Teaching English as a Foreign Language Using Multiple Intelligences, Cooperative Learning and Taking into Account the Pupils' Perceptual Learning Styles
Case of First Year Pupils (Following "Scientific and Literary Streams") at Ati Abd Elhafid Secondary School in Oud Athmania

Abstract:

This research aims at investigating whether the implementation of cooperative learning (CL) activities, involving the insights given by Howard Gardner's theory of multiple intelligences (MI), and taking into account the pupils' perceptual learning styles (PLS) in secondary school EFL classrooms, will have a positive effect on pupils' English language proficiency and attitude. An experimental study was adapted. The place of this study was in two EFL classrooms (First year secondary school pupils, a class from the scientific stream and the other from the literary stream were taught for a whole year). Many learning activities adapted from the first year secondary school textbook "At the Crossroads", and based on Gardner's theory of Multiple Intelligences, were used while a Cooperative Learning approach was practiced, taking into account the pupils' perceptual learning styles in designing the lesson plans. The data for the study was collected from two sources: The first one was the pupils' questionnaire on attitudes and motivation, regarding CL, MI, and PLS. The second was from the pupils' pretest and posttest scores on their language proficiency tests. The pupils' first, mid and final-term examination marks were also taken into account. The results of the study showed that the experimental groups that were taught using the ideas based on CL, MI, including perceptual learning styles, outperformed the control groups based on Competency Based Approach(CBA) on the stimulated English proficiency tests for the three skills and the three achievement school examinations. Based on the results of our study, secondary school pupils can improve their achievements and their English language proficiencies through the implementation of new teaching methods based on cooperative learning, multiple intelligences theory and learners' perceptual learning styles.

Key Words: Multiple Intelligences (MI), Cooperative Learning (CL), Perceptua Learning Styles

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ملخص:

يهدف هذا البحث إلى تقصي كيفية تأثير العمل الجماعي و التمارين المبنية على نظرية الذكاءات المتعددة لغادنر مع الأخذ بعين الاعتبار طرق التعلم المتعددة للتلاميذ, على التحصيل العلمي للغة الانجليزية لتلاميذ السنة الأولى ثانوي. و لإجراء هذه الدراسة أخذنا عينتين إحداهما من القسم العلمي و الأخرى من القسم الأدبي و قمنا بتدريسهما بالطريقة المقترحة مدة عام دراسي كامل, مستعملين في ذلك عدد معتبر من التمارين المبرمجة ضمن الكتاب المدرسي و التي تم تكييفها وفق نظرية الذكاءات المتعددة, ضف إلى ذلك الاعتماد على أسلوب العمل الجماعي مراعين في ذلك مختلف طرق التعلم عند التلاميذ. و قد أثبتت جملة ما توصلنا إليه من نتائج مدى فعالية هذه الطريقة في تحفيز و رفع المستوى التعليمي لتلاميذ السنة الأولى ثانوي في اللغة الانجليزية.

Introduction :

Children's difficulties in school learning were investigated by Bruner (1983). The results of his investigation revealed that children face these difficulties because they experienced learning in a way that is separate from their real life.

To make the linkage between the learning environment and the learners' real life, teachers have to use modern teaching methods and techniques to create a relaxing and free learning atmosphere, in which all learners are given the opportunity to express their strengths and weaknesses through their different learning preferences and intelligences, and this helps learners to be active participants and not passive receivers, especially in the English language classes.

The teaching of English as a foreign language for all pupils in Algeria is regarded as crucial in their education. However, there exist a number of major problems. The first problem of English education in Algeria is that teaching is still teacher-centered, even though the method used in teaching English as a foreign language is the Competency-Based Approach which is, in its basis, a learner-centered approach that needs from the teacher to build on his lessons on the learners' competencies. This approach may work with the mother tongue and not with a foreign language in which learners have no competencies, or other competencies that are sometimes different from English (Arabic and French). Consequently, pupils tend to be over-dependent on their teachers in their learning practice and always think of teachers as knowledge givers. The second problem is that group work between pupils is seldom used as a teaching strategy. In class, it is the teacher that always initiates the discussion, whereas pupils are passive listeners and receivers. Therefore, interaction is ignored since there is only one-way communication. This approach to teaching restricts the practice of oral language skills.

