The Effect of an Instructional Program Based on Multiple Intelligences Theory on the Basic Stage Students' Achievement in English

أثر برنامج تعليمي قائم على نظرية الذكاءات المتعددة في تحصيل طلبة المرحلة الأساسية في اللغة الإنجليزية

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The Effect of an Instructional Program Based on Multiple Intelligences Theory on the Basic Stage Students' Achievement in English

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Dedication

To my father, whose confidence paved my path to pursue my goals, and whose sacrifice and support made this work possible, to my mother, who encouraged me in the difficult moments of my life, advised me to continue my study to get a Ph.D degree to materialize one of my dreams, and to my sisters and brother who were always supporting me and encouraging me with their best wishes. I dedicate this work to my children who may always remember the importance of education, and finally, to my dearest, closest and real friends, I dedicate this work.
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Abstract

Abu Minshar, Manal Majed. (2012). The Effect of an Instructional Program Based on Multiple Intelligences Theory on the Basic Stage Students’ Achievement in English. Ph.D. Dissertation, Yarmouk University. (Supervisor: Prof. Fawwaz Al-Abd Al-Haq, Associate Supervisor: Dr. Lutfi Abu Al-Haija).

The aim of this study was to investigate the effect of an instructional program based on multiple intelligences theory on the basic stage students’ achievement in English and their intelligences. This study also aimed at investigating the effect of the program on eighth grade teachers’ practices. The study was carried out in the academic year 2011 – 2012 in Al-Mafraq District.

The participants of the study were two groups: the teachers and the students. Eighth female teachers participated in the study. The first group of teachers (N=4) was assigned to the control group and the second group (N=4) was assigned to the experimental group and trained on the program which was prepared by the researcher. Eight students’ sections were selected from those which were taught by the same teachers. The experimental teachers’ group taught four sections which constituted the students’ experimental group, while the control group teachers taught the other four sections which constituted the students’ control group.

The following are the questions of the study:

1. Are there any statistically significant differences at (α = 0.05) in the students’ intelligences before and after the implementation of the Multiple Intelligences training program?
2-Are there any statistically significant differences in the students’ achievement in English before and after the Multiple Intelligences training program?

3- What is the impact of this training program on teachers’ classroom practices?

To answer the questions of the study, the researcher designed a training program for training eighth grade teachers, and two units from Eighth grade English book were developed according to Multiple Intelligences Theory, as well as an observation checklist in order to observe teachers’ practices and an achievement test in order to measure the development of the students’ achievement in English, the researcher also developed an intelligences inventory based on Gardner, 2001, Teel, 1992 and Mchenzi, 1999 to measure the effect of the program on students’ intelligences. These tools were validated and their inter-scorer reliability was ensured.

The results of the study were as follows:

The results of the research showed a statistically significant difference at (α=0.05) between the achievement scores of the experimental group and the control group in favor of the students in the experimental group who were taught using the multiple intelligences theory. Besides, the multiple intelligences activities were effective in developing students’ intelligences, and that the multiple intelligences program had a positive effect on teachers’ classroom practices.

Based on the above results, the study offered recommendations that might be useful for developing students’ intelligences and achievement in English.

**Key Words:** Multiple Intelligences, Linguistic Intelligence, kinesthetic Intelligence, Training program, visual Intelligence, logical Intelligence, Interpersonal intelligence, Training program, Teachers Practices.
Chapter One

Introduction

Background of the Study

It is important to keep up with the developments in the educational field and try to benefit from the current educational views and psychological theories. The educational system is in need of re-examining its aims, content, methods and curriculum in order to become an instrument for development. This system needs to be changed in order for it to meet the challenges of modern society. In recent years, research has focused on the learners’ mental and cognitive abilities. This concern is the base of the multiple intelligences theory (MIT) which is one of the most permanent theories in the field of education (Denig, 2004).

The MIT was developed by Gardner and articulated in his eminent work, *Frames of Mind* (1983). Gardner advocates a move away from evaluative tests and correlation of tests to look at more natural sources of information relating to how people develop skills that are important to their culture and way of life. Gardner (1983) defines multiple intelligences (MI) as "the ability to solve problems or to create fashion products that are valued within one or more cultural settings". This definition challenged the traditional psychological view of intelligence as a single capacity that drives logical and mathematical thought. Gardner’s theory encourages a shift from the more traditional understanding of intelligence to a more holistic perspective that validates and fosters each and every part of a person’s mind. In the same direction, Gardner (1993) describes intelligences as a bio-psychological potential that could be influenced by experience, culture, and motivational factors.
The MIT formulated by Gardner is one of the theories that conceive intelligence as a basic variable influencing learning. This theory that Gardner came up with means there are differences between people in their mental and cognitive abilities, which means they have different types of intelligences. For example, a person could have excellent verbal intelligence but finds it difficult to learn music. This means that a person may possess all the Intelligences or some of them. For instance, if a student does not participate in a classroom, that does not mean that the student is weak, the student might have other intelligences that enable him to be creative in other areas (Eid, Alizh & Sheaere, 2004).

