that 10,5% of the participants scored from 15 to 35 points *(N=3)*; 21,14% scored 40 to 45 points *(N=6)*; 35,6% scored 50 to 55 points *(N=10)*; 3,5% scored 60 points *(N=1)*; 10,7% scored 65 points *(N=3)*; 3,5% scored 70 points *(N=1)*; 10,7% scored 75 points *(N=3)*; and 3,5% scored 85 points *(N=1)*.

Table 13 shows the frequencies and percentages of the pre-test scores for the Present Continuous Tense using MI-based instruction.

Table 13: The Frequency Table of the Pre-test Results of MI-based Instruction

Scores	***f***	***%***
15	1	3,5
20	2	7,1
25	1	3,5
30	2	7,1
35	7	25
40	4	14,2
45	1	3,5
55	2	7,1
60	1	3,5
65	2	7,1
70	2	7,1
80	1	3,5
85	2	7,1
Total	28	100,0

Considering the pre-test results for the MI-based instruction of the Present Continuous Tense usage, it was found that 46,2% of the participants scored from 15 to 35

points *(N=13)*; 17,7% scored 40 to 45 points *(N=5)*; 7,1% scored 55 points *(N=2)*; 10,6% scored 60 to 65 points *(N=3)*; 7,1% scored 70 points *(N=2)*; 3,5% scored 80 points *(N=1)*; 7,1% scored 85 points *(N=2)*.

Table 14 shows the frequencies and percentages of the post-test scores for the Simple Present Tense using traditional method.

Table 14: The Frequency Table of the Post-test Results of Traditional Teaching

Scores	***f***	***%***
25	2	7,1
35	1	3,5
40	2	7,1
45	4	14,2
50	3	10,7
55	2	7,1
60	5	17,8
65	4	14,2
70	2	7,1
80	1	3,5
85	1	3,5
95	1	3,5
Total	28	100,0

Considering the post-test results for the traditional instruction of the Simple Present Tense usage, it was found that 10,6% of the participants scored from 25 to 35 points *(N=3)*; 21,3% scored 40 to 45 points *(N=6)*; 17,8% scored 50 to 55 points *(N=5)*; 32% scored 60 to 65 points *(N=9)*; 7,1% scored 70 points *(N=2)*; 7% scored 80 to 85 points *(N=2)*; only one of the participants was able to get 95, which is the highest score among the ones having taken this pre-test.

Table 15 shows the frequencies and percentages of the post-test scores for Present Continuous Tense using MI-based instruction.

Table 15: The Frequency Table of the Post-test Results of MI-Based Instruction

Scores	***f***	***%***
25	1	3,5
30	4	14,2
40	3	10,7
45	1	3,5
50	1	3,5
60	6	21,4
65	4	14,2
70	5	17,8
75	1	3,5
80	1	3,5
85	1	3,5
Total	28	100,0

Considering the post-test results for the MI-based instruction of the Present Continuous Tense usage, it was found that 17,7% of the participants scored from 25 to 30 points *(N=5)*; 14,2% scored 40 to 45 points *(N=4)*; 3,5% scored 50 points *(N=1)*; 35,6% scored 60 to 65 points *(N=10)*; 21,3% scored 70 to 75 points *(N=6)*; 3,5% scored 80 points *(N=1)*; 3,5% scored 85 points *(N=1).*

4.4.1. The Analysis of Proficiency Test Results

The tables related to the attitude scale are able to inform the reader about the tendencies of the participants at a glance but interval data that are the scores obtained from the proficiency tests require an in-depth analysis as it does not make sense to add the scores and display them as a total. This is a quasi-experimental study which is a repeated-

measure design since two measures are taken from that *one* group of students. In the study, data was analyzed using t-test statistical analysis for significance between the means of measures to describe the data.

Table 16 shows the t-test values as results of the procedure that tested the statistical difference between two measures that were obtained from the post-test scores of the treatment with traditional instruction and the treatment with MI-based instruction.

Table 16: T-test Values for the Post-test Results Regarding Traditional Teaching and MI-based Instruction

Method	N	X□	Sd	Df	t	p
MI-based instruction "Present Continuous"	28	56,07	16,96	3,21	-0,166	0,869
Traditional Method "Present Simple"	28	55,89	16,33	3,09		

Analysis of the post-test scores showed that students who were instructed with MI-based activities did not score significantly higher than the treatment through the traditional teaching methods. The means of control and experimental design scores were not statistically significant at the .05 level (t=-0,166; p=0,869 p>0,05). The students in experimental measure did not outperform in the control measure with means 56,07 and 55,89 respectively. As the means of two measures were closer to each other, it could not be concluded that the difference between measures was statistically meaningful (Table 16). This shows that the performance of the students were not better with MI activities than the traditional method. In other words, MI based instruction did not create any considerable increase on the learning level of the students in comparison to traditional teaching.

Table 17 shows the t-test values as results of the procedure that tested the statistical difference between the pre-test and the post-test scores of the treatment that was presented through traditional language teaching methods.

Table 17: T-test Values for the Pre-test and the Post-test Results Regarding Traditional Teaching

	N	X□	Sd	Se	t	p
Pre-test	28	53,21	15,59	2,94	-3,88	0,001
Post-test	28	55,89	16,33	3,09		

When the pre-test and post-test scores of the Simple Present Tense which was presented through traditional methods, were analyzed, the t-test showed that student scores differed significantly from the pre-test to the post-test ($t=-3,88$; $p=0,001$, $p<0,05$). The measure scored a mean of 55,89 on the post-test, which was 2,68 points higher than the pre-test of which mean was 53,21. In other words, the students performed significantly better on the post-test.

Table 18 shows the t-test values as a result of the procedure that tested the statistical difference between the pre-test and post-test scores of the Present Continuous Tense that was presented through MI-based instruction.

Table 18: T-test Values for the Pre-test and the Post-test Results Regarding MI-based Instruction

	N	X□	Sd	Se	t	P
Pre-test	28	45,71	19,89	3,76	-5,943	0,000
Post-test	28	56,07	16,96	3,21		

When the pre-test and post-test scores of the Present Continuous which was presented through MI-based instruction, were compared, the difference was found to be statistically significant; the t-test values showed that student scores differed significantly from the pre-test to the post-test ($t=-5,94$; $p=0,000$, $p<0,05$). The measure scored a mean of 56,07 on the post-test, which was 10,36 points higher than the pre-test of which mean was 45,71. In other words, the students in this study significantly outperformed on the post-test with means 56,07 and 45,71.

The last two tables (17 and 18) showed that there were meaningful differences between the pre-test and the post-test results of both measures in the study at the level of .05 significance. However, the difference between the pre-test and the post-test means of the treatment which was prepared to the traditional teaching methods was lower than the difference between the pre-test and the post-test means of the measure with MI-based instruction. This enabled to conclude that the lesson plan organization which was equipped with MI-based activities and exercises contributed to the learning of the students more highly than traditional teaching according to the comparison to the pre- and post-test scores.

CHAPTER FIVE

5. CONCLUSIONS

5.1. Introduction

This chapter presents the conclusions which were drawn from the findings of the study. This section also makes an overview of the study and includes pedagogical implications, suggestions, limitations of the study and finally the prospects for further research studies.

5.2. Overview of the Study

This study investigated whether or not language learning process which activates the multiple intelligences of students has a significant influence on their learning level and attitude towards the English classes in comparison to the traditional language teaching methods.

Data were collected from the students by administering an attitude scale to determine whether or not there was a change in their attitude; English proficiency tests to determine whether or not MI-based instruction increased their learning level; and a multiple intelligences inventory to organize the MI-based treatment with the activities according to the students' intelligence profiles. Mostly, the data was analysed quantitatively by using Sign test and T-test to show the presence of change in the attitudes and success of the students. The qualitative data analysis was done by making use of the observations to interpret the presence of change or its degree in the attitudes of the participants towards English as a foreign language and as a compulsory course of formal education after the treatment based on MI activities with respect to the traditional teaching. As a result of these analyses, the following conclusions were made.

5.3. Conclusions

When speaking of MI Theory and its effects, Gardner is in the claim that the theory can become a powerful partner in effective teaching. To what extent MI Theory can satisfy the need of children understanding the world at a higher level both socially and academically is the focus of this study and the conclusions are as follows.

From the findings of the multiple intelligences inventory, inter-personal intelligence of the students has the top rank. The next common intelligence type is verbal-linguistic. The less dominant ones are bodily-kinesthetic and musical-rhythmic intelligences. Under the light of all these results, the intelligence profile of the class is revealed so that the teacher does not stray from the common ways of learning of the students by keeping in mind that the weak ones should be improved as well.

The first research question sought whether MI-based activities created a positive effect on the attitude of the students regarding traditional teaching methods. Overall, the study found some important changes shown through the analysis of the student survey. The data presented that activities enabling students to be active in different kinds of intelligence resulted in more positive engagement; they produced higher positive percentages than both the pre-test and the post-test of traditional teaching treatment. This was because students felt successful in English and they were eager to study it as they thought it was beneficial, all which contributed to a growth in their confidence as well (Table 6). Another positive result was that students no longer associated studying English with a boring school activity. They stated that English classes were enjoyable, attractive and exciting and they felt comfortable in English after MI-based activities (Table 7). Additionally, after MI-based teaching, the participants seemed to gain motivation to learn English to a high degree as they believed in the necessity of learning language for their future (Table 8).

From all these, it can easily be concluded that language learning process which stimulates multiple intelligences of the students increases their self-esteem, interest and motivation towards learning. Obviously, the data confirms the link between MI-oriented activities and heightened engagement; positive rates spike when MI-centred activities are employed. The data also confirms the negative effects of the teaching English in

compliance with the traditional methods of language learning and the activities suggested in the textbook on the attitude of the students. The comparison of the pre-test and the post-test results provides no positive change in favour of traditional teaching but a confirmation between students' ratings in MI-based treatment and high participation and motivation. However, there is no statistically significant change between the pre-test and the post-test of MI-based treatment in itself. One explanation for this discrepancy might be the fact that most of the pre-test ratings of the students are already high. Another explanation might be that the students are exposed to the administration of the attitude scale for three times.

The other main query in the study is related to the learning level of the students. The students learned the Simple Present Tense, the frequency adverbs (always, usually, often, sometimes, never) and telling the time in the first treatment with traditional teaching. In the second treatment, the focus was on basic sentence formation and time expressions of the Present Continuous Tense with MI-based activities. It was found that the learners both in the two treatments had difficulty with putting the verbs into the correct form in the given tense and word order. The difficulty that the subjects experienced in both treatments was related to the subject-verb agreement and word order and this can be attributed to the differences in the syntactic and morphemic structures of Turkish and English languages.

The study yielded some mixed results related to the use of MI in English teaching. T-tests were run on the data to see if there were significant differences in the means of the test scores for the students who performed during two treatments. In the analysis of the post-test scores, there was no meaningful difference between MI-based instruction and the instruction with traditional methods (Table 16). However, between the pre-test and the post-test scores of these two treatments, meaningful differences were found (Tables 17 and 18). While there was a slight difference between the means of the pre-test and the post-test of the traditional method, it was considerable in MI-based treatment. This means that MI theory worked well in its own if the comparison was made between its own pre-test and post-test. But this does not mean a high superiority over traditional teaching. In other words, the instruction equipped with the multiple activities for each type of intelligence of the students did not create higher learning level than traditional teaching as it facilitated high rates in their positive engagement into English classes. Namely, MI was effective in capturing attention and creating positive attitude but not all the success in the students.

The reason that the study did not find out any statistically significant change in terms of cognitive domain regarding both post-tests of the two subject matters can be related to the prior learning habit of the learners. Maybe, the students were not familiar with the multiple ways of learning in such activities as brainstorming, game, song, information gap, puzzles, PowerPoint presentations, etc. This research also shed light on the difficulty in implementing MI-based instruction with the students who were trained in traditional teaching. The participants were accustomed to coding the knowledge in a deductive way with only one or two intelligences out of eight maybe more. As a result, all MI activities provided a great fun and enjoyment into the classroom environment, motivated them a lot and positively affected their attitude; however, this did not create a significant improvement in their learning level in comparison to the traditional instruction.

The findings of the study suggest that the means of the post-test scores which were obtained from the two treatments were with no significant difference in success but overall attitude towards English. Concerning the pre-test and the post-test means of the two treatments in their own, this study tells us that there is a difference worth mentioning in both treatments. However, the pre-test means of MI-based instruction were dramatically low most probably because it was administered just after the Present Simple treatment. In other words, the point is that the prior learning of the students negatively affected their performance in the pre-test of the Present Continuous treatment and noticeably decreased their scores. The failure of them can be attributed to the negative effect of prior knowledge.

While the use of MI in the instruction of English had high student engagement rates in this study, MI activities did not appear to have a greater impact on students' scores than traditional teaching. Therefore, the findings of some studies which found that students performed better on tests, after participating in multiple learning activities as opposed to other classical teaching ways, were not confirmed by the results of this study. The claim of MI theorists that creative, higher level and student-centred language learning leads to better learning, when compared to traditional methods, was not substantiated by this study. It, instead, found that MI-based instruction resulted in nearly equal learning level with traditional teaching. Even if the high rates of student engagement into English classes leads to a conclusion that MI-based instruction worked well in terms of attitude, the facilitation of MI teaching techniques does not successfully match the contribution to the success.