The third problem is that the classes are very large. It is very difficult for a teacher to manage a class of over forty pupils and design a teaching strategy which will meet each pupil's needs. The reason for this is simple: the teacher is limited in time and energy and cannot deal successfully with so many pupils and each one alone, even the ones that need extra help. Therefore, a teaching method should be found to help teachers who have to teach large classes to better meet individual pupil needs.

In order to address the three problems presented above we need to cultivate pupils' potential for interdependent study through group work, and create a suitable environment for the pupils that have different proficiencies and intelligences to learn the four language skills.

Another possibility is to use some ideas from Multiple Intelligences Theory and Perceptual Learning Styles that focus on engaging the pupils in their learning, and making them responsible for how they demonstrate their knowledge.

1. Review of Literature
1.1 What is Intelligence?

For a long period of time philosophers have tried to shed some light on the concept of intelligence, its nature and how we can measure it. And till now

this topic is still considered as highly controversial because there are many definitions of the concept which do not agree with each other in the field of psychology and education where it is thoroughly investigated.

The term intelligence comes from older Latin roots and exactly from the word "Intellegere" which is divided into two parts "inter" which means between, within + "legere" which means to bring together, gather, catch up with eye, and read .i.e. "intellegere" means to see into, perceive and understand; and this term gained more importance in the late 19th century when Sir Francis Galton revived the term and made his first serious attempt to develop measures that would reflect a person's intelligence.

Traditionally, human intelligence was seen as a single, unchanged, inborn or inherited capacity on which the IQ test was founded (Snider, 2001); it means intelligence was described on the basis of Linguistic and Mathematical abilities (Richard and Rodgers, 2001).

In recent years, intelligence is used and described from two perspectives: firstly, the term can be used to mean intelligent acts which refer to the acts of composing a poem, designing a house or inventing a new way of calculating numbers. Secondly, the term intelligence can be used to refer to mental processes such as analysing and synthesising actions "that give rise to [different] intelligent acts." (Kail and Pellegrino, 1985:3)

1.2 Multiple Intelligences Theory

Howard Gardner's Multiple Intelligences Theory (MIT) emerged in 1980s from his work in "Project Zero" at Harvard University, and published in his book *Frames of Mind.* By developing this theory Gardner challenged the too restricted definition of intelligence by giving birth to eight types of intelligences (logical mathematical, musical, linguistic, spatial, bodily-kinesthetic, intrapersonal, interpersonal and naturalist) that each individual possesses and uses "to learn and demonstrate understanding."(Christenson and Kennedy, 1999:) in a variety of ways, however the development of one intelligence does not mean the exclusion of the others, which means that all individuals have at least eight intelligences, but there is a dominant intelligence that is more developed than the other intelligences. Chen and Gardner (2005:79) describe the types of intelligences as follows:

> **1.***Linguistic intelligence*, describes the ability to perceive and generate spoken and written language.
> **2.***Logical-mathematical intelligence*, involves the ability to appreciate and utilize numerical, abstract, and logical reasoning to solve problems.

3.*Musical intelligence*, entails the ability to create, communicate, and understand meanings made out of sound.

4.*Spatial intelligence*, refers to the ability to perceive, modify, transform, and create visual and/or spatial images.

5.*Bodily-kinesthetic intelligence*, deals with the ability to use all or part of one's body to solve problems or fashion products.

6.*Naturalistic intelligence*, concerns the ability to distinguish among critical features of the natural environment.

7.*Interpersonal intelligence*, describes the ability to recognize, appreciate and contend with the feelings, beliefs, and intentions of other people.

8.*Intrapersonal intelligence*, involves the ability to understand oneself including emotions, desires, strengths, and vulnerabilities and to use such information effectively in regulating one's own life.