Gardner (1983) proposes different and autonomous intelligences capacities that result in many different ways of knowing, understanding, and learning about the world to have a better understanding of the theory. These intelligences in combination enable people to understand the world and to express themselves in a good way. The MIT contains eight types of intelligences, which include:

- Verbal Intelligence: having the ability to use the words fluently in speech or writing; it also involves being able to remember the information and form words and their meanings.
- Logical/Mathematical Intelligence: being able to logically analyze the problems, work with the mathematical equations and explain them in a good way, and apply the scientific way in solving problems.
- Spatial Intelligence: having the ability to realize the universe in a visual/spatial way and it also involves the ability to visualize graphically the visual and spatial ideas.
- Kinesthetic-Bodily Intelligence: having the ability to use the body as a whole or parts of it in learning and being able to express ideas and feelings and be able to solve problems in a way that goes with the individual’s mental abilities.

- Musical Intelligence: having the ability to feel the musical notes and being able to perform.

- Natural Intelligence: having the ability to understand the different natural limitations and to know the different types in nature.

- Interpersonal Intelligence: the ability to understand the feelings of others, their motives and interests, and differentiate between them.

- Intrapersonal Intelligence: having the ability to understand yourself, your motives, and feelings (Alaser and Alkafafey, 2000; Nelon, 2003; and Checley, 1997).

Later on, Gardner (1999) has opened the door to other intelligences:

- Spiritual Intelligence: having the ability to represent the spatial world internally in your mind—the way a sailor or airplane pilot navigates the large spatial world, or the way a chess player or sculptor represents a more circumscribed spatial world. Spatial intelligence can be used in the arts or in the sciences.

- Existential Intelligence: having the ability to be sensitive to, or have the capacity for conceptualizing or tackling deeper or larger questions about human existence, such as the meaning of life, why we are born, and why we die.

- Moral intelligence: having the ability to understand right from wrong. It means to have strong ethical convictions and to act on them so that one behaves in the right and honorable way.
Gardner (2004) believes that it is possible for each of these intelligences to be developed, in different degrees, through education, specially when there is training at early stages. Gardner’s MIT posits that students would learn better when teachers use different methods, exercises, and activities to reach all students’ intelligences, not only those who excel at linguistic and logical intelligence.

Silver, Strong, Perini (2000) believes that classroom focus should be on integrated learning. Integrated learning requires educators to have a holistic approach to teaching. In other words, they must step back and look at the big picture. The main goal is to maximize learning for all students. This takes into account Gardner’s MIT. Differentiated instruction is an approach to teaching that requires educators to change their teaching methods to fit the needs of their students.

Gardner (1994) believes that MIT helps parents and teachers to examine their own ideas and assumptions about achievement and considers various teaching approaches. MIT increases students’ confidence and enthusiasm for learning; it can also improve their academic achievement and change teachers’ perceptions of their students’ learning.

There are many important usages for this theory in teaching. Armstrong (1994) argues that the teacher can present the information for the students in nine different ways. Furthermore, it can help the teachers in varying their teaching strategies to reach as many numbers of students as possible with their different levels of intelligence going beyond the verbal and logical views that are used in a classroom environment. Teachers can use MIT to train their students to be more conscious and reflective in their thinking abilities. It also helps teachers to understand the
differences which they realize among their students and choose the suitable teaching methods in light of the individual differences between them.

According to Chapman (1993), several intelligence principles exist. First, intelligences can be modified. Teaching and learning processes can affect how well, or even if, an intelligence is developed. Second, children are born with certain innate abilities. Educational opportunities can further develop those abilities. Intelligence cannot only be increased but also taught. Third, each person is born with some level of each of the intelligences. The experiences and influences in each person’s life determines which intelligences are developed and to what extent. Fourth, teachers play a role in the development of the intelligences of their students. In most cases, unless they are addressed, a student’s intelligences may never be identified.

The subject of MI has taken a great deal of attention by the researchers, so they started investigating about MI among their students whether at school learning stage or university learning stage. According to Kagan (2000), there are many reasons why teachers should care about MIT in the classroom. Using the MIT in the classroom will better prepare students for future, and will make the curriculum accessible to all students, and making the content area engaging and exciting to all students. Students should be taught according to their abilities and ways of learning. Active and involved teaching is a step towards students' academic success.

MIT asks the question, in what ways students are smart, rather than, are they smart. Teachers generally hold the view that all students are capable of achieving; MIT considers this and indicates the teaching strategies that will bring forth such success (Denig, 2004).

Kallenbach and Viens (2002) encourage educators to consider and develop MIT based practices for their own contexts, according to their best professional judgment with the help of
active support and guidance. MIT has generated a great deal of enthusiasm among some educational communities for its individualized approach and practical application in the classroom.