5.4. Pedagogical Implications

Whether or not MI can serve as a pedagogical organizer and framework for structuring language lessons is the issue that this study aimed to enlighten. Gardner (1993) proposed a variety of language activities that stimulate the different tools or intelligences to engage multiple memory pathways for learning the matter. In the second language classroom, it is possible to motivate learners by activating multiple ways of meaning-making through the use of tasks relating to the different intelligences beyond the traditional teaching. Incorporating all eight multiple intelligences in the classroom helps students receive a variety of instructional methods to best suit all of their abilities.

According to Orden and Milner (2005: 122), "Although most of the articles written about the multiple intelligences are in support of the theory, there is very little empirical evidence of the theory's success." Despite the lack of empirical evidence, teachers tend to hold themselves accountable for what students learn. More and more teachers are recognizing multiple learning styles in their students and adopting multiple forms of instruction in their classrooms. Even if the positive effect of MI on the enhancement of learning is not verified with this study as a considerable superiority over the traditional teaching methods, the case is in favour of MI-based instruction in terms of attitude towards English. When the immediate feedback received from the learners and the researcher's observations on their attitudes were considered, it can be said that they were more voluntary to participate in the lessons, open to learn and positive towards learning English, with all which MI excels as a pedagogical organizer in the teaching of many disciplines.

The possibilities of MI Theory improving academic results in different disciplines such as foreign language teaching have been discussed in many forums. MI framework is a useful tool for planning language learning task which insure that students can cope in the presence of challenge. When learners see what they can do, this has a positive effect on their self-esteem and can lead to enhancing success in language learning. Ideally learning in any classroom should involve personal development and growth in all human dimensions. This modest but meaningful result which was obtained from this study can serve as an encouragement to other educators who are striving to make English attractive and forge multiple paths for learning the language material.

5.5. Suggestions

As the study clearly showed, MI activities had a positive effect on the attitudes of students but it did not increase the learning meaningfully. This can be because of the mismatch between the teaching process and assessment. This result suggests making a major accommodation in student assessment. The MI-based treatment was an interactive instruction but the assessment included a truly linguistic tests. The test items lacked the pictorial representation; some of the questions were rather linguistic, therefore not providing proper assessment. MI proposes creating not only lessons based on the students' individual intelligences but also individualized self-assessments around students' intelligence strengths. There were also some questions on the student survey that could be modified to better assess the interests and needs of our students. Overall, throughout this action research project, we learned about our students and the additional needs and modifications they individually require.

No theory is enough to create the change alone. The one that will make the change is the human being that is why the people must internalize Multiple Intelligences Theory and work in cooperation with each other. The ones who should know MI Theory and cooperate are not only the teacher of English but also the teachers of other courses, the parents of the students, and the students themselves. If this is achieved, MI will be a guide and will be beneficial in inspiring the changes that are suitable to the individual needs and features.

No two teacher educators will use MI Theory in exactly the same way. Some teacher educators can use the theory as an entry point into the lesson content. Others will attempt to incorporate all eight intelligences in their lessons. There is no single correct answer or road to follow. What we tried to realize in this study was to include all eight intelligences in order to increase the learning level of the students and improve their attitudes towards English. In terms of attitude, the research reached its aim to a great extent but in the case of success, it needs more, detailed and longer researches. More qualitative and quantitative researches must be conducted in order to determine the effect of MI-based instruction on the learning of the students by carrying out comprehensive researches in terms of time, place, level, skill and the number of researchers.

The suggestions can be summarized as follows:

1. Similar studies should be carried out in larger groups with more than one researcher throughout longer durations.
2. This study involved grammar teaching to beginners. It is suggested that studies be carried out to find out the efficacy of MI Theory in teaching *vocabulary*, *listening comprehension*, *speaking*, *reading* and *writing* at different levels.
3. Testing and evaluation techniques related to theory of MI should be developed.
4. The efficacy of MI-based instruction should be tested in the schools of different social-economical levels including a comparison between boys and girls.
5. The choice of the subject-matter used as the basis for comparison in the studies including one group as a sample should be carefully done. The prior knowledge should not hinder the next learning.
6. There should be more classroom activities parallel to MI Theory, the parents should be informed about the intelligence types that their children possess and the cooperation with other teachers should be increased.
7. MI studies, that are relatively new in our country, should be encouraged.

5.6. Limitations of the Study

There are some limitations with this project which hinders generalization.

1. This study was carried out with a limited number of sixth graders. The small sample size (N=28) was the most challenging aspect.
2. The school was not randomly selected since the researcher worked there that is why this was an intact group design which made the study not generalizable.
3. The data collection method was limited to the attitude scale and English proficiency tests, but a wider variety of data collection techniques are needed to be administered to enhance and expand the research on a strong basis for comparison.
4. Finally, one group pre-test-post-test design is open to extraneous variables which threaten to invalidate the research. The addition of a control group provides a

decided improvement over the one group pre-test-post-test design not to jeopardize internal validity.

As a result of the study it can be stated that the use of Multiple Intelligence in teaching English improved the attitude of the students towards English in comparison to traditional teaching to a great extent. However, MI-based instruction did not enhance the learning of the subject matter in the learners. If the limitations in this study could be minimized, a follow-up study using the same treatment or a different one might show more significant differences in the results of the study.

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APPENDICES

Appendix 1: The Attitude Scale towards English Lesson

İNGİLİZCE DERSİNE KARŞI TUTUM ÖLÇEĞİ

Sevgili Öğrenciler;

İngilizce dersine karşı tutumunuzu değerlendirebilmek için hazırlanmış bu ölçekte 24 adet yargı belirten cümle yer almaktadır. Her cümlenin sonunda bu yargıya katılıp katılmadığınızı veya ne ölçüde katıldığınızı belirtecek ifadeler bulunmaktadır. Kendinize uygun olan kısmı lütfen işaretleyiniz.

Gülden KOCAKARA

		Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
1	İngilizce öğrenebileceğime eminim.	( )	( )	( )	( )	( )
2	İngilizce benim için kolay bir derstir.	( )	( )	( )	( )	( )
3	İngilizce çalışmaya değer gerekli bir derstir.	( )	( )	( )	( )	( )
4	İngilizcede başarılı olabilecek birisiyim.	( )	( )	( )	( )	( )
5	İngilizce benim en iyi olduğum derstir.	( )	( )	( )	( )	( )
6	İngilizce dersinden iyi notlar alabiliyorum.	( )	( )	( )	( )	( )
7	İngilizce dersine faydalı olduğunu bildiğim için çok çalışıyorum.	( )	( )	( )	( )	( )
8	Okulda İngilizce dersleri için fazla zaman olmalıdır.	( )	( )	( )	( )	( )
9	İngilizce dersleri eğlencelidir.	( )	( )	( )	( )	( )
10	İngilizce dersleri ilgi çekicidir.	( )	( )	( )	( )	( )
11	İngilizce dersleri heyecan vericidir.	( )	( )	( )	( )	( )
12	İngilizce derslerinde kendimi rahat hissediyorum.	( )	( )	( )	( )	( )
13	İngilizce derslerinde kendimi başarılı hissediyorum.	( )	( )	( )	( )	( )
14	İngilizce dersleri kendimi bana meraklı hissettiriyor.	( )	( )	( )	( )	( )
15	İngilizce dersinde sorulan sorulara istekle cevap veriyorum.	( )	( )	( )	( )	( )
16	İngilizce dersinde öğretmenlerime sorular soruyorum.	( )	( )	( )	( )	( )
17	İngilizce dersinde öğrendiklerimi okul dışında kullanacağımı biliyorum.	( )	( )	( )	( )	( )
18	İngilizce dersinde öğrendiklerim bana gelecekte yardımcı olacaktır.	( )	( )	( )	( )	( )

19	Gelecekte İngilizce alanında uzmanlaşmak istiyorum.	( )	( )	( )	( )	( )
20	İngilizce ile ilgilenmenin eğlenceli olduğunu düşünüyorum	( )	( )	( )	( )	( )
21	İngilizce biliyor olmak bana kendimi önemli hissettiriyor.	( )	( )	( )	( )	( )
22	İngilizce öğretmenlerim bana İngilizce'de ilerleme yeteneğim olduğunu hissettiriyor.	( )	( )	( )	( )	( )
23	İngilizce dersinde başarılı olmak geleceğim için önemlidir.	( )	( )	( )	( )	( )
24	İngilizce'de ileri düzeyde çalışabileceğime inanıyorum.	( )	( )	( )	( )	( )

Appendix 2: Multiple Intelligences Inventory entitled as "What I Like"

NELERİ SEVİYORUM?

Aşağıda belirtilen davranışlardan hangisini seviyorsanız, yanındaki çizgiye √ işareti koyarak belirtiniz.

1.____Öyküler, fıkralar, masallar anlatmayı
2.____Sözcük oyunları oynamayı
3.____Kitap okumayı
4.____Dil oyunları, tekerlemeler söylemeyi,
5.____Sözlü açıklamaları dinlemeyi
6.____Başkaları ile sözel ilişki kurmayı
7.____Hesaplamaları hızlıca yapmayı
8.____Matematik ve bilgisayar oyunları oynamayı
9.____Mantık ya da zihin bulmacaları çözmeyi
10.___Satranç, dama ya da diğer strateji oyunları oynamayı
11.___Nesneleri çeşitli özelliklerine göre sıralamayı
12.___Düşünce yollarını gösteren deneyler yapmayı
13.___Haritaları, çizelgeleri ve diyagramları okumayı
14.___Hayal kurmayı
15.___Sanat etkinliklerini izlemeyi
16.___Film, slayt ve diğer görsel sunumları izlemeyi
17.___Üç boyutlu yapılar oluşturmayı (Lego, kumdan kule vb.)
18.___Kitap, defter, kağıt vb.lerini çiziktirmeyi
19.___Sürekli hareket etme, kıpırdanma, yerinde duramamayı
20.___Birilerini, bir şeyleri taklit etmeyi
21.___Koşma, atlama, zıplama vb. etkinlikleri yapmayı
22.___Yaşımdan beklenenin üstünde el işleri yapmayı
23.___Düşünürken ya da çalışırken çeşitli fiziksel hareketler yapmayı
24.___Çamur ya da diğer elle tutulabilir maddeler ile uğraşmayı
25.___Şarkı melodilerini mırıldanmayı

26.___Müzik aleti çalmayı
27.___Ritmik konuşmayı
28.___Çalışırken masaya ya da sıraya ritmik olarak vurmayı, kalem çevirmeyi
29.___Müzik parçaları dinlemeyi, söylemeyi
30.___Kendi kendime mırıldanmayı
31.___Yaşıtlarımla bir arada olmayı
32.___Sorunları olan arkadaşlarıma çözümler önermeyi
33.___Grupla yapılan çalışmalara gönüllü olarak katılmayı
34.___Arkadaşlarıma bir şeyler öğretmeyi
35.___İki ya da daha fazla sayıda yakın arkadaşa sahip olmayı
36.___Başkalarını anlayabilmeyi
37.___Özgür ve güçlü olmayı
38.___Dayanıklılıklarım ve güçsüzlüklerim konusunda kendimi tanımayı
39.___Bir konuya ilgi duyma ya da hobi geliştirmeyi
40.___Kendi kendimi yönetmeyi
41.___Yalnız çalışmayı
42.___Her durumda kendime duyduğum saygıyı korumayı
43.___Çevre bilimi, doğa, hayvanlar, bitkiler gibi konularla ilgili projelerde çalışmayı
44.___Doğaya, hayvanat bahçelerine ve tarihsel müzelere gitmeyi
45.___Kuş beslemeyi, kelebek ve böcek koleksiyonu oluşturmayı
46.___Mevsimle ve iklim olayları ile ilgili olaylar ile ilgilenmeyi
47.___Tabiattaki canlıları konu alan kitap ve dergileri okumayı ve belgeselleri izlemeyi
48.___Doğa olayları ve oluşumları (depremler, yanardağlar, bulutlar vb.) hakkında bilgi edinmeyi

Yukarıdakilerin dışında hoşlandığınızı düşündüğünüz şeyi kısaca yazınız.
……
……
……
……
……
……

Öğrencinin : **Tarih:**

Adı Soyadı:
Sınıfı :
İmzası :

Öğretmenin : **Tarih:**

Adı Soyadı:
İmzası :

Appendix 3: The English Proficiency Test on the "Simple Present Tense"

Name: Class:
Surname: Number:

Choose the best answer for the following questions.

1) …… Sue get up early?

a) Is
c) Do
b) Are
d) Does

2) Waiters ……

a) cook
c) doesn't cook
b) cooks
d) don't cook

3) "…… you ……. late?"

a) Do / sleeps
c) Do / sleep
b) Does / sleep
d) Does / sleeps

4) Ali never …… his teeth after meals.

a) brush
c) don't brush
b) brushes
d) doesn't brush

5) I sometimes ……. TV.

a) watch
c) don't watch
b) watches
d) doesn't watch

6) Burak never …… the news on TV.

a) watch
c) don't watch
b) watches
d) doesn't watch

7) Tina usually ……. her mother.

a) help
c) don't help
b) helps
d) does help

8) "……..?" "Sometimes."

a) How often do you go out?
c) What do you go?
b) Where do you go?
d) How do you go to school?