Multiple Intelligences Theory is the fruit of cognitive science that built up a learner-centered philosophy which is "an increasingly popular approach to characterizing the ways in which learners are unique and to developing instruction to respond to this uniqueness" (Richards and Rodgers, 2001: 123). This theory helped the teachers to vary their teaching techniques and materials to cope with their learners' differences, especially in foreign language classes.

1.3 Learning Styles

Closely related to Multiple Intelligences Theory is that of Learning Styles. Learning styles are "individual's natural, habitual and preferred way(s) of absorbing, processing, and retaining new information and skills" (Reid, 1995: viii). They are internal characteristics that can be cognitive, affective or social and learning preferences which people use unconsciously to receive, process, understand and retrieve information (Fleder and Silverman 1988). Learning Styles are divided into three major categories: sensory or perceptual learning styles, cognitive leaning styles and personality learning styles. Cognitive learning styles include impulsive/reflective, analytic/global and field-independent/field-dependent learning styles. Personality learning styles also fall into the following sub-styles: right and left hemisphere learning styles, Myers-Briggs temperament styles (1995) and tolerance of ambiguity styles. In her study, Reid divided perceptual/sensory learning styles as visual/auditory, group/individual and tactile/kinesthetic and the most known ones are visual, auditory and kinesthetic learning styles (or the VAK).

Learning styles theory was used in many educational researches by a wide range of researchers, such as Kinsella in 1995, Oxford in 1995, and Reid also in 1995. The results of these researches played a vital role in enhancing learners' performance and raising the teachers' awareness about their learners'

differences, which led them to use a diverse range of classroom activities and teaching materials.

1.4 Cooperative Learning

Cooperative learning is a social skill that is used in our daily life, at work in schools and even at home; according to Lin "Humans learn best when they collaborate with others and actively process personally meaningful information" (2006:35)

Cooperative learning or collaborative learning is an essential method in the educational environment; it involves learners to learn from each other in groups, and this interaction between the students helps to develop their intrapersonal intelligence (Casal, 2002). This socializing approach to learn in the classroom can also "foster the development of the [students'] social skills" (Crandall, 1999:226) by lowering their anxiety, shyness and their language ego in language classes, "so that they can work together more effectively."(Larsen-Freeman, 2007:164)

2. Methodology

2.1 Overall Research Design

The purpose of this research is to investigate the implementation of Cooperative Learning (CL) Activities, involving the insights given by Howard Gardner's theory of Multiple Intelligences (MI), taking into account the pupils' Perceptual Learning Styles (PLS) in secondary school EFL classrooms, and its positive effectiveness on pupils' English language proficiency and attitude.

The study took place at Ati Abdelafid High school in Ouad Athmania in 2013/2014 academic- year, and was conducted with four classes, 2 classes from the scientific stream and 2 classes from the literary stream (First year classes, between 16 and 19 years old). In this study, Multiple Intelligences and Learning Styles Inventories were administered to 69 pupils, who were chosen randomly from a population of 210 pupils, and their results were analysed and used in forming the learners' profiles and designing the lesson plans. A pre-test, post-test and a teaching method based on CL, MI and PLS was conducted to teach 68 pupils from two classes (1 scientific and 1 literary).(c.f.p.7, for the time it took to implement the study.

2.2 Research Questions

Our research focused on the following research questions:

2.2.1 In what ways can the language learning environment be constructed in order to improve the English learning outcomes of secondary school pupils in Algeria?

2.2.2 Can cooperative learning enhance pupils' attitudes?

2.2.3 Can cooperative learning activities and multiple intelligences and perceptual learning styles insights used in conjunction improve the pupils' four language skills?

2.2.4 Do pupils' perceptual learning styles have a positive effect on pupils' self directed learning?

2.3 Research Hypotheses

To gain more insight into the above research questions, a teaching experiment was conducted. Essentially, four teaching groups were formed: Groups A and B (control groups), and groups C and D (experimental groups). The teaching experiment aimed to test the following hypotheses:

2.3.1 The implementation of Cooperative Learning (CL) Activities, involving the insights given by Howard Gardner's theory of Multiple Intelligences (MI), and taking into account the pupils' Learning Styles in secondary school EFL classrooms, will have a positive effect on pupils' English language proficiency and attitude.