Gardner (1994) believes in teachers’ role to cultivate the intelligences by using variety of approaches to the subject matter. In addition, Wallace (2010) emphasizes that the teachers may be able to incorporate intelligences into their foreign language classroom, so that learners can learn faster.

The MIT has been introduced into a number of international schools; Kezar (2001, P.146) argues that one factor smoothing its acceptance is the more general fact that schooling is gradually moving from teacher-center to students-center. He adds that trend of transferring learning outside the classroom into settings “where the intelligences are used actively” is another development that favor MIT.

The Jordanian Ministry of Education (MoE) realizes the importance of the English language as a global means of communication. It also realizes that learning English nowadays occupies a prominent position in today’s technological world. This stand is clearly reflected in the General Guidelines and General and Specific Outcomes for the English Language (2006). The MoE indicates that learning English enables students to cope with the vast changes and developments that take place around the world. It is one of the disciplines of the curriculum from the basic stage throughout high school.

In light of the great need to improve the process of learning English as a foreign language (EFL) in Jordan, and because teachers are the key figures, determinant of students’ success (Goldberge, 2001), and they are the ultimate decision makers in the classroom (Freeman and Johnson, 1998), training programs should be designed to include, besides the received
knowledge, intensive activities and practical applications on how to apply effectively the techniques and strategies of teaching inside the classroom.

Here in Jordan the need to follow effective teaching strategies in the classroom is increasing. It is very important to conduct a study in order to explore the types of intelligences existing in EFL students, and try to develop those intelligences and provide students with effective teaching strategies to enhance their achievement in the English language.

Statement of the problem

Since workshops and training programs of the MIT principles are important to be introduced (Al-Omari, 2011), and since research studies examining the link between training programs and students' achievement in English are rare, further research in this area is in great need, particularly in response to the current reform efforts and the ever changing needs of students (Hijazi, 2010).

The researcher noticed during her experience as a teacher of English for six years that students have a salient weakness in English. This may be due to the fact that English teachers must be better equipped to widen their pedagogical repertoire to accommodate linguistically, culturally, and cognitively diverse students. In addition, teachers should know how to cater optimally to learners with different intelligences profiles and how to create a learning environment in which learners feel secure and relaxed. In light of these findings the researcher aims to implement a program of multiple intelligences theory to measure its effect on developing students' achievement and intelligences, and to measure the program's effect on teachers' practices. It is hoped that such program will foster and promote a sustainable spirit of development for teachers to apply this theory in the classroom in order to change teachers'
practices inside the classroom and to determine the effect of the program on students’ achievement and intelligences.

Questions of the Study

1- Are there any statistically significant differences at(\(\alpha =0.05\)) in the students’ intelligences before and after the implementation of the MI training program?

2- Are there any statistically significant differences at(\(\alpha =0.05\)) in the students’ achievement in English before and after the MI training program?

3- What is the impact of this training program on teachers’ classroom practices?

Operational Definition of Terms

The following terms have the associated meanings whenever they appear in this study:

-MI Training Program: It is a well-prepared plan based on MIT, and designed by the researcher to train eighth grade female teachers in specific skills to equip MIT in their classrooms.

-Multiple Intelligences (MI): Different types of intelligences that show the learners’ ability, and that includes indications of the kinds of students' capacity . In this study there are five intelligences which were measured by the Intelligences Inventory.

-Teacher Classroom Practices: They are the teachers' behaviors in the classroom setting which are related to planning classroom lessons with various MI activities, and which are noticed by an observation checklist to measure the extent of the teacher's execution of these behaviors.

-Students’ Achievement: It is determined by students’ grades on classroom scores on an English test that includes vocabulary, grammar, writing, reading, speaking.
Significance of the Study

The researcher believes that it may be necessary to design an instructional program based on MIT. Implementing such a program can be significant for the following parties:

- EFL Teachers, since it can empower teachers so that they are able to diagnose the students based on their intelligences. This study will train EFL teachers to develop a multiple intelligences way of teaching since they can be reminded of the fact that students usually vary in their intelligences profiles and need to have different activities and tasks for learning to occur. Teachers may become increasingly aware of their individual preferred methods and will be able to recognize factors which either facilitated or inhibit students' learning.

In addition, the present study is expected to engage teachers in activities that they may use to address the range of intelligences. This study can provide valuable information to the teachers on how the changing in their practices inside the classroom by using the MIT can raise students' achievement in English. This study may provide deeper insights into teachers' classroom practices as they acquire and apply MIT in the classroom and the effect not only on the students' achievement in English, but also on the various intelligences of the students.

- The students, since this study may guide them to notice their areas of interest and their strengths and weaknesses so that they can take more responsibility for their own learning; this is a key factor in raising the self-esteem of many students, particularly those who regard themselves as failures.

- Researchers, since they may derive insights for different research studies stemming from the MIT principles. Also, the significance of this study may stem from the recommendations of many researchers (e.g. Loucks and Melle, 1982; Guskey and Sparks, 1991; Eun and Boynton, 2007; Hijazi, 2010; Al-Omari, 2011) who recommend conducting further researches to...
investigate the effect of training programs on teachers' classroom practices and students' achievement.