9) "Do they often visit you?" "No, they …….. visit me."

a) usually
c) always
b) often
d) rarely

10) I …….. help my mother, but my brother never helps her.

a) rarely
c) never

b) always d) don't

11) I always get up at …… (07.15)

a) seven o'clock c) a quarter past seven

b) half past seven d) a quarter to seven

12) Our lessons finish at …….. (14.40)

a) a quarter to two c) twenty to two

b) a quarter past two d) twenty to three

13) We ……. dinner at …….. (19.00)

a) has / seven c) have / eight

b) have / seven d) has / eight

14) I have lunch at …….. (12.30)

a) twelve c) a quarter to twelve

b) half past twelve d) a quarter past twelve

15) The school finishes at ……. (15.00)

a) three o'clock c) a quarter past three

b) half past three d) a quarter to three

16) I …….. up at 07.00 in the morning. (07.00)

a) wake c) don't wake

b) wakes d) doesn't wake

17) …… is the time?

a) Who c) Where

b) What d) How

18) "What time is it?" "It is ……." (20.45)

a) a quarter to eight c) a quarter past eight

b) a quarter to nine d) half past eight

19) "What time is it?" (23.35)

a) It's twenty-five to twelve. c) It's twenty-five past eleven.

b) It's twenty-five to eleven. d) It's half past twelve.

20) We have breakfast …….. seven.

a) at c) in

b) on d) every

(Time given: 30 minutes)

Gülden KOCAKARA
English Language Teacher

Appendix 4: The English Proficiency Test on the "Present Continuous Tense"

Name: Class:
Surname: Number:

Choose the best answer for the following questions.

1) Jane has dinner at 19.00, but tonight she …….. at 18.00.

a) have c) has

b) is having d) are having

2) "Where is John?" "He …… his car."

a) wash c) washes

b) is washing d) is wash

3) "Look! The weather ……"

a) snow c) is snowing

b) are snowing d) snowing

4) My mum …… my shirts at the moment.

a) is standing c) is ironing

b) am ironing d) am standing

5) The men ……..…….. in the field now.

a) is working c) are working

b) work d) works

6) The mouse …… eating a nut …… .

a) is / now c) are / often

b) is / often d) are / now

7) "Hurry up! The bell ……..…. .

a) is ring c) is ringing

b) ring d) rings

8) Turn off the TV. I …… it.

a) am watching c) am not watching

b) watch d) watches

9) He usually watches TV, but at the moment he …… radio.

a) is listening to c) is listens to

b) listen to d) listens to

10) Ayşen ……. very hungry. She …....……a sandwich at the moment.

a) are / eat b) is / is eat

c) is / eats
d) is / is eating

11) The mice …… all around the house at the moment.

a) is running
c) are running

b) run
d) runs

12) You and I …… in our desks now.

a) is sitting
c) am not sitting

b) isn't sitting
d) aren't sitting

13) Annie usually studies Maths, she ……. Science now.

a) is studying
c) are studying

b) studies
d) study

14) I …… my friend Ahmet. I …… a letter to him now.

a) likes / writing
c) like / am write

b) like / am writing
d) like / am writing

15) The children usually watch TV, but they ……. chess at the moment.

a) are playing
c) are not playing

b) play
d) is playing

16) …… Mary …….. her bicycle now?

a) Is / mend
c) Are / mend

b) Is / mending
d) Are / mending

17) " ……Jane and Ann ……. in the sea?

a) Is / swimming
c) Are / swimming

b) Is / watching
d) Are / waiting

18) The students …… at the door now.

a) isn't writing
c) aren't making

b) isn't pointing
d) aren't standing

19) …… I ……. a computer now?

a) Are / using
c) Am / ironing

b) Am / using
d) Am / doing

20) The weather is good. It …… .

a) is raining
c) isn't raining

b) rain
d) rains

(Time given: 25 minutes)

Gülden KOCAKARA
English Language Teacher

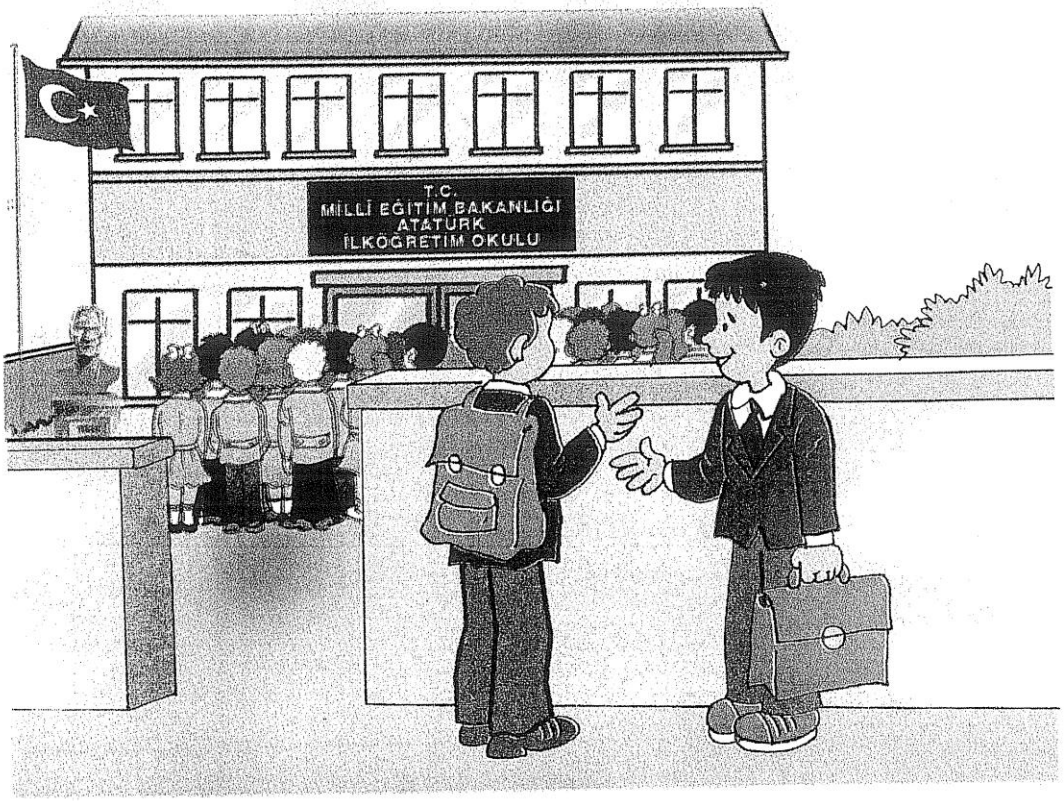
Appendix 5: The First Week Intervention Material with Traditional Teaching

UNIT FIVE

Lesson One

Part I.

1. Read.



David And John Are Close Friends

David and John are close friends. They go to the same primary education school. They like their teachers, friends and school. They get up early, and go to school in the morning.

David has a large breakfast. He drinks a cup of milk and eats three slices of bread with butter and honey every morning. John doesn't have breakfast. He doesn't drink milk. He likes only sweets. He eats two bars of chocolate every day. He doesn't brush his teeth, so his teeth are bad.

David is a very hardworking student. He listens to his teachers, and doesn't make noise in classes. He studies hard and answers all the questions. So his teachers and friends like him very much.

John doesn't listen to his teachers, so he can't answer all the questions. He feels hungry in classes, because he doesn't have a good breakfast.

2. **Read the text and say whether the following sentences are True (T) or False (F).**

( ) **1.** David and John are close friends.

( ) **2.** They go to school in the afternoon.

( ) **3.** David doesn't have a breakfast.

( ) **4.** John drinks a cup of milk every morning.

( ) **5.** David studies hard.

( ) **6.** John feels hungry in classes.

3. **Make true sentences according to the text.**

	(+) **does**	(–) **doesn't**
David	David has a large breakfast.	....
John	....	....

4. **Look at the example. Make true sentences according to the text.**

1. David-John-friends: David and John are close friends.

2. They-school-morning: ..... .

3. David-milk-breakfast: ..... .

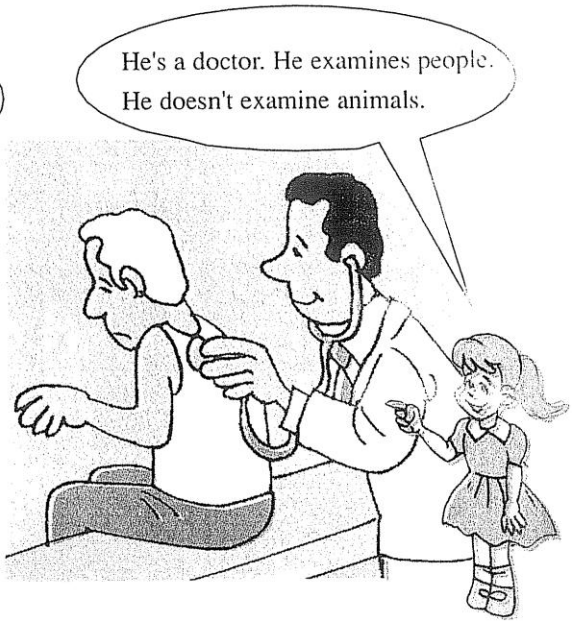
4. John-chocolate-every day: ..... .

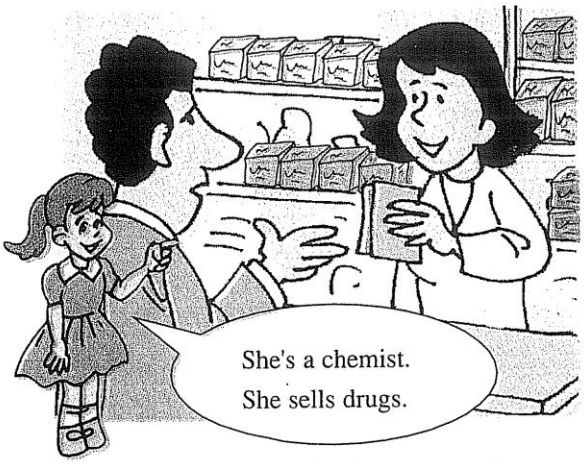
5. David-answer-questions: ..... .

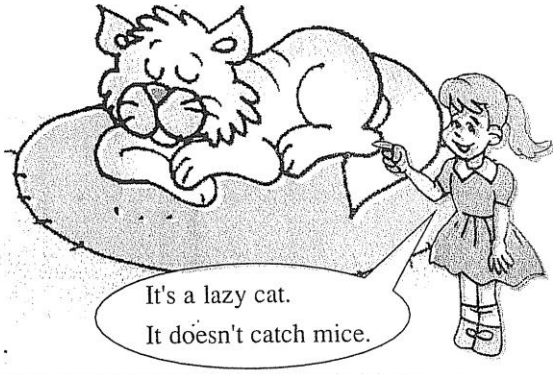
6. John-hungry-classes: ..... .

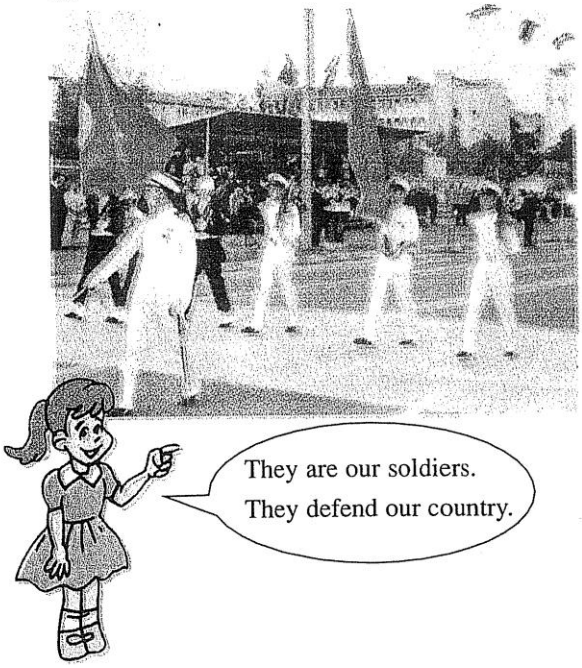
Part II

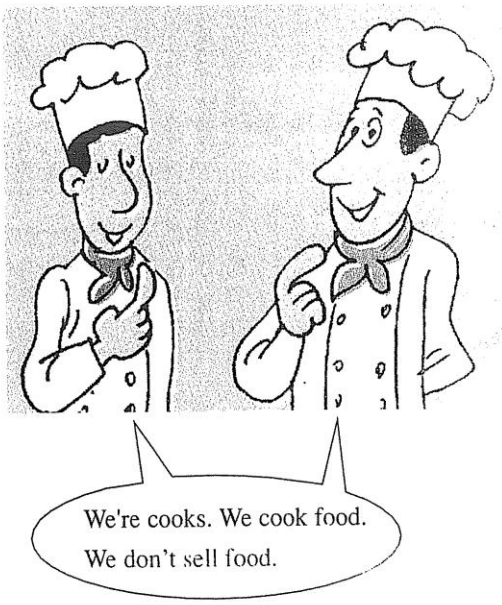
5. Read.