2.3.2 The experimental groups C and D will score significantly better than the control groups A and B on the English listening, reading and writing tests.

2.3.3 The experimental groups C and D will score significantly better than the control groups A and B on the first, mid and last-term achievement examinations.

2.4 Participants

This study was conducted with first year pupils attending Ati Abdelhafid High School in Ouad Athmania. Two classes from the scientific stream and two classes from the literary stream were selected; these classes were selected by the school administration. 138 students were chosen randomly from a population of 210 pupils, participated in the study. Information about the students are given in the following table:

Streams	Male	Female	Total
Scientific Stream	44	34	78
Literary Stream	24	36	60
Total	68	70	138

Table01: Distribution of the Participants by Streams and Gender

2.5 TheExperimental Design

Based on the quantitative methodology, this research adopted the quasi-experimental design of unequal groups. The experimental groups (69 pupils) received the multiple intelligences teaching, regular textbooks, cooperative and multiple intelligences activities, and lesson plans were used based on their learning styles. The control groups (69 pupils) were taught using

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the traditional teaching method (Competency-based approach) and only the textbooks. The experimental groups had a total of 80 hours of experimental teaching within 20 weeks, i.e. 3 hours (the scientific stream) and 4 hours (the literary stream) per week and also the control groups. The experiment design pattern is shown in the following table.

Groups	Pre-Test Post-Test	Experiment Treatment
Experimental Groups	$2O_1$ $2O_2$	M1
Control Groups	$2O_1$ $2O_2$	M2

M1 and M2: Two different teaching methods
Table02: The experiment design pattern

From the table above, we can see that $2O_1$ is pretest data, $2O_2$ is post-test data, and M_1 and M_2 are two different teaching methods. All four groups were not taught by the same teacher because of some severe administrative regulations, so the two experimental groups were taught by the teacher who did the research and the two control groups were taught by another teacher from the same secondary school. Although, the four groups were taught by two different teachers, the pupils received the same English lessons, homework and assignments during this experiment. However, there were two different ways in which the groups were instructed. The two control groups were taught using the Competency Based Approach; in contrary, the two experimental groups were instructed using the new teaching method based on cooperative learning, multiple intelligences and the pupils' perceptual learning styles. Pupils' development and progress in the three language skills (listening, reading and writing) was checked through a pre-test and a post-test. The post- test was delivered and its results were compared with the ones of the pre-test. Table03 shows the different methods used with the different groups:

	Treatment or Teaching Methods	Group/ Pair Work	Assessment
Control Groups A and B	Competency Based Approach	None	First, mid and last-term exams. The general proficiency tests

Experimental Groups C and D	Cooperative learning, multiple intelligences activities and the pupils' perceptual learning styles	Grouping by multiple intelligences and learning styles	First, mid and last-term exams. The general proficiency tests

Table03: Learners' teaching methods, groupings and ways of assessment

2.6 Research Means and Instruments

Our research includes the following instruments:

2.6.1 The Reading Test

The reading test was used for both the pretest and the posttest; it tests the students' comprehension of the reading passages an also their grammar and vocabularies. The reading test used in our research was adapted from Sheridan English Proficiency Information Booklet (2008) and it was composed of two parts: part one was a reading passage, and part two was a cloze passage activity. The pupils needed 50 minutes to finish answering this test.

2.6.2 The Listening Test

The listening test was used for the pretest and the post test. We have adapted this listening test from Sheridan English Proficiency Information Booklet (2008), and it was composed of one part which was a dialogue. For this test the dialogue and the questions were recorded in a tape. The pupils listened to the tape and then ticked the best answer in the dialogue answer sheet they had. The test needed 30 minutes to be completed by the pupils.