-The significance of the study also appears through the possibility to overgeneralize it to other contexts.

Limitations of the study

1-This study is limited to the eighth grade female students in Al-Mafraq District during the academic year 2011-2012.

2-The MI program is designed for the eighth grade English female teachers in Mafraq District.

3-The developed units are limited to the fifth module (units 7 and 8) of eighth grade English book (Action Pack), which is taught in public schools in Jordan for the academic year 2011-2012.

4-The study measures the effect of the program on developing five types of students' intelligences only because these types can be developed in pedagogical settings and it's difficult to use all types of intelligences in the same lesson.

Review of Related Literature

This chapter presents a review of the theoretical and empirical literature on the relationship between training programs in general and the development of teachers' practices and students' achievement, the relationship between using MIT inside the classroom and the development of students' achievement and the effect of using MIT inside the classroom on improving students' intelligences. Finally, this chapter ends with concluding remarks.
Part one: Theoretical Background

Training Programs and Teachers' Development

There is no doubt that the current educational climate is driven by an overriding concern with students’ achievement and what promotes it. The role of teachers in students’ achievement is central to this concern. We can help adult students achieve higher standards only if we enhance the effectiveness of our teachers (Smith and Gillesbe, 2007).

Darling-Hammond and McLaughlin (1995: 597) wrote, “the new visions of practice that underlie the nation's reform agenda require most teachers to rethink their own practices and beliefs about students, to construct new classroom roles and expectations about students' outcomes, and to teach in ways they have never taught before”.

Head and Taylor (1997) explained that teachers must be provided with opportunities to learn. Professional learning of the teachers punctuated by the effective training programs is recognized as a key component of building teachers' competencies.

Kallested and Olweus (1998) stated that teachers' training and professional preparation have a large impact on defining teachers' goals for their students, and those goals in turn affect teachers’ behavior in the classroom and schools.

Fillmore and Snow (2002) described the multiple roles of the teacher. The teachers must have an understanding of how English language learners use language. For example, teachers need training to know language learners' different problems that resolve themselves with time and which need attention.
Reimers (2003) stated that teachers may obtain individual satisfaction in training programs, but the most important thing is the positive impact of training on teachers' beliefs and practices, students' achievement, and on the implementation of educational reforms.

Healey (2008) investigated ideas about training in developing countries. For him, training is an important feature of the most social sector. He stated that training can make public sector personnel seek out professional development opportunities that will enhance teachers' job performance and ensure that what they learn is actually utilized.

Effective teachers' training is supposed to foster lasting change in the classroom. When it does not, teachers waste valuable time and resources. Attending a workshop can help raise awareness of and enthusiasm for a topic. A professional development program will have a greater probability of success when the learning goals are clear to all at the building and district levels (Chappuise, 2009).

In the challenge of bringing the students to have English competency as international language, teachers must be ready to be trained to accept and adapt themselves with many kinds of changes that happen around them. Teachers are demanded to change their function to achieve long life learning (Wati and Herlina, 2011).

Training Programs and Students' Achievement

In recent years there has been growing recognition that teachers are the most important factor in students' achievement and that the professional development is the most effective way for changing practices (Carey, 2004). Borko and Putnam (1995) supported the fact that training plays an important role in changing teachers' teaching methods, and that these changes have a positive impact on students' learning. Experienced teachers' pedagogical content knowledge and
pedagogical content beliefs can be affected by training programs, and that such are associated with changes in their classroom instruction and students' achievement.

Cohen and Hill (1998) stated that there is a strong relationship between training programs, teachers' learning opportunities, and students' achievement. There is a link between students' achievement and teachers' attendance at workshops and other experiences that engaged them in learning about the specific topics of the student curriculum in conjunction with new curriculum frameworks.

A number of studies reported that the more professional knowledge teachers have, the higher the levels of students' achievement. In fact, the report of the National Commission on Teaching and America's Future cites evidence that investments in teachers' knowledge and skills net greater increases in students' achievement (McGinn and Borden, 1995; The National Commission on Teaching and America's Future, 1996; Tattoo, 1999; Falk, 2001; Grosso de Leon, 2001).

Guskey (2000) stated that students' learning outcomes become a key focus. Success of training programs began to be measured based on increased students' learning rather than on whether teacher participants were satisfied or not.

The Center of Public Education (2005) clarified that teachers' quality - whether measured by knowledge, experience or training - is strongly related to students' achievement. Simply, skilled teachers produce better students' results.

Hwang Yoon-Suk (2010) explained that teachers' professional development affects students' achievement through three steps which are: 1- Professional development enhances teachers'
knowledge, skills and motivation. 2-Better knowledge, skill and motivation improve classroom teaching. 3-Improved teaching raises students' achievement.