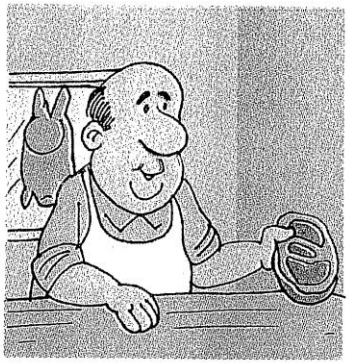




6. **Match the pictures with the sentences.**

1. She types letters.
2. He examines people.
3. He builds buildings and bridges.
4. She pulls out teeth.
5. He serves drink to people.
6. He drives cars.
7. She sells medicine.
8. He sells meat.



Part III.

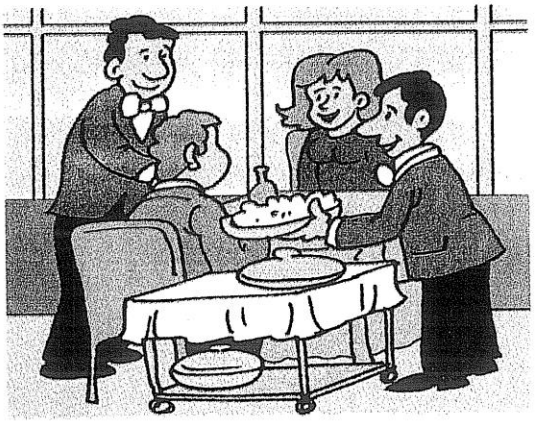
7. **Read.**

A : Are you a mechanic?

B : Yes, I am.

A : Do you make cars?

B : No, I don't make cars. I repair them.

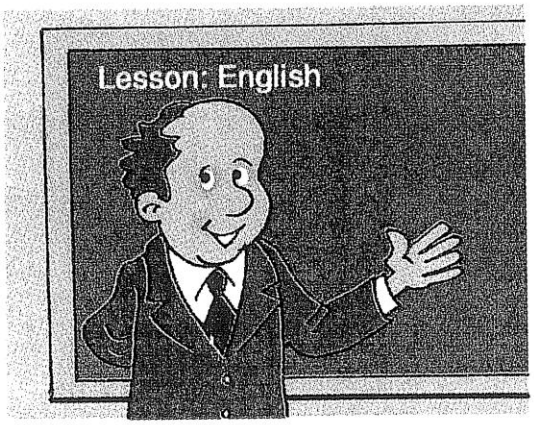


A : What do waiters do?

B : They serve food.

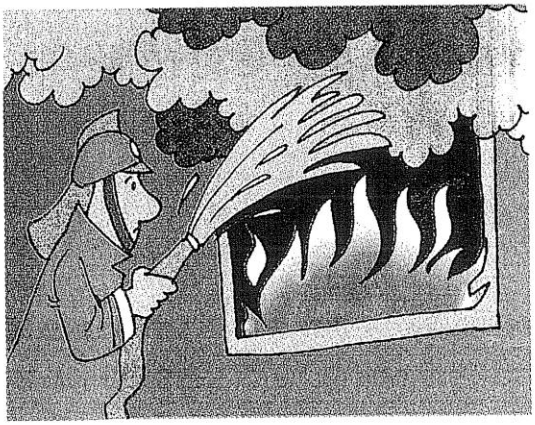
A : Do they cook food?

B : No, they don't cook food.



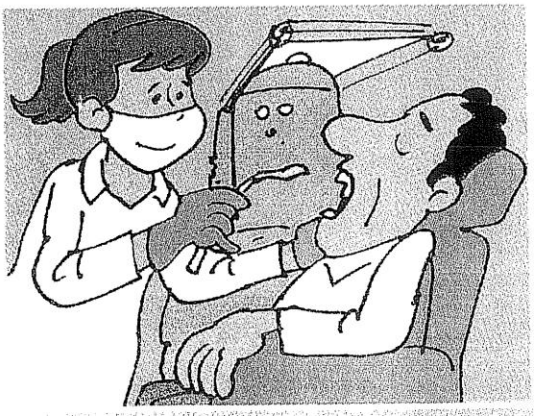
A : What does a teacher do?

B : A teacher teaches students at school.



A : What does a fireman do?

B : He puts out fire.



A : Is she a doctor?

B : No, she isn't.

A : What is her job?

B : She is a dentist.

A : Where does she work?

B : She works in a hospital.

A : What does she do there?

B : She treats people's teeth.

8. **Match the following as in the example.**

A	B
(g) **1.** An engineer	**a.** look after the patients.
( ) **2.** A secretary	**b.** catch thieves.
( ) **3.** A pilot	**c.** make clothes for people.
( ) **4.** Nurses	**d.** grow vegetables and fruit.
( ) **5.** Policemen	**e.** types letters.
( ) **6.** Tailors	**f.** sells groceries.
( ) **7.** A grocer	**g.** makes plans of buildings and bridges.
( ) **8.** Farmers	**h.** flies planes.

9. **Ask and answer as in the examples.**

butcher

A : What does he do?

B : He sells meat.

students

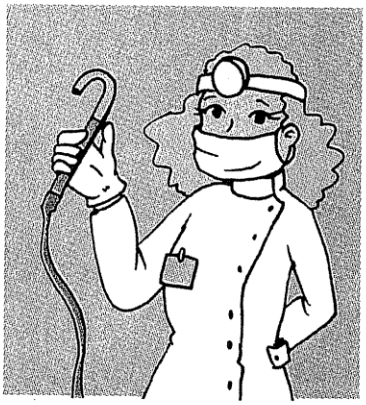
A : What do they do?

B : They study school subjects.

footballers

A : ..... ?

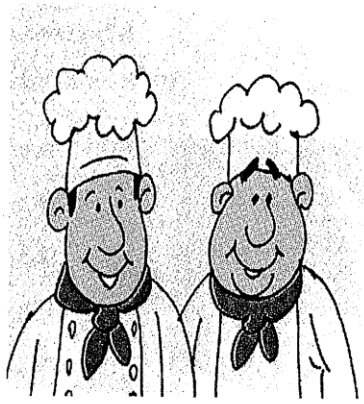
B : ..... .



dentist

A : ..... ?

B : ..... .



cooks

A : ..... ?

B : ..... .

driver

A : ..... ?

B : ..... .

Look! The Simple Present Tense

I You We They	speak study have	Turkish English Maths	every day.
He She It	speaks studies has	Turkish English some milk	

I You We They	do not (don't)	speak study have	Turkish English Maths	every day.
He She It	does not (doesn't)	speak study have	Turkish English some milk	

Do	I you we they	speak study have	Turkish English Maths	every day?
Does	he she it	speak study have	Turkish English any milk	

Yes,	I you we they	do.
	he she it	does.

No,	I you we they	don't.
	he she it	doesn't.

10. **Answer the questions.**

1. Do you speak French?

.....

2. Does your father go to work on Saturdays?

.....

3. Does your brother like classical music?

.....

4. Do your friend and you play table tennis?

.....

5. Does your mother cook delicious food?

.....

11. **Make questions.**

1. ..... ?

Yes, I play guitar.

2. ..... ?

No, my father doesn't smoke.

3. ..... ?

Yes, they live in that flat.

4. ..... ?

Yes, my mother works in a hospital.

5. ..... ?

No, we don't have a car.

Appendix 6: The Second Week Intervention Material with Traditional Teaching

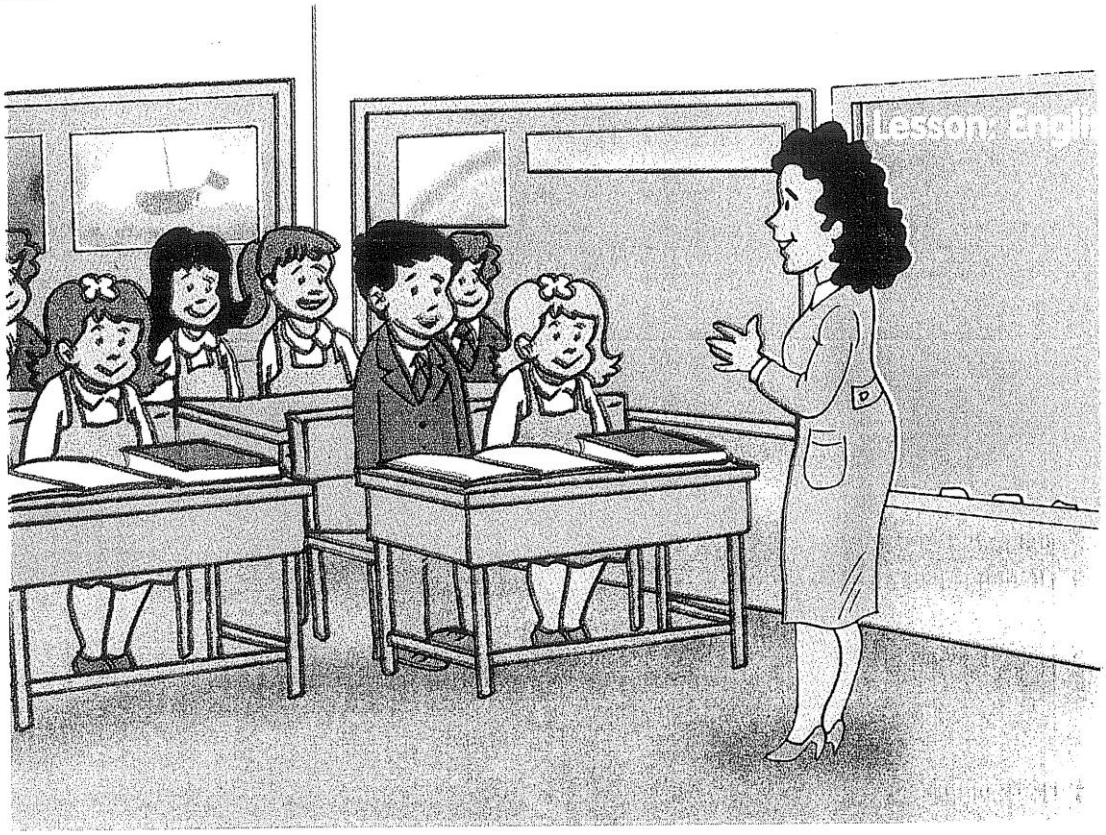
UNIT FIVE

Lesson Two

Part I.

How Often Do You Watch The News On TV?

1. **Read.**



Teacher : How often do you watch the news on TV?

Emel : I rarely watch the news on television.

Teacher : How about you, Burak? Do you watch the news?

Burak : No, I never watch it, madam.

Teacher : How about your parents? How often do they watch the news?

Emel : My father always watches it, but my mother sometimes watches the news. She likes music programmes.

Teacher : How about your parents, Burak?

Burak : My father usually watches the news but my mother often watches the serials.

2. **Write True (T) or False (F) next to the sentences.**

( ) **1.** Emel rarely watches the news on TV.

( ) **2.** Emel's father never watches the news.

( ) **3.** Burak never watches the news.

( ) **4.** Burak's mother often watches the news.

( ) **5.** Emel's mother sometimes watches the news.

( ) **6.** Burak's father doesn't usually watch the news.

3. **Put a tick (✓) on the table according to the dialogue and say the sentences.**

	always	usually	often	sometimes	rarely	never	
Emel							**watches the news.**
Burak							**watches the news.**
Emel's mother							**watches the news.**
Emel's father							**watches the news.**
Burak's mother							**watches the serials.**
Burak's father							**watches the news.**

4. **Write true sentences for you and your parents.**

– I sometimes watch television.	television	– My father usually watches it.
–	football	– My mother always watches it.
–	music	– .....
–	newspaper	– .....
–	homework	– .....
–	cinema	– .....

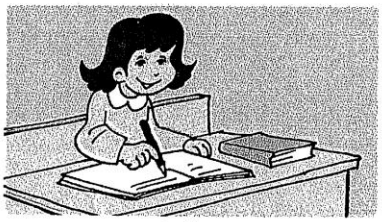
5. **Answer the following questions truly. Use the right frequency adverb.**

Do you do your homework on time?	always
Does your sister watch TV?	usually
Do your parents visit their friends?	often
How often does your brother play table tennis?	sometimes
How often do you and your friend go for a picnic?	rarely
How often does your father play volleyball?	never
	every day

6. **Put a tick (✓) on the table and make true sentences about you, and your friend next to you.**

		always	usually	often	sometimes	rarely
I	spend money on books.					
	help father/mother.					
	visit grandparents.					
	get up early.					
My friend	brushes teeth.					
	makes bed.					
	plays video games.					
	goes to the theater.					
	reads newspaper.					

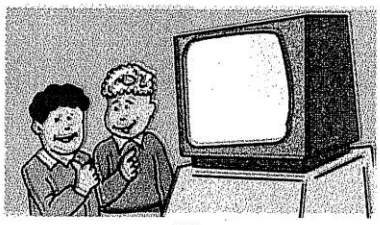
Look!