2.6.3 The Writing Test

The writing test was used for both the pretest and the posttest. This test was designed by the researcher. The test is composed of two topics from which the pupils had to choose one and write a short composition in 50 minutes. The criteria used for assessing the students' writings were the writing form and content.

2.6.4 The First, Midd and Last Term Examinations

These were the usual achievement examinations taken by all the school pupils, and they were elaborated by all the teachers of the English language in the secondary school. These examinations or tests were used to check the students' achievements in the English language after each trimester.

2.6.5   Other Data Collection Means

a.   The Questionnaire

The questionnaire was adapted to explore the pupils' motivation and attitude towards learning English as a foreign language after the changes in the teaching method and materials during this year. The questionnaire was composed of seventeen (17) questions that investigated the students'

motivation towards learning English, teaching materials and textbook; classroom activities and assessment based on Multiple Intelligences Theory, Cooperative learning and the pupils' perceptual learning styles. The questionnaire was administered to the students of the two experimental groups in one hour at the end of the teaching experiment (the end of the academic year), and it was translated carefully (teacher of translation) into Arabic to insure the pupils' understanding of all the items.

b. Multiple Intelligences Inventory

Multiple Intelligences Inventory was adapted from the one of Christison (1996) and Berman (1998). The inventory or the survey was designed to assess individuals' different types of intelligences. It is composed of eight sections. Each section contains six questions. The pupils had to rank each statement 0, 1or 2 and then place them into the scoring rubric to know their dominant intelligence. The Inventory was administered to the pupils of the two experimental groups C and D at the beginning of the school year and the researcher used them to construct the pupils' profiles that were needed in designing the lesson plans.

c. Learning Styles Inventory

Perceptual Learning Styles Inventory was adapted from and was used to identify the pupils' learning styles. It consists of two parts: Learning Styles Survey with 24 questions, and the second part Learning Styles Assessment which is composed of three sections, each section with ten questions. The pupils' had to tick and rank the statements and then place them in the scoring rubric. Learners' results were very useful means in raising the teacher's and the pupils' awareness about the different learning styles, also they were used in designing the lesson plans.

d. Lesson Plan

"All good teachers have some type of plan when they walk into their classrooms."(Jensen, 2001:403) These lesson plans are used as maps that the teacher uses to know "what to teach, in what order, and for how much time [needed to be taught]." (Jensen, 2001:403) Based on these ideas the researcher designed a range of lesson plans (30 lesson plans) that were used to investigate the pupils' academic achievement and attitudes toward learning English as a foreign language. The lesson plans used in our investigation were designed based on the first year secondary school textbook "At the crossroads." The researcher selected the teaching activities that fit the learners' intelligences and learning styles, and many times he rejected some of the textbook activities and supplemented them by others adapted from different resources.

2.6.6 Data Analysis

The data obtained from the pretest, the posttest, the first, mid and last-term examinations and also the one obtained from the pupils' questionnaire were collected, analyzed and interpreted. The data were calculated and tabulated using the Statistical Package for Social Sciences (SPSS 17.0). A t-test for independent samples (p> .05) was run to determine the pupils' improvement in learning English as a foreign language. Paired sample t-tests were performed to determine the pupils' improvement within the same group.

a. Results of Pupils' Pretest, Posttest of the Three Language Skills and the First, Mid and Last-Tem Examinations

From a deep examination of the descriptive statistics of the pretest and the post-test of the three language skills, we noticed the differences that appeared in all the groups. Also, these differences took place in the first, mid and last-term examinations which were very crucial tests for all the pupils in the secondary school to pass to the second year. (See table 04)