**Multiple Intelligences Theory and Education**

One of the most important messages of Gardner’s MIT is this: if education is to work as effectively as possible, students’ multiple intelligences profiles should be taken into account rather than being ignored (Palmberg, 2002).

Traditionally, many learning contexts have been organized and many teachers have taught as if all learners were the same. One of the most significant advances in education in the last decades of the twentieth century has come from a considerable amount of research done in the area of learning styles, which recognizes that the students in classrooms have greatly different learning profiles. MIT is a dynamic construct that understands intelligences as tools that are changeable and trainable: “while traditional intelligence tests are based on the notion that the general faculty of intelligence is an inborn attribute that does not change over the time, the MIT asserts that there are skills universal to human species, related to the culture nurturing that domain and that develop according to experience, age and training” (Armstrong, Kennedy & Coggins, 2002). MIT is providing education with a rationale for doing what we know is good for kids. The more diverse learning experiences we provide our students, the more robust their education will be, the more ways they will learn each topic (Darren, 2002).

A tenet of MIT is that people learn and utilize knowledge in many different ways. These differences challenge an educational system which assumes that everyone can learn the same materials in the same way. Students who cannot master the competence of the language reveal significant mastery and understanding when the lesson is conducted using MIT. If MIT is
implemented in regular education, it is likely to strengthen students’ learning and build their self-esteem (Gardner, 1991).

Fink (1991) emphasized that teachers has to discover and nurture intelligences for a variety of students and to take a tremendous amount of energy and collaborations in order to reach the excitement, creativity and learning outcomes.

Since all children do not learn with the same method, it will be possible to reach more children using MIT. Gardner calls this attractive approach, figuratively speaking, “different windows into the same room”. When students observe that a teacher can explain a piece of information using a number of different ways, they understand what it means to be an expert and also discover that they can also explain a specific subject in more than one way (Vickers, 1995).

Many studies reveal that implementation of MIT could make very positive contributions to individual development and the efficiency of learning environments. Study conducted Campbell (1989) found that instruction guided by the principles of the MIT significantly contributed to academic development of students.

Teachers should show students how to understand a subject which indeed addresses and applies one or more of their intelligences’ domain. For instance; a student who has a highly-developed musical intelligence can be asked to learn about a war and what happened during that war by making up a song about it (Brualdi, 1996).

Everyone might possess eight intelligences; they are not equally developed in any individual. Some teachers feel that they need to create activities that draw on all eight, not only to facilitate language acquisition amongst diverse students, but also to help them realize their full potential with all eight. One way of doing so is to think about the activities that are frequently
used in the classroom and to categorize them according to intelligences types (Larsen-Freeman, 2000).

Armstrrong (2000) suggested that teachers should make sure they grasp the theory. He believed that unless teachers have an experimental understanding of the theory, they are unlikely to be committed to using it in the classroom.

Gardner (2006), beyond the descriptions of the original eight intelligences, emphasizes that:

- Each person possesses all seven intelligences between the lowest and highest extreme.
- Most people can develop each intelligence to an adequate level competency with adequate encouragement, enrichment and instruction.
- Intelligences usually work together in complex ways. No one intelligence stands out alone, but rather they interact with each other in complex ways depending on the person.
- There are many ways to be intelligent.

Individuals acquire much intelligences' types at birth. However, each student comes to a classroom as an individual who has developed a different type of intelligences. This means that each student has his own intelligences superiorities and weaknesses. These intelligences' domains determine how easily or difficultly a student can learn (Temur, 2007).

MIT offers several ways of thinking in the service of introducing, clarifying, and helping students make sense of new material. The same idea can often be thought of in many different ways. The eight intelligences can help us think about a variety of ways an idea may be represented. MIT urges teachers to extend the boundaries of the curriculum, consider the many talents and abilities students bring to a school setting, and put greater emphasis on the variety of skills necessary to succeed in today’s world (Hammond et al, n.d).
The Implementation of Gardner’s Theory in the Classroom and Its Effect on Students’ Intelligences

Any intelligence gets stronger when students practice and work at it. The more teachers can provide appropriate resources, the stronger the child’s abilities will become in that area. Ultimately, it is important to have many areas of intellectual strength. The art of teaching is helping people use their already well-developed abilities to build other strengths, so that they can master learning in a variety of ways (Hammond et al., n.d).

Gardner (1983) stated that the various intelligences of the individual can be enhanced by designing different learning programs accordingly. He believes these intelligences can also be gradually achieved, that students can aim to improve their various intelligences. Gardner said that it is possible to identify various intelligences at an early age and then develop and expand these intelligences to the maximum. Gardner stated that with assistance, support and tutoring, all humans have the ability to expand and improve all of the eight Intelligences to a satisfactorily high degree.

Gardner’s MIT stresses the importance of eight forms of intelligence. This holistic approach is based on the belief that if any of these forms of intelligences is slighted, it will have a detrimental effect of the development on the remaining seven (Gardner, 1994).