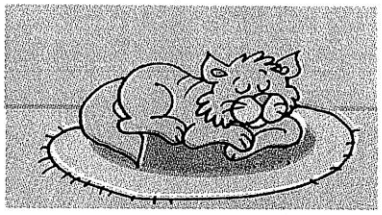
I

She

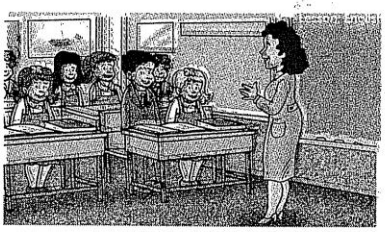
He



We



It

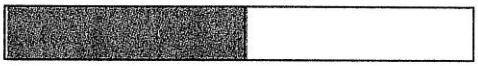


They

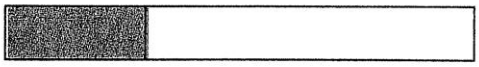
always: I always do my homework.

usually: She usually cooks meals in the kitchen.

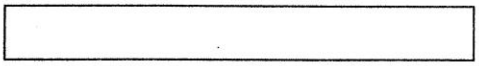
often: He often reads books in his free time.



sometimes: We sometimes watch television.



rarely: It rarely catches mice.

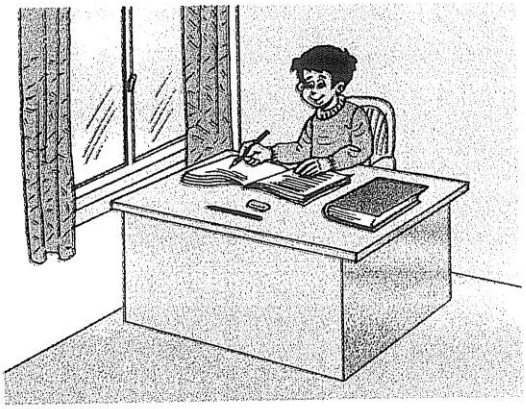


never: They never make noise in classes.

11. **Look at the pictures and make sentences as in the previous exercise.**

play basketball

.....



study

.....

go to cinema

.....

help his father

.....

watch TV

.....

forget to feed his cat

.....

Appendix 7: The Third Week Intervention Material with Traditional Teaching

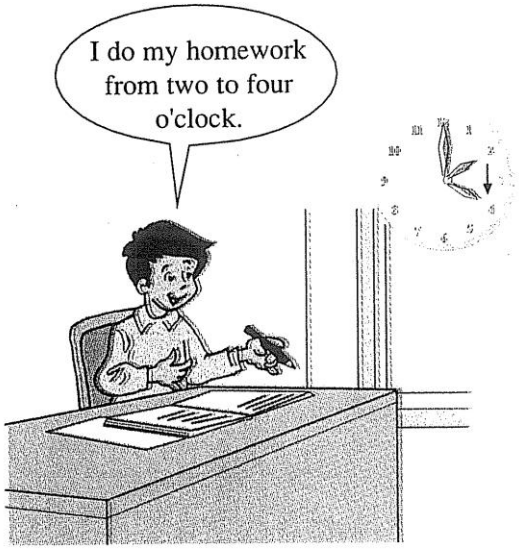
UNIT FIVE

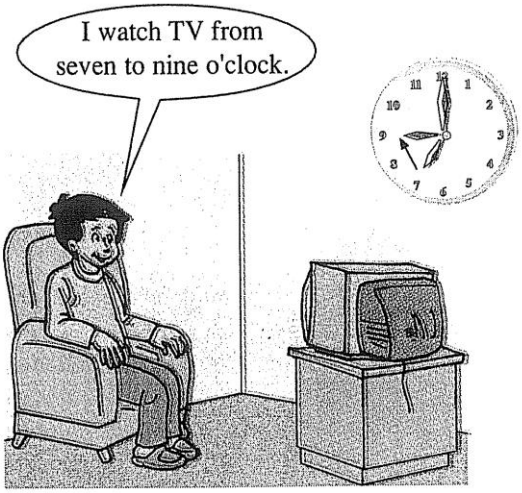
Lesson Three

I Always Get Up At Seven O'clock.

1. **Read.**

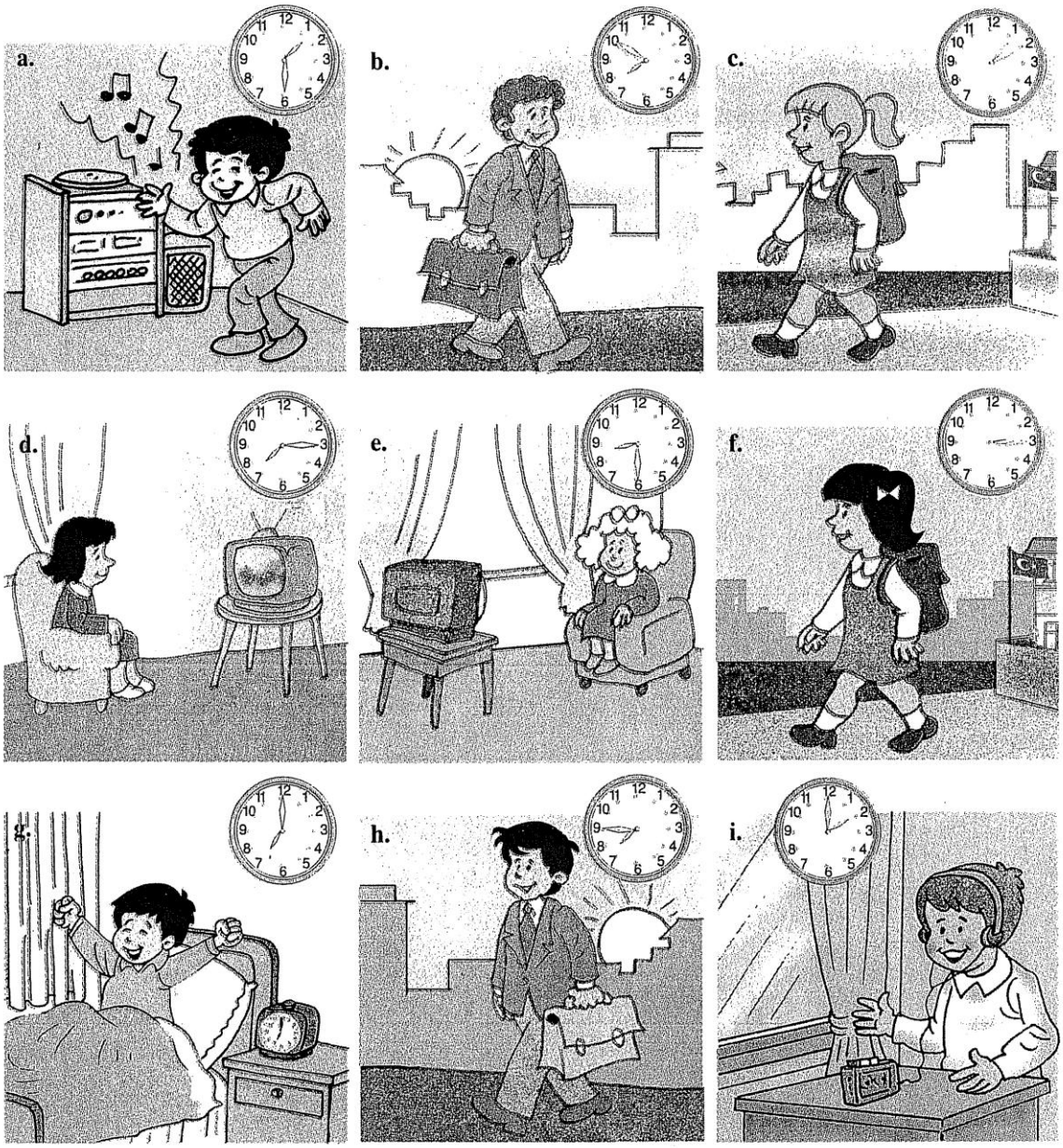

We have our lunch at one o'clock.


I do my homework from two to four o'clock.


I watch TV from seven to nine o'clock.


I go to bed at half past nine.

2. **Match the pictures with the sentences.**



(g) **1.** Ahmet gets up at seven o'clock.

( ) **2.** Elif watches TV at half past eight.

( ) **3.** Erol goes to school at ten to eight.

( ) **4.** Cemal listens to music at half past one.

( ) **5.** İpek arrives home at ten past one.

( ) **6.** Ezgi watches TV at quarter past seven.

( ) **7.** Ömer listens to music at two o'clock.

( ) **8.** Cem goes to school at quarter to eight.

( ) **9.** Cemile arrives home at quarter past three.

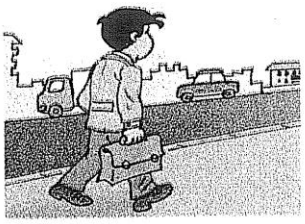
3. **Look at the pictures and do the same.**


(get up)

He gets up at quarter past seven.

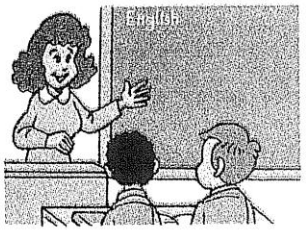

(have breakfast)

.....

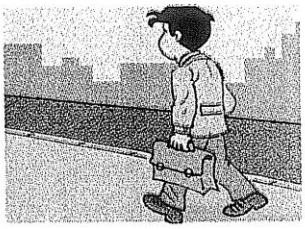
(go to school)

.....

(first lesson start)

.....

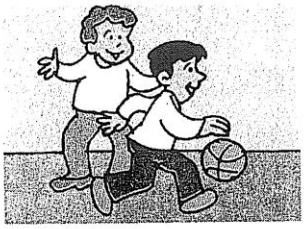



(arrive home)

.....

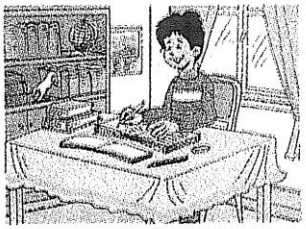

(have lunch)

.....

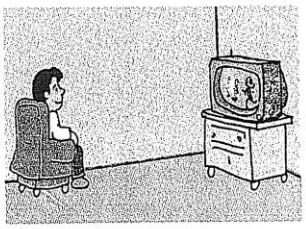
(play basketball)

.....

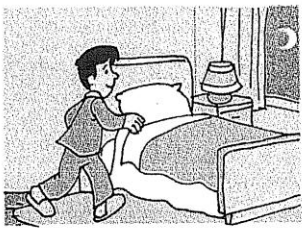
(do homework)

.....

(watch TV)

.....

(go to bed)

.....

4. **Do the same.**

1. Yusuf-lunch-  Yusuf has lunch at quarter past seven.

2. Elif-book-  ..... .

3. Cem-homework-  ..... .

4. Dilek-volleyball-  ..... .

5. Ali-bed-  ..... .

5. **Write about your day.**

I get up ..... .

..... .

..... .

..... .

..... .

..... .

6. **Ask your friend next to you, and write about his/her day.**

She/He gets up ..... .

..... .

..... .

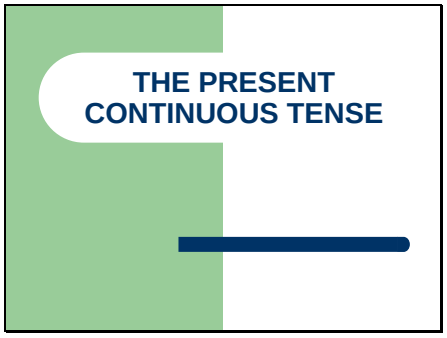
..... .

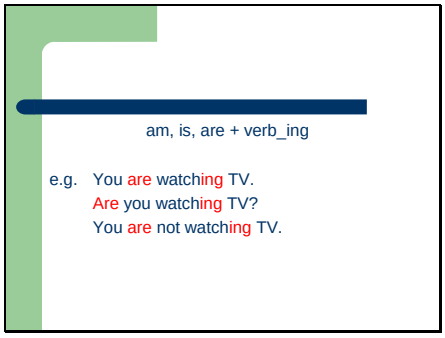
..... .

..... .

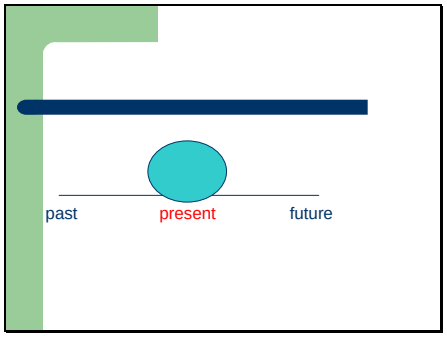
Appendix 8: The First Week Intervention Material with MI-based Instruction

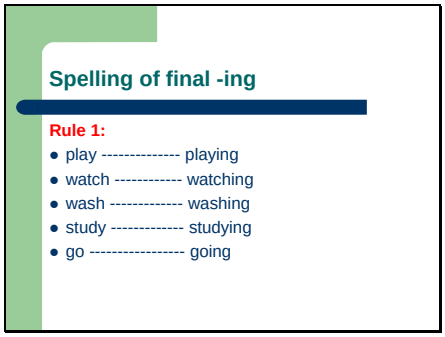
Slayt 1



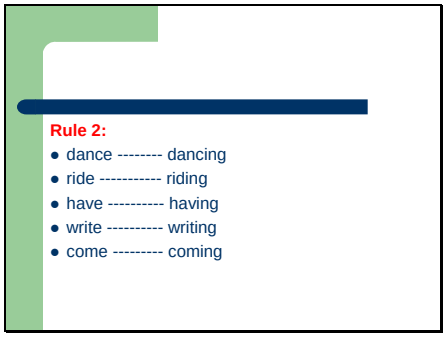


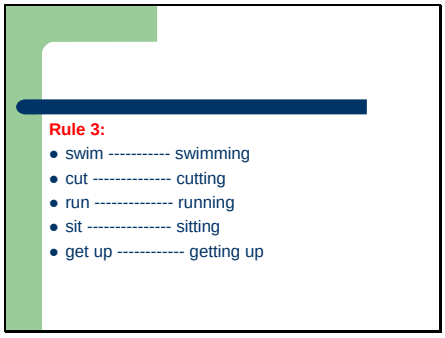
Slayt 2





Slayt 3





Slayt 4

Common tense markers

- Now
- At the moment
- At present
- Still
- Look!, Listen!, etc.