	Control Group B Literary Stream		Experimental Group D Literary Stream		Control Group A Scientific Stream		Experimental Group C Scientific Stream	
	Means	Std deviation	Means	Std deviation	Means	Std deviation	Means	Std deviation
Reading a	4,85	3,04	4,78	2,29	4,87	2,66	4,43	2,68
Reading b	4,91	2,80	6,81	2,35	4,14	2,34	5,36	2,05
Listening a	6,20	3,77	6,23	2,87	3,53	3,14	6,23	3,39
Listening b	6,30	3,88	8,30	3,31	4,69	2,73	7,61	2,74
Writing a	0,93	1,28	1,10	1,33	1,17	1,32	2,32	1,53
Writing b	1,01	1,35	2,91	1,56	1,28	1,46	2,99	1,47
1st term Exam	6,71	3,79	7,66	3,59	6,39	4,60	8,89	3,90
2nd term	6,98	2,93	8,86	4,01	5,74	3,72	9,06	4,31

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Exam								
3rd term Exam	8,41	2,82	12	4,31	7,16	5,14	10,94	4,10

Table04: Descriptive Statistics for the pretest and posttest of the three language skills and the First, Mid and Last-Term Examinations of the control groups A and B and the Experimental groups C and D

(**Reading a** means reading pre-test. **Reading b** means reading post-test)

It is important to mention that the pupils' scores in the experimental groups C and D in the three term examinations were higher than the pupils' scores in the control groups A and B, especially in the last-term (C $\bar{X}$= 10,94 , D $\bar{X}$=12) examination. Such result realizes our expectations about the third hypothesis of our research which said that: "The experimental groups C and D will score significantly better than the control groups A and B on the first, mid and last-term achievement examinations."

The differences between the pupils' post-test scores in the three language skills of the experimental groups C and D and the control groups A and B were analysed through t-test for independent samples. In our analysis of the research results we will take into account the pupils' streams, which mean that our samples will be divided as follows: Groups C and A represent the scientific stream, groups D and B represent the literary stream and the t-test for independent samples will be used for each stream.

The results of the independent t-test between the experimental group C and the control A which represent the scientific stream, revealed that the accounted t-values for the three proficiency tests are $t_{(77)}$=2,44 in the reading test, $t_{(77)}$=4,71 in the listening test and $t_{(77)}$=5,14 in the writing test. The obtained t-values are greater than the required value of $t_{(77)}$ =1, 67 at a level of significance α=0.05 and a degree of freedom df= 77. The pupils in the experimental group C ($\bar{X}$ r=5, 36 $\bar{X}$l= 7, 71 $\bar{X}$w=2, 99) showed significant development in their English learning proficiency in the three language skills compared to the pupils in the control group A ($\bar{X}$ r=4, 14 $\bar{X}$l= 4, 69 $\bar{X}$w=1, 28). From these results we can say that there is a statistically significant difference between the post-test scores of the two groups C and A at 0.05 level of significance.

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The results of the independent t-test between the experimental group D and the control B which represent the literary stream, revealed that the accounted t-values for the three proficiency tests are $t_{(59)}$=2,84 in the reading test, $t_{(59)}$=2,14 in the listening test and $t_{(59)}$=5,02 in the writing test. The obtained t-values are greater than the required value of $t_{(59)}$ =1, 68 at a level of significance α=0.05 and a degree of freedom df=59. The pupils in the experimental group D ($\overline{X}$ r=6, 81 $\overline{X}$l=8, 30 $\overline{X}$w=2, 91) showed significant development in their English learning proficiency in the three language skills compared to the pupils in the control group B ($\overline{X}$ r=4, 91 $\overline{X}$l=6, 30 $\overline{X}$w=1, 01). From these results we can say that there is a statistically significant difference between the post-test scores of the two groups D and B at 0.05 level of significance.

Note: $\overline{X}$ **r** the mean of reading, $\overline{X}$**l** the mean of listening, $\overline{X}$**w** the mean of writing, **df** the degree of freedom of the groups, and **α** presents the level of significance in one-tailed test.

In order to probe the positive effect of the teaching method that we used in our experiment within groups, paired-sample tests were conducted.