Gardner (2004) argued that every intelligence can be strengthened or ignored and weakened. He urged schools to develop students’ intelligences, he added that intelligences can be developed in different degrees. Likewise, Eksi (2009) believed that teachers are responsible for implementing the activities call up on all intelligences in order to reach every student in the classroom, and to create equal opportunities for all learners to learn.
Students who believed that their intelligences could be developed outperformed those who believed their intelligences were fixed. The students who learned about the MIT showed significantly higher achievement. The belief that intelligence is fixed reduced students' motivation to learn, made them afraid of effort, and made them want to quit after a setback. This is why so many bright students stop working when school becomes hard. It is the belief that intelligences can be developed that opens students to a love of learning, a belief in the power of effort and being constructive. Students who thought they were not smart. Lost their enjoyment to learn, and, as a result, their performance plummeted. Furthermore, those praised for effort maintained their confidence, their motivation, and their performance (Dweck, 2008).

Miric (2010) stressed the importance of MIT not only to build up the students’ existing language knowledge but also to learn new content and skills. She emphasized that implementation of MIT at the university increased the students’ interest in language learning, and offered a better understanding of students’ intelligences.

The Implementation of Gardner’s Theory in the Classroom and Its Effect on Students’ Achievement and Learning

“Genuine understanding is most likely to emerge and be apparent to others. If people possess a number of ways of representing knowledge of a concept or skill” (Gardner, 1991: 13). Gardner’s (1983) MIT is an especially powerful model in helping educators create authentic learning experiences for students. MIT increases students’ achievement, participation, and nurture various learning styles.

Gardner (1994) indicates that MIT persuades parents and teachers to examine their own ideas and assumptions about achievement and consider various teaching approaches. This
suggestion provides a powerful lens to analyze MI in the context of elementary students’ performance.

When students are offered a variety of learning experiences they become actively engaged and invested in their individual learning process. Furthermore, students will participate more frequently and retain more knowledge because they understand the material in a more complex way (Emig, 1997).

MIT has the potential to empower students to become motivated, successful learners. There are many positive points related to MIT including improving behavior, increasing student confidence and the intrinsic motivation, engagement, and performance on standardized tests. As Barrington (2004) suggested, encouraging students to use their MI, helps create “personal meaning” and enhances learning and achievement.

According to Pienaar (2008), educators work and train the brain, but do not really understand its complexity. If educators were trained to understand the brain better, they would educate, teach, develop and nurture the brain in a good way. In so doing, learners will be led to better understand themselves and their strengths.

MIT engages students deeply in their education and increases students’ achievement because learning is embedded in innovative, practical, flexible, experiences that connect to the real world. MIT helps students gain a three-dimensional understanding and familiarity with content that helps them apply their learning in a variety of contexts and situations (Rafael, 2007).

Tyler (2011) stated that students should be given a choice of activities that matches their strengths. For example, students who have strength in Linguistic intelligence should appropriately be assigned a written research report as a class assignment. The future use of MIT
in education holds much promises because it provides a differentiated instruction to meet the individual needs to ensure their success. Furthermore, it provides alternative means for instructor assessment of students’ performance based on the strengths of students rather than relying on a traditional IQ test. However the success of differentiated instruction will depend on the level of commitment and training for instructors to implement MIT.

Zhu(2011) pointed out that MIT is a useful tool for planning language learning tasks which insures 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.

**Part two: Review of Empirical Studies**

**Empirical Studies**

In this section, some of the major studies conducted with respect to the effect of training programs and the application of MIT are addressed. This can help us scrutinize the efficiency of the training programs and the applicability of the theory more accurately.

**The Effect of Training Programs on Teachers' Practices**

Pacek (1996) examined Japanese teachers' perceptions of their one year Japanese government sponsored in-service teacher training program. The study placed special emphasis on the effects of the program on teachers' classroom practices in Japan. To evaluate the practicality of the program, Pacek found via a questionnaire that the secondary school teachers who had previously participated in the program generally perceived the program to be beneficial for their practices.
Deringer (1999) explored the experience of twenty eight teachers from three middle schools who participated in a training program. The researcher aimed to answer the following question:

What might the impact of a training program be for middle level educators on the teachers who participate? on their schools? on their school districts? Analysis of data revealed that 1- Teachers were challenged to think in new ways. 2- Teachers gained confidence and felt empowered, and 3- Teachers became willing to indicate change and overcome obstacles. The researcher concluded that the program increased teachers' personal and professional growth, and provided an impetus for them to initiate change in their middle schools.

Fullan (1999) tried to determine the impact of a training program in the Direct Instruction Reading at an urban elementary school on teachers' performance and students' achievement in reading. The sample for this study consisted of six, third, fourth, and fifth – grade teachers (two teachers at each grade level) and their students. The design of the training program was based on well – researched instructional strategies that had been found to increase the level of transfer of knowledge and skills, gained from training, to the classroom. Teacher performance data were obtained through a professional development survey, training forms, and classroom observation forms. Student achievement data consisted of reading scores (pre-test) and reading scores (post-test). The results of the study showed that the training program did impact teachers' performance and students' achievement positively.