Simple Present vs Present Continuous

- I usually watch TV in the evening.
- I am watching TV at the moment.

- He always gets up early but today he is *still* sleeping.

Slayt 5

Short versions

- I am = I'm
- He
- She
- It → is='s
- We
- You
- They → are='re

- I am not = I'm not
- is not = isn't
- are not = aren't

Slayt 6

Short answers

A: Are you coming out?
B: Yes, I am.
No, I'm not.

A: Is	he / she / it		sleeping?
B: Yes, he / she / it		is.	
No, he / she / it		isn't.	

Slayt 7

A: Are they sleeping?
B: Yes, they are.
No, they aren't.

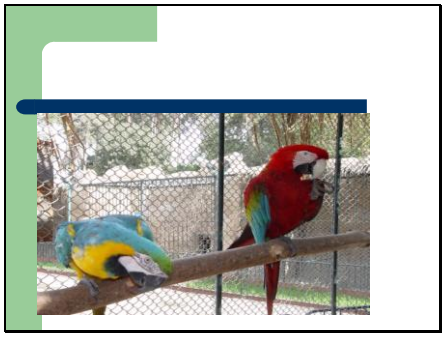
- Question word + am,is,are + S + V_ing + O

e.g. What are you doing now?
Where is she going?
Who is he talking to?
When are we leaving?

Slayt 8

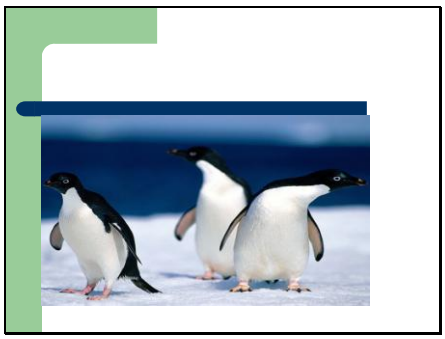
Slayt 9

Slayt 10

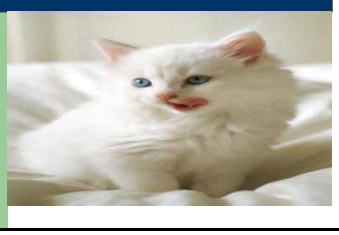


Slayt 11

Slayt 12



Slayt 13



Present Tense ile ilgili basit mini bir quiz…

- 1 - I ..... her every day and she never says hello to me.

  (a) see
  (b) am seeing
  (c) will see

Slayt 14

- 2 - What is the name of that picture which you ..... on the wall.

  (a) look at
  (b) is looking at
  (c) are looking at

- 3 - ..... to see that film that is on at the cinema next week?

  (a) Do you go
  (b) Is you going
  (c) Are you going

Slayt 15

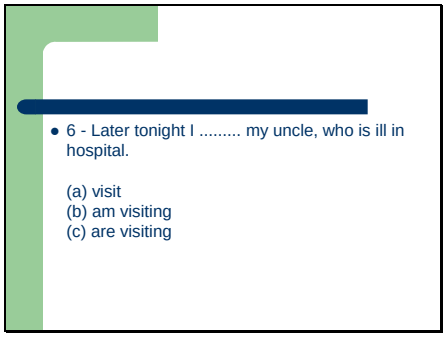
- 4 - ..... every single thing which that man says?

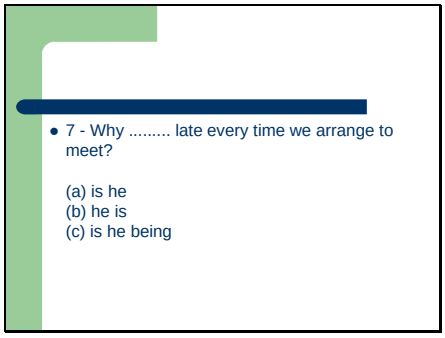
  (a) Do you believe
  (b) Is you believing
  (c) Are you believing

- 5 - Sometimes I ..... what the teacher says to me.

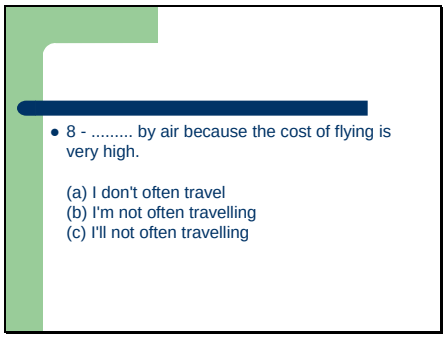
  (a) don't understand
  (b) am not understanding
  (c) understand not

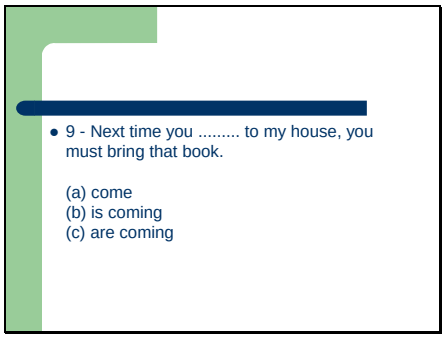
Slayt 16



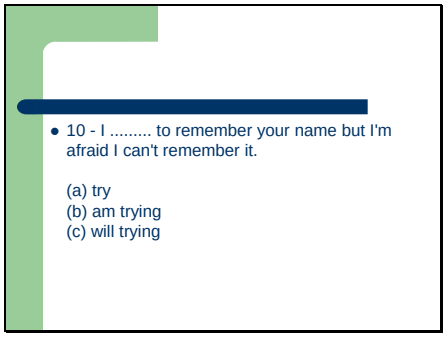


Slayt 17



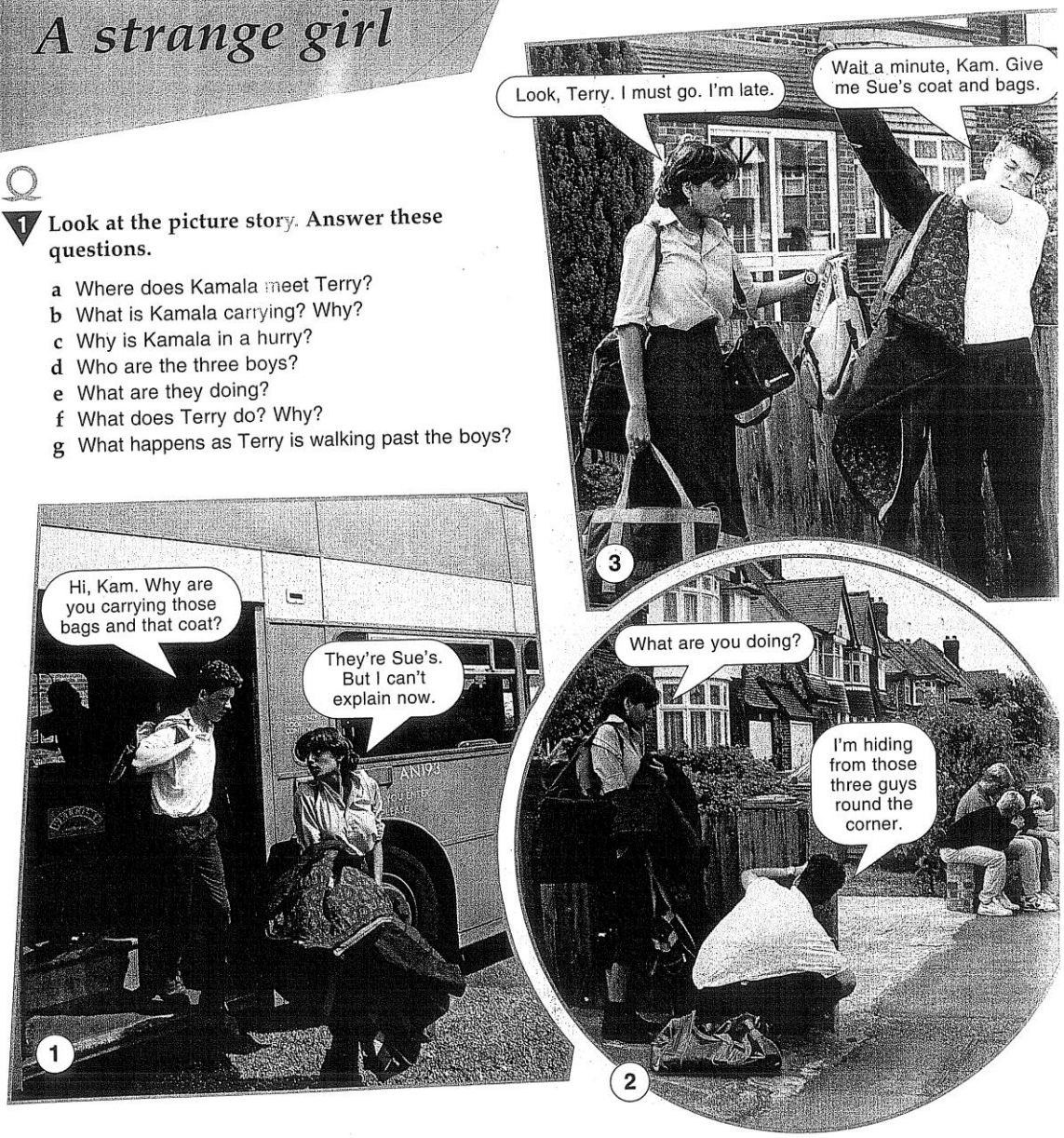


Slayt 18



Appendix 9: The Second Week Intervention Material with MI-based Instruction

A strange girl



1 **Look at the picture story. Answer these questions.**

a Where does Kamala meet Terry?
b What is Kamala carrying? Why?
c Why is Kamala in a hurry?
d Who are the three boys?
e What are they doing?
f What does Terry do? Why?
g What happens as Terry is walking past the boys?

2 **Listen and follow in your book.**

Terry Hi, Kam. Why are you carrying those bags and that coat?

Kamala They're Sue's. But I can't explain now. I'm in a hurry…What's the matter, Terry? What are you doing?

Terry I'm hiding from those three guys around the corner. What are they wearing?

Kamala Well, one of them is wearing a red sweater and jeans, one is wearing a black jacket and grey trousers.

Terry Is the other guy wearing a blue sweatshirt?

Kamala Yes, he is.

Terry It's them. What are they doing?

Kamala Well, they aren't doing anything. They're sitting on a wall. Look, Terry, I must go. I'm late.

Terry Wait a minute, Kam. Give me Sue's coat and bags. I can take them…Good, the big guy isn't looking at me. But the wind is blowing the hood…Oh no!

Darren There he is. Quick. Chase him.

3 **Right, Wrong or Don't know?**

	✓	✖	?
a In picture 1, Terry and Kamala are arriving at Victoria Road.	❑	❑	❑
b Kamala is carrying Sue's bags.	❑	❑	❑
c In picture 2 Terry is hiding from the three boys.	❑	❑	❑
d Darren Tooley is wearing a sweatshirt.	❑	❑	❑
e The three boys are talking to a man.	❑	❑	❑
f In picture 4 Terry is wearing Sue's coat.	❑	❑	❑
g In the last picture, the three boys are chasing Terry.	❑	❑	❑

4 **Listen again and repeat.**

Useful expressions

5 **How do you say these in your language?**

I'm late.

It's them.

There he is.

I can't explain.

Wait a minute.

round the corner

6 **Work with a partner. One person is Terry, one is Kamala and Darren Tooley. Read the dialogue.**

optional activity

FOLLOW UP

7 **What is happening in each picture in the story?**

a Complete the sentences.

..... are sitting on a wall.

..... is wearing Sue's coat.

..... are chasing Terry.

..... are arriving at Victoria Road.

..... is blowing the hood.

..... is hiding from the three boys.

..... is giving Sue's coat and bags to Terry.

b Which picture does each sentence describe?

Appendix 10: The Second Week Intervention Material with MI-based Instruction

READING

1 a Look at the pictures. Which outfit do you like best? Why?

b Read the texts. Match the names to the correct pictures.

Sharon's wearing a pink jumper, a dark brown skirt, brown tights and brown shoes. Her jumper is £12.99 from 'Dorothy Perkins'. The jacket is grey with pink buttons and is £49.99 from 'Warehouse'. Sharon's also wearing a purple headband and pink gloves.