Pairs	Groups	Paired difference		t	Sig (1-tailed)	df
		Mean of Difference	Std deviation			
Reading a – Reading b	Group A	0,73	1,83	2, 49	0,000*	3 8
	Group C	0,92	2,63	2, 19	0,017*	3 8
	Group B	0,06	3,25	0, 11	0,456*	2 9
	Group D	2,03	2,64	4, 21	0,000*	2 9
Listening a – Listening b	Group A	1,15	2,80	2, 56	0,007*	3 8
	Group C	1,39	3,76	2, 30	0,013*	3 8
	Group B	0,10	3,38	0, 16	0,436*	2 9
	Group D	2,06	4,46	2, 53	0,000*	2 9

Writing a – Writing b	Group					
	Group A	0,10	0,72	0,89	0,192*	38
	Group C	0,67	1,07	3,90	0,000*	38
	Group B	0,08	1,08	0,42	0,000*	29
	Group D	1,80	1,67	5,91	0,337*	29

Table05: Paired (related) sample tests of the three language skills for the experimental groups C and D and the control groups A and B

The results in Table 04 show that there was a significant difference between the pupils' pre-test and post-test scores in the three language skills, at the level of significance $\alpha < .05$, in the two experimental groups C and D and the control groups A and B (the t-values obtained are greater than the critical value of $t_{(38)}=1,69$ for groups A and C and $t_{(29)}=1,70$ for groups B and D, see table 05). However, in the control group A we notice that there is not a significant difference between the pupils' pretest and posttest scores in writing, the obtained t-value $t_{(29)}=0.89$ was less than the required value of $t_{(38)}=1,69$ at a level of significance $\alpha < .05$. Also, the results reveal that there was not a significant difference between the pupils' pre-test and post-test scores in the three language skills at the level of significance $\alpha < .05$ in the control group B. The calculated t-values obtained in the three language skills tests are less than the critical value of $t_{(29)}=1,70$ at a level of significance $\alpha < .05$ and a degree of freedom df= 29 (see table 05 above).

a. Results of the Pupils' Motivation and Attitudes Questionnaire

Interest in Learning English
Item01: I really enjoy learning English, because the English class is interesting.
Item04: I feel it is not difficult to learn English well.
Item06: I hate English, but I don't have any choice, I just have to sit in class.
Item07: I study English because I 'am interested in it, not for the sake of passing the test or the examinations.

Pupils' responses to the items related to their interest in learning English indicate that the majority of the pupils in the two groups (91% in group C and 83% in group d) enjoyed leaning English because they found that the English class is more interesting this year. The teaching method based on cooperative learning, multiple intelligences, and pupils' perceptual learning

styles with the great diversity in teaching materials and activities played an important role in facilitating English learning for most of the pupils and gave them new ideas on how to learn and what to learn, also it changed their attitudes towards learning English by making them not studying for the sake of the tests and exams, but for the sake of learning the language itself.

Item03: I feel English is important to find a good job.

Pupils' responses to item 03 (61% in group C and 70% in group D) demonstrate the pupils' interest towards the instrumental motivation in learning English. The results revealed that most of the pupils believe that English is important to find a good job which is an instrumental goal rather than integrative.

Item05: I like English class, because I like my English teacher.

The teacher plays a vital role in sustaining and increasing pupils' motivation towards learning in general and learning a foreign language in specific. Results (94,9% in group C and 100% in group D) depict that the teacher has had a big impact on most of her students in the two groups C and D. With the relaxing and free classroom atmosphere that teacher created she had more opportunities to cope with her students' different needs.

Teaching Materials and Classroom Activities
Item08: The textbook or the teaching materials are more practical and useful this year.
Item09: Classroom activities like storytelling, drama, role plays, songs, picture creating and so on can motivate my interest in learning English.

From the results obtained (94, 8% in group C and 79, 9% in group D), the majority of the pupils in the two experimental groups showed a positive attitude towards the teaching materials and the classroom activities that were used during this year. The researcher used a variety of teaching materials and classroom activities which motivated the pupils to work happily with their teacher in most of the lessons that were presented.