Lamie (2001) examined the impact of training programs on Japanese teachers' teaching beliefs and practices. Lamie employed multiple data methods including questionnaires, interviews, and classroom observations. The study investigated four teachers' perceptions of change in their (a) English teaching methodology; (b) teaching attitudes and (c) actual teaching practices before and after the program. The findings suggested that in all three areas participants'
teaching practices and attitudes shifted toward more communicative oriented teaching, even though the constraints they faced were just like large class size.

Angrist and Lavy (2001) evaluated the effect of in-service teachers' training in Jerusalem schools. Researchers found significantly positive causal effect of this program on pupils’ test scores. Their cost effectiveness analysis suggests that teachers’ training may provide a less costly means of improving pupil achievement scores than reducing class size or adding school hours.

Mortinsen (2002) explored the impact of the training program on teachers' attitudes, skills, and behavior during and after the training and assessed the level of transfer of the teaching pedagogy from the training to more sophisticated integration and the explicit use of arts-based mechanisms, techniques, and tools in the classroom. Qualitative and quantitative data generated by the implementation of the training program at a middle school site in the metropolitan DC area throughout one academic year were used to analyze the efficacy of the program. The measurement of efficacy was based on the successes and failures of the subjects (four eighth grade teachers) as they attempted to understand and integrate arts based training into their regular classroom teaching. The results of this study confirmed the potential for this training program to generate teacher change in expertise and pedagogy.

Bigpond (2006) examined the effectiveness of three training programs in a suburban / metropolitan school district and the impact of these three training programs on student academic achievement in this school district. Data were collected from 47 classroom teachers through surveys and interviews designed to provide answers to the research questions. The results showed that the training was sufficient in all three programs. The participants felt that the programs were beneficial in the classroom since they increased students' academic achievement.
and improved students' learning. The researcher recommended conducting further research, particularly in response to the new expectations for students’ learning since research studies examining the link between training programs, teacher classroom practice and student learning are rare.

Eun and Boynton (2007) investigated the impact of professional development programs for English as second language teachers on their classroom practices and on the way that teacher efficacy and organizational support at the school level relate by interacting with years of teaching experience. The authors collected data by using questionnaires administered to 90 elementary and secondary teachers participating in ESL training programs. Results of the study based on multiple regression analyses indicated that teacher efficacy and organizational support significantly predict level of professional development impact without interacting with years of teaching experience.

Wati (2011) identified the effectiveness of English teachers' training program. The researcher took 55 teachers from 20 schools. These teachers had attended English teacher training suggested by Local of Educational official under Department of National Education Local Universities. Questionnaires and interviews were used as the instruments of data collection. There were five sections classified according to the research questions:

Section A: Demographic Questionnaire.

Section B: The Overall Effectiveness of Training Program.

Section C: The Effectiveness of Training Program in Building Teachers’ Confidence.

Section D: The Effectiveness of Training Program in Building Teachers’ Motivation.

Section E: Future Needs of the Teachers.
Data findings showed that the English language training program was highly effective in improving EFL teachers' practices.

**The Effect of MIT on Students' Achievement and Its Implications Inside the Classroom**

Temur (2007) conducted a study to detect the effects of the training activities developed according to MIT on students' achievement. This research has been carried out on the fourth graders at Gazi University Foundation Private Primary school. Among all the classes, two of them were selected, 4-A was selected as an experimental group and 4-B as a control group considering their pre-test points. An experimental pattern has been used in the study as the research design and T-test has been applied in data analysis to reveal any differences between the group averages. The results show that MI activities have positively affected the achievement scores of the students in the experimental group and it has been observed during the teaching activities performed that students actively participate in lessons; their interest level rise with the rich activities performed; and they become more aware of their abilities.

Greenhawk (1997) discussed the implementation of MI at White Marsh Elementary School in Maryland. The application of MI increased students’ performance on standardized tests and produced a “school-wide culture of achievement” (p. 62). Over a period of five years, Greenhawk and her colleagues collected data which revealed that MI based curriculum helped students understand their abilities as learners, build confidence, and take educational risks. MI helped educators initiate ‘unforgettable learning’ experiences and assess students’ knowledge more accurately. Greenhawk stated that MI transformed her school’s learning community and helped the teachers and students strive toward excellence by valuing excellence, diversity and achievement.
Khamis (2005) investigated the effect of a multiple-intelligences-based teaching program on Jordanian tenth grade students’ paragraph writing ability in English. The study adapted a quasi-experimental design involving a post-test. The sample of the study consisted of (158) tenth grade students (90) males and (68) females, enrolled in two western Amman public schools during the second semester, 2004/2005. The students of each school were randomly assigned to a control group and an experimental group. The researcher developed a four-question achievement test to measure students’ writing ability. The teachers were trained on the MIT. Test papers were scored and the results were analyzed. The results indicate a statistically significant difference in students’ writing ability in favor of the MI teaching program.