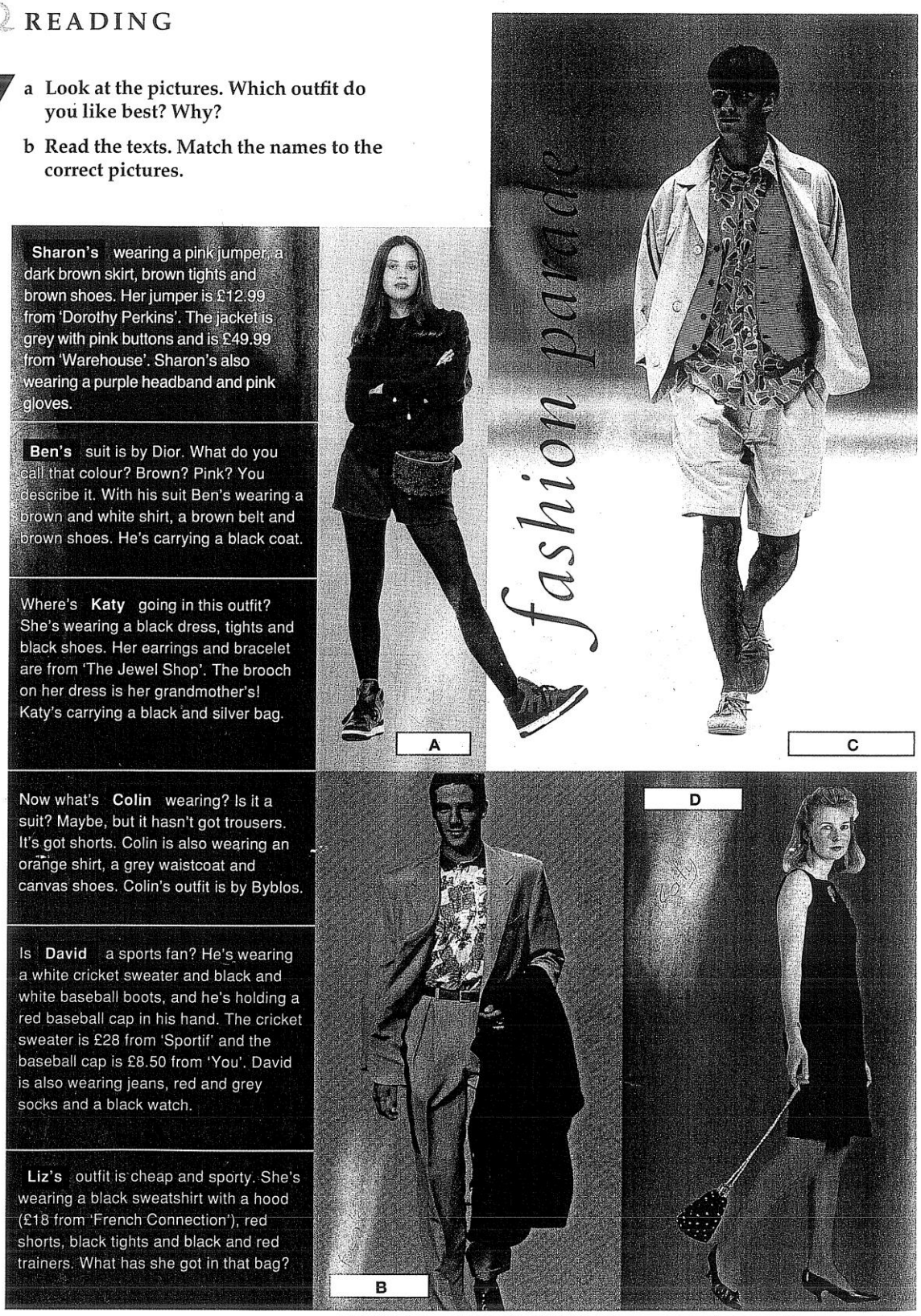
Ben's suit is by Dior. What do you call that colour? Brown? Pink? You describe it. With his suit Ben's wearing a brown and white shirt, a brown belt and brown shoes. He's carrying a black coat.

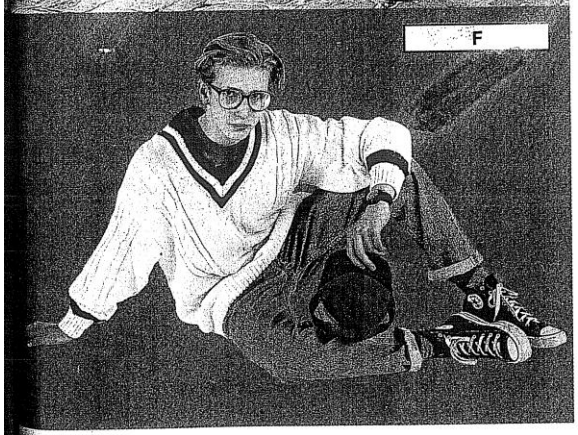
Where's **Katy** going in this outfit? She's wearing a black dress, tights and black shoes. Her earrings and bracelet are from 'The Jewel Shop'. The brooch on her dress is her grandmother's! Katy's carrying a black and silver bag.

Now what's **Colin** wearing? Is it a suit? Maybe, but it hasn't got trousers. It's got shorts. Colin is also wearing an orange shirt, a grey waistcoat and canvas shoes. Colin's outfit is by Byblos.

Is **David** a sports fan? He's wearing a white cricket sweater and black and white baseball boots, and he's holding a red baseball cap in his hand. The cricket sweater is £28 from 'Sportif' and the baseball cap is £8.50 from 'You'. David is also wearing jeans, red and grey socks and a black watch.

Liz's outfit is cheap and sporty. She's wearing a black sweatshirt with a hood (£18 from 'French Connection'), red shorts, black tights and black and red trainers. What has she got in that bag?





2 **Find one example of each of these things in the pictures.**

shirt	dress	shorts	trousers	waistcoat
belt	socks	cap	brooch	headband
suit	shoes	coat	jacket	
skirt	earrings	gloves	sweater	
tights	trainers	bag	bracelet	

optional activities

3 **a Use the things in the pictures. Choose different items to make a new outfit.**

b Describe your new outfit.

4 **Which outfit would you choose for these occasions?**

a You are going to a friend's birthday party.
b You are going for a picnic.
c You are going to the cinema.
d You are visiting your grandparents.
e You are helping with the housework.
f You are going to a wedding.

WORD WORK

5 **How many names of clothes do you know? Put them in a chart like this. Who can make the longest list?**

boys	girls	unisex

6 **You are going on holiday. You can only take six things. Choose six things from your own clothes.**

Example
my blue trousers

optional activities

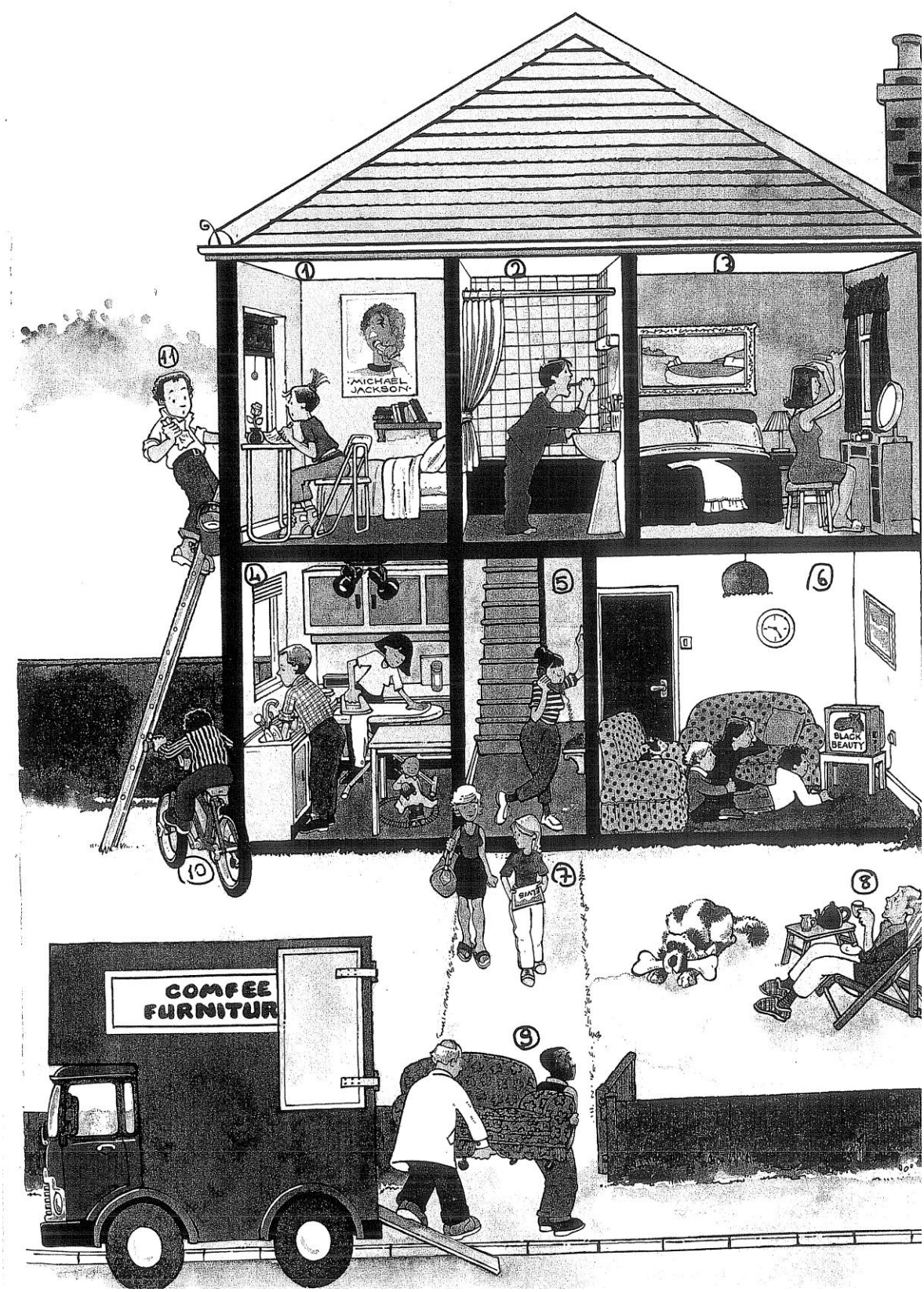
7 **Think about it.**

- Do you think clothes are important?
- How much do people spend on clothes? Is it too much?
- Do you prefer clothes with famous brand names?
- Why do people pay more for a famous brand name?

FOLLOW UP

8 **Describe the clothes that you are wearing now.**

Appendix 11: The Second Week Intervention Material with MI-based Instruction



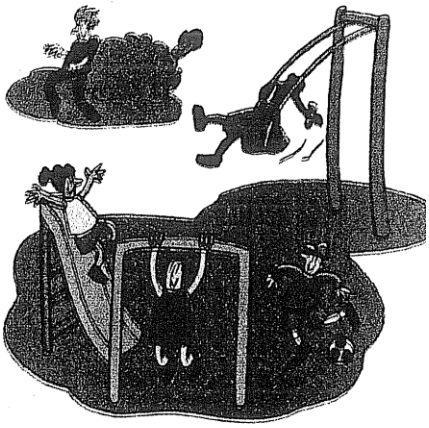
Appendix 12: The Second Week Intervention Material with MI-based Instruction

(Word Order Activity & Game)

PART 3 Reading And Writing Time

Put the words into the correct order. Re-write the sentences.

1. playing / are / Pat / Mark / and / hide and seek.
.....
2. sliding / Debbie / is.
.....
3. the / Fran / climbing / bars / is.
.....
4. football / is / Roy / playing.
.....
5. is / swinging / Vicky.
.....



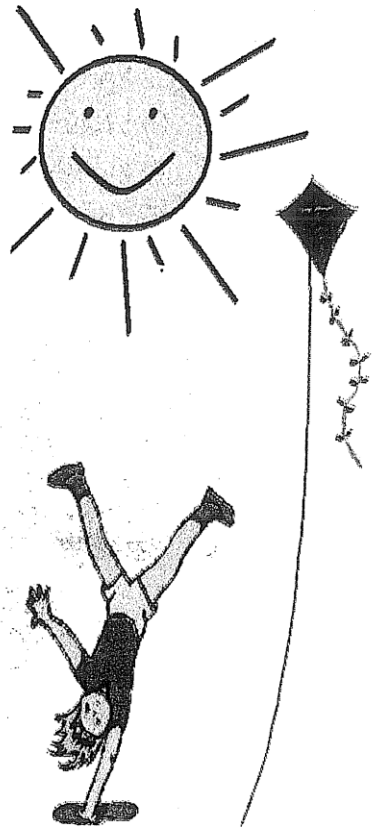
PART 4 Game Time – 1

a) Read the poem. Rehearse it.

Are you having fun?
Yes! I am sitting in the sun.
This park is number one!

Is Macy flying a kite?
Yes! It's out of sight.
The sky is so bright.

Are you playing with the sand?
No! We're doing a handstand.
This park is our land.



b) Now, read it aloud for your friends in different tones (happy, sad, angry, nervous, bored).