Cooperative Learning and Group Work
Item10: I like small group work in the classroom; it can lower my anxiety and fear about learning English.
Item11: I feel cooperative learning in group work it can improve interpersonal relationships among classmates.
Item02: I like to speak English in class.

The majority (89, 8% in group C and 86, 7% in group D) of the pupils affirmed that cooperative leaning and small group work lower their anxiety and fear to use the language freely in the classroom. Teamwork activities gave the shy pupils more opportunities to speak English in small groups with the help of their classmates.

Multiple Intelligences Activities and Assessment
Item12: I feel that multiple Intelligences based activities can improve my four language skills.
Item13: I feel the multiple Intelligences based assessment can give me more confidence and lower my anxiety in learning English.

Multiple intelligences-based activities and assessment had a positive effect on the pupils and this is shown in the results obtained (82, 1% in group C and 90% in group D). Most of the pupils in the two experimental groups liked the use of new activities that are related to their different types of intelligences and liked more the new ways of assessment which were based on their portfolios and not just the standardized tests, because this gave them more chances to show their strengths in learning English.

Cooperative Learning and Multiple Intelligences
Item14: When in group work, I like to work with classmates that have the same type of intelligence.
Item15: When in group work, I like to work with my classmates that have the different types of intelligences.
Item16: After fill in the blanks in the Multiple Intelligences inventory for EFL young adults, I agree that it can match my learning and Intelligence type.
Item17: After fill in blanks in the learning styles inventory, I agree that it can match my way of learning.

Pupils' responses (95% in group C and 97% in group D) to the items related to group work and multiple intelligences show that the use of Multiple Intelligences Inventory and Perceptual Learning Style Inventory had raised the pupils' awareness about their Intelligences profiles and Learning styles.

3- **General Discussion and Conclusion**

The major concern of this research was to investigate the positive effectiveness of the implementation of cooperative learning (CL) activities, involving the insights given by Howard Gardner's theory of multiple intelligences (MI), taking into account the pupils' perceptual learning styles (PLS) in secondary school EFL classrooms on pupils' English language proficiency and attitude.

The null hypothesis predicting that the implementation of cooperative learning (CL) activities, involving the insights given by Howard Gardner's theory of multiple intelligences (MI) taking into account the pupils' perceptual learning styles (PLS) in secondary school EFL classrooms, will have no significant effect on pupils' English proficiency and attitudes and if there is an effect, it will be due to pure chance, was rejected. The results demonstrated that the two experimental groups outperformed the two control groups in the three proficiency tests. Moreover, they showed that the two experimental groups performed better than the two control groups in the three achievement examinations (first, mid and final examinations).

The research findings indicate that the teaching method based on cooperative learning, multiple intelligences and perceptual learning styles contributed positively to the improvement of pupils' English learning proficiency and attitudes.

Moreover, the results of this study revealed that the implementation of cooperative learning and group work in the classroom played a vital role in lowering learners' anxiety and shyness, and helped in creating a relaxing and more comfortable learning atmosphere which led the pupils to take responsibility of their activities elaboration, and they became more creative when they work in teams; these findings are similar with the earlier findings of Lacey (1991) which showed that when using cooperative learning, students seemed to participate more and generate creative ideas when they work together.

In addition, the findings of this research suggest that the use of classroom activities and assessments based on multiple intelligences theory enhanced the pupils' participation in the English class. After filling multiple intelligences and learning styles inventories the pupils became more aware of their dominant intelligences and their different preferences to learn. They were excited when the teacher stuck their profiles on the wall. Pupils' awareness about their profiles raised the teacher's awareness about the pupils' learning differences and this helped her to be more creative in managing the classroom, and cope with individual pupils needs. The present findings are in line with Hall Haley's (2004) research which showed that most students who participated in his experimental work expressed positive feelings about teachers using a variety of instrumental strategies as well as assessment practices based on multiple intelligences theory.

To conclude, EFL teachers will have more opportunities to be creative and effective teachers if they challenge their teaching experiences by adapting Multiple Intelligences Theory, cooperative learning and perceptual learning approach in their classes.

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