Chauhan (2009) selected the parallel design or equivalent group for conducting the experiment. The investigator randomly selected 60 students from a primary school at Ahmedabad in Gujarat. These students were grouped into two equivalent groups on the basis of their achievement in English, which is obtained from the school records. The ‘t’ test result reveals that the experimental group students are better than the control group students in their gain scores. This was due to the fact that the MI based teaching of English is more effective than the traditional method of teaching English. MI based teaching helps the students to improve their achievement in learning English.

Naoe (2010) conducted a study primarily to identify the MI of the Grade Five pupils of David Elementary School through a designed MI learning package. It aimed at helping the client school develop its own prototype activities inspired by the MIT which was used as the basis for this research. The sets of questionnaire were provided and used by the researcher to gather the needed information from the respondents. The results of the study showed that every child can be considered to possess the eight multiple intelligences in varying degrees. These intelligences can
be enhanced through creative strategies, appropriate instructional materials, and a stimulating and nurturing environment.

Sahatsatatsana and Siriyothin (2010) conducted a mixed-method research that consisted of both quantitative and qualitative data analysis to examine the effect of using MI theory in English instruction. The experimental group taught by the researcher via MI Instruction on English Conversation course, whereas the control group was taught by the researcher through the traditional method which focused on lecture by teacher. The results show that the students’ achievement of experimental group taught through the MI theory is higher than the students’ achievement of control group taught via a traditional method. According to the result mentioned above, the MI Instruction encouraged students to learn effectively. When students have a positive learning attitude and feel comfortable to learn, it helps them learn effectively. It could be said that MIT gives a chance for students to learn English both individually and cooperatively.

Concluding Remarks
To conclude the previous review, the researcher presents the following remarks:

1-The use of training programs as a way to improve teachers' practices and student's achievement is a need that educators and teachers support. The findings from the literature review provide evidence for the large impact of the training programs on teachers' practices and their beliefs.

2-Teachers must change their beliefs about how to teach in ways they never teach before so that teachers must be provided with opportunities to build their competences by affective programs (Head and Tylar, 1997; McLaughin and Hammond, 1995).
3-Teachers can improve students’ learning through attending training programs. The researcher concludes from the study review that the more professional knowledge the teachers have the higher the level the students will be at.

4-Students do not learn in the same way. Every student has his own intelligences. Teachers must design different activities to facilitate language learning. It is clear from reviewing the previous studies that there are positive views around using MIT in teaching. The literature reveals that MIT is a useful philosophy and a practical framework for learning experiences according to each students’ needs. The literature indicates that MI-based instruction yields positive implications for students’ achievement including increased performance on standardized tests, and increased intrinsic motivation, engagement, and confidence.

5-MIT helps educators teach in a way that helps students question, explore, collaborate rather than follow directions and memorize existing body of information. MI is also a powerful pedagogical organizer that helps structure learning according to the needs of students. MIT understand intelligences as a tool that helps teachers to apply their teaching in variable contexts and situations.

6-In her review, the present researcher was unable to find practical lesson plans or detailed instructions of actual use for the MIT inside the classroom. As educators need to apply MIT in different educational environments, specific information and practical programs are needed to help guide the application of the MIT. Additionally, she was unable to find research on using MIT for teaching English so that language educational institutions and teachers’ preparation courses should be offered.
7-Although previous researchers’ investigations in the study review provide some insights about the relationship between MIT and increasing students’ achievement, there is a need for continued research and application of MI.

8-Many researchers recommended conducting further research to examine the link between training programs, teacher classroom practices and student learning since such studies are lacking in the field of teacher training.

The current study is similar to the previous studies in that it focuses on MIT and its effect on developing students’ achievement. The difference between this study and previous studies is that it provides English teachers with a practical MI training program and a developed unit according to MIT. Additionally, it measures the effect of using MI program on eighth grade female students' achievement in English. Moreover, the method followed to collect data in the present study is different. The present study used a training program which was designed and implemented by the researcher. Besides, two units from Action Pack 8 was developed and implemented by the teachers of the experimental group to measure the effect of the program on students’ achievement. Observation checklist was developed to follow the implementation of MIT. The observation of the subjects was divided into two phases, one before attending the training sessions to see the teachers’ actual teaching practices related to MIT, and the other phase was carried out during the implementation of the training program for the purpose of ongoing assessment. These two phases were implemented to measure the difference in the teachers’ practices before and after training. A pre-test and a post-test were administered to find the difference in the students’ achievement. Finally, the MI inventory based on (Teele, 1992; Machenzi, 1999; Gardner, 2001) was developed and used before and after implementing the MI program to find out the effectiveness of the training program in developing students’
intelligences. The other studies used one or two survey instruments to collect data. Accordingly, the researcher believes that there is a need for studies that serve EFL teachers’ needs by developing in-service training programs meant to develop EFL teachers’ competencies, which in turn contributes to upgrading and developing students’ learning abilities.