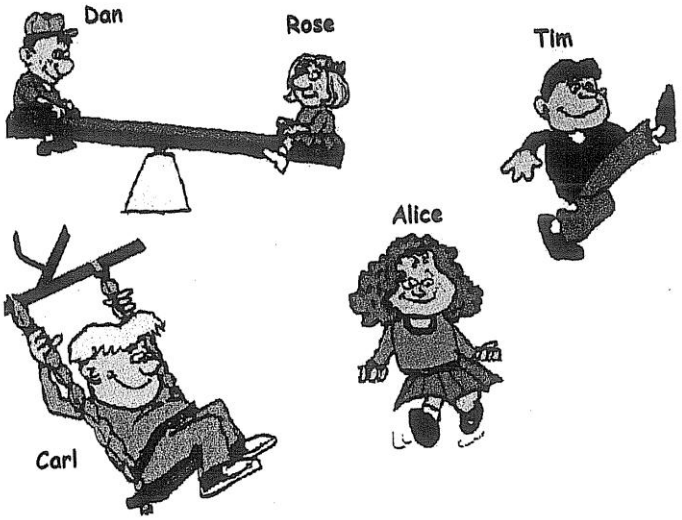
Appendix 13: The Second Week Intervention Material with MI-based Instruction

PART 6 Speaking Time

Work in pairs. Don't show your cards.
Pair A: Ask questions. Find out what children are doing. Draw and complete the picture.
Pair B: Listen to the question. Answer your friend.
Now, change roles.

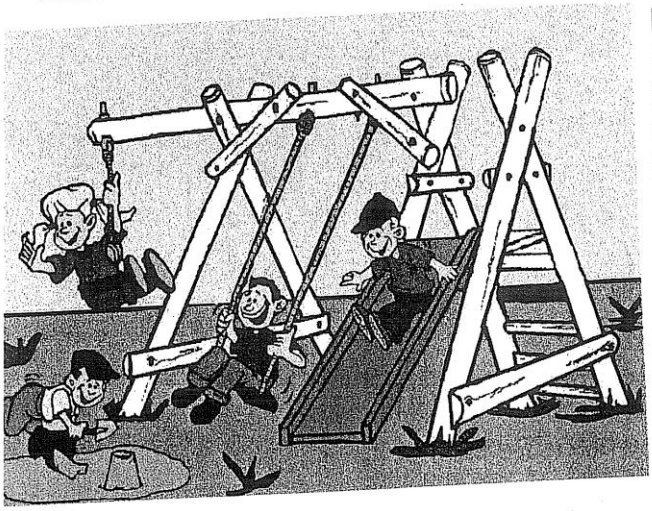
▶Pair B is on page 153.

PAIR A

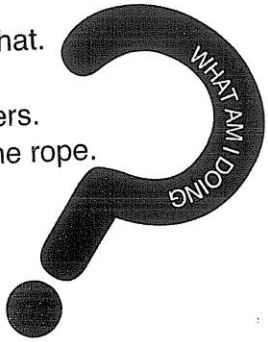


PART 7 Game Time – 2

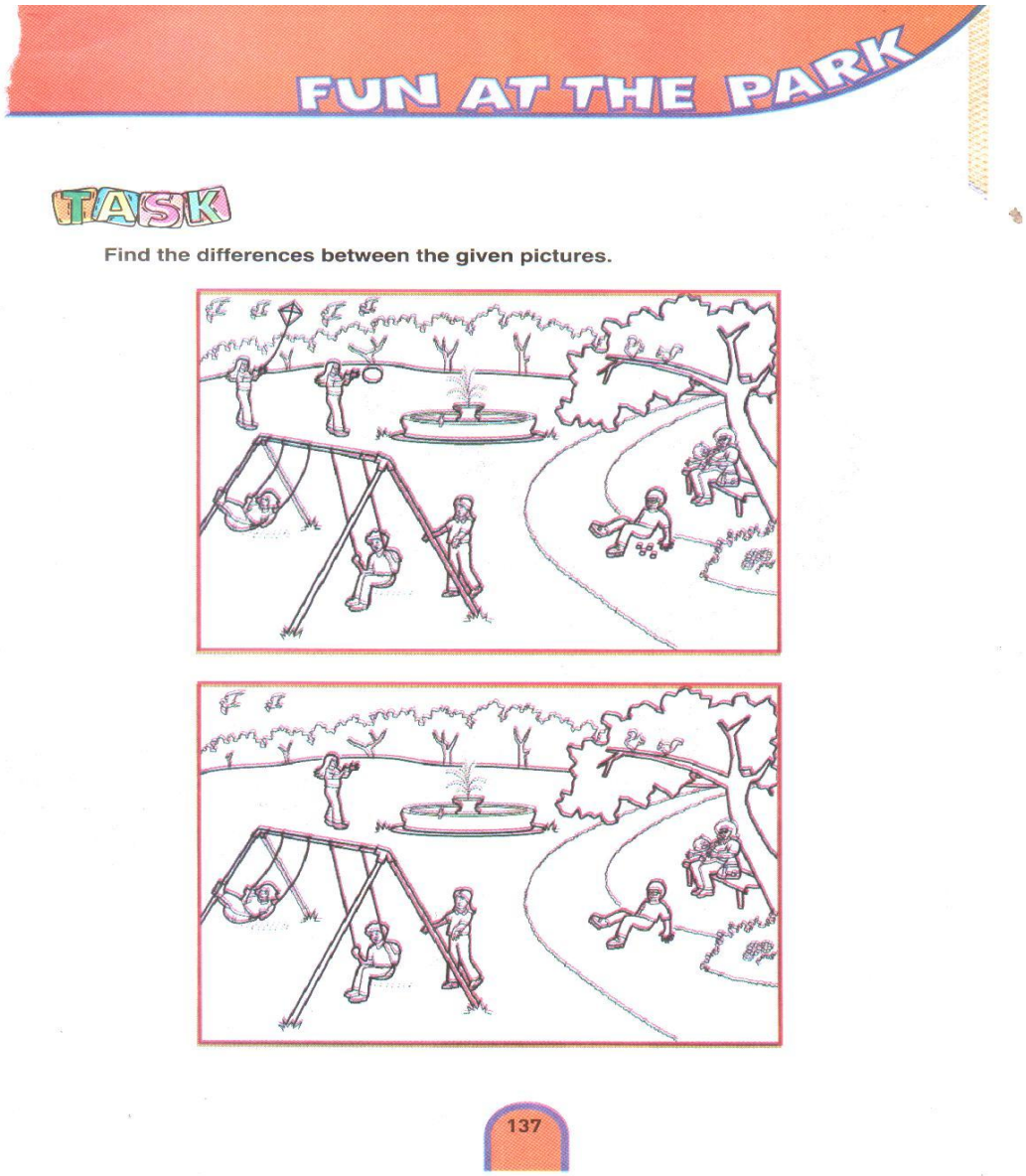
Read the clues. Find me in the picture.



It's a lovely day.
I'm at the park.
I'm playing with my friends.
I'm not sitting on the bench.
I'm not wearing a brown T-shirt.
I'm not swinging.
I'm not wearing a hat.
I'm not sliding.
I'm wearing trousers.
I'm not climbing the rope.



Appendix 14: The Second Week Intervention Material with MI-based Instruction



FUN AT THE PARK

TASK

Find the differences between the given pictures.

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Appendix 15: London Bridge is Falling down – Nursery Rhyme

London Bridge is falling down,
Falling down, falling down.
London Bridge is falling down,
My fair lady.

Build it up with iron bars,
Iron bars, iron bars,
Build it up with iron bars,
My fair lady.

Iron bars will bend and break,
Bend and break, bend and break,
Iron bars will bend and break,
My fair lady.

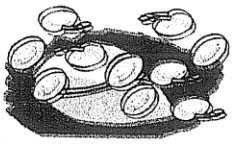
Build it up with gold and silver,
Gold and silver, gold and silver,
Build it up with gold and silver,
My fair lady.

Appendix 16: The Third Week Intervention Material with MI-based Instruction

(Short Story)

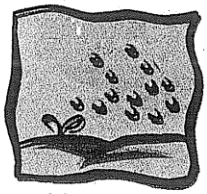
b) Read the story and fill in the chart.

There is a little red hen. She lives on a farm.
She has got three friends; a lazy dog, a sleepy cat and a noisy duck.



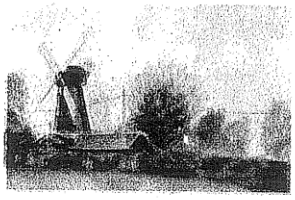
One day, she finds some seeds on the ground.
The little red hen has got an idea. She can plant the seeds.

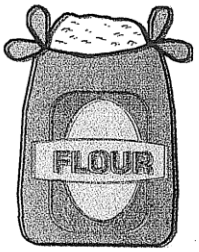
The little red hen asks her friends: "Who can help me plant the seeds?"
"Not I," says the lazy dog. "I'm resting."
"Not I," says the sleepy cat. "I'm sleeping."
"Not I," says the noisy duck. "I'm singing."
"Okay, then," says the little red hen.
She plants the seeds all by herself.



When the seeds are grown, the little red hen asks her friends:
"Who can help me cut the wheat?"
"Not I," says the lazy dog. "I'm resting."
"Not I," says the sleepy cat. "I'm sleeping."
"Not I," says the noisy duck. "I'm singing."
"Okay, then," says the little red hen.
She cuts the wheat all by herself.

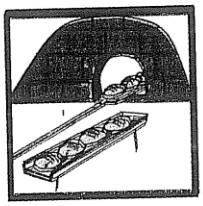
When all the wheat is ready, the little red hen asks her friends:
"Who can help me take the wheat to the mill?"
"Not I," says the lazy dog. "I'm resting."
"Not I," says the sleepy cat. "I'm sleeping."
"Not I," says the noisy duck. "I'm singing."
"Okay, then," says the little red hen.
She takes the wheat to the mill all by herself.

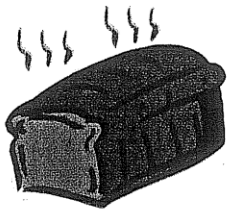




When the flour is ready, the little red hen asks her friends: "Who can help me carry the flour back to the farm?"
"Not I," says the lazy dog. "I'm resting."
"Not I," says the sleepy cat. "I'm sleeping."
"Not I," says the noisy duck. "I'm singing."
"Okay, then," says the little red hen. She carries the flour sack all by herself.

When she is back, the little red hen asks her friends: “Who can help me bake some bread?”
"Not I," says the lazy dog. “I'm resting.”
"Not I," says the sleepy cat. “I'm sleeping.”
"Not I," says the noisy duck. “I'm singing.”
“Okay, then,” says the little red hen.
She bakes the bread all by herself.



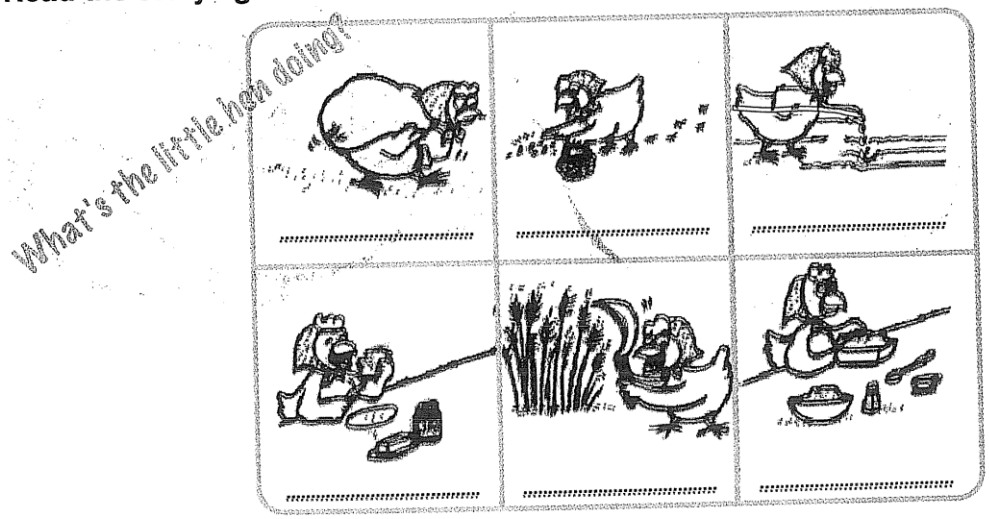


When the bread is ready, the little red hen asks her friends:
“Who can help me eat the bread?”
"I can," says the lazy dog. “I'm not resting now.”
"I can," says the sleepy cat. “I'm not sleeping now.”
"I can," says the noisy duck. “I'm not singing now.”
"No!" says the little red hen, "I can eat it all by myself."
Now, the little red hen has got a lot of bread all for herself.

	The little red hen	The lazy dog	The sleepy cat	The noisy duck
Singing				
Working				
Sleeping				
Resting				

PART 3 Reading and Writing Time

Read the story again and write the answer under the pictures.



CURRICULUM VITAE

Gülden KOCAKARA was born in Ünye in 1981. After finishing Mehmet Refik Güven Anatolian Teachers' High School in Ünye, she attended the English Language Teaching Department in Middle East Technical University in Ankara. After graduating from the department in 2004, she started to work as an English teacher in Akkuş İMKB YİBO in Ordu. Then, she was admitted to the M.A. program in Applied Linguistics at Karadeniz Technical University, Trabzon. She is currently employed as a teacher in Ünye Hotel Management and Tourism Vocational High School.