PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA
MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH
UNIVERSITY OF TLEMCEN
FACULTY OF LETTERS AND LANGUAGES
DEPARTMENT OF ENGLISH

From a Traditional Learning to a Cooperative Learning Method through a Metacognitive Approach to an EFL Group-Based Project: The Case of Second Year LMD Students at the University Center Ahmed Salhi, Naama.

Thesis Submitted to the Department of English in Candidacy for the Requirement of the Degree of 'Doctorate' in English

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June, 2018

STATEMENT OF ORIGINALITY

I, Asma KEBIRI, declare that my doctorate thesis entitled, "From a Traditional Learning to a Cooperative Learning Method through a Metacognitive Approach to an EFL Group-Based Project: The Case of Second Year LMD Students at the University Center Ahmed Salhi, Naama.", contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

February 7th, 2018

Ms. Asma KEBIRI

DEDICATION

In memory to the ONE friend; whom I did not have enough time to know and love enough, Mrs. Djamila ZEGHOUDI. I just wish we lived this moment together…

I PRECISELY dedicate this work to my beloved parents, who have pushed me to always reach the best throughout all my life. Though not knowing a mere word in English, the motivation you provided me with was endless.

Words never come close to how I truly LOVE and RESPECT my WONDERFUL husband. I am deeply grateful for embracing my pain and weakness whenever I had tough times, and for always knowing how to transform that to faith and peace instead.

To my sweet sisters I say "thank you for being in my life…your presence certainly made it beautiful".

To my family and my family in law; who showed me love and support, and to my friends and colleagues who truly wanted success and happiness for me, I dedicate this work.

ACKNOWLEDGEMENTS

It is of a great value to be under the supervision of Prof. A. BELMEKKI, who despite his many other academic and professional commitments, has been always a source of inspiration and motivation to me. To him I express my deep gratitude.

I precisely thank the board of examiners and I appreciate the fact of accepting to read and examine my research work.

It gives me a great pleasure to acknowledge the support of Ms. H. BAGUI. She simply motivated me by sharing with me some of her experience.

I share the credit of my work with my uncle, Mr. M. SOUARIT who provided me with great information resources. In fact, without this, my work would be in vain.

I also owe sincere thankfulness to the subjects for accepting to participate in this study. Indeed, they were both my challenge and inspiration.

ABSTRACT

This study combines together the concepts of cooperation and metacognition in an EFL classroom. The researcher attempted to investigate the effects of working with metacognitive strategies in cooperative groups on the EFL learners' understanding and use of English tenses, as well as the development of their positive attitudes towards the cooperative approach. Accordingly, this study represents a quasi-experimental research in which the investigator opted for a pre-test post-test group research design. In addition to this research instrument, the researcher selected also a reflective questionnaire and an interview. The sample population dealt with in this study is composed of two EFL 2nd year classes at the department of English, at the University Center Ahmed Salhi, Naama. The research process, then, started first with the students sitting for a pre-test for the sake of identifying their needs; to consider in the next step. Later, during the training phase, students had lectures about English tenses, and were asked to accomplish tasks. The only difference was that students of the experimental group worked on the assigned tasks with metacognitive strategies in cooperative groups and students of the control group worked with metacognitive strategies individually. At the end, students were asked to answer the reflective questionnaire and the interview. Thus, the researcher opted for both qualitative and quantitative types of data analysis. The statistical procedures used for the analysis of the students' scores in both the pre- and post-tests demonstrated that both methods applied to both groups were beneficial; however, students of the experimental group achieved better results. The researcher, though, could not really confirm this hypothesis since the generalization issue could not be achieved after the use of the independent samples t-test. The remaining two hypotheses, on the other hand, were confirmed as far as the analysis of the reflective questionnaire and the interview demonstrated better understanding and use of metacognitive strategies by students of the experimental group and positive attitudes towards their cooperative experience. At the end of this research work, and based on the conclusions drawn, the researcher was able to propose some important concepts and activities to be considered by teachers in their EFL classrooms.

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List of Abbreviations and Acronyms

EFL: English as a Foreign Language

2nd: Second

CLT: Communicative Language Teaching

CBA: Competency-based Approach

ZPD: Zone of Proximal Development

LT: Learning Together

AC: Academic Controversy

STAD: Student Teams-Achievement Divisions

TGT: Teams-Games-Tournaments

GI: Group Investigation

TAI: Teams-Assisted-Individualization

CIRC: Cooperative Integrated Reading and Composition

TEFL: Teaching English as a Foreign Language

BA: Bachelor of Arts

LMD: License-Master-Doctorate

M: Mean

SD: Standard Deviation

N: Number of Respondents

P: Probability Coefficient

Df: Degrees of Freedom

SLA: Second Language Acquisition

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General Introduction

GENERAL INTRODUCTION

It is common knowledge that the field of teaching English as a foreign language increasingly witnesses important contributions of researchers including policy makers, applied linguists as well as educators; which in turn leads to a tremendous amount of progress in the field. These contributions basically serve two main areas; enhancing the quality of teaching English and providing solutions to the already existing trouble spots in the process of education. Indeed, these problems that face EFL learners may arise from the fact that the process of teaching English is conceived to be a dynamic one.

Under this view, it is important to mention the feeling of being obliged to deal with various and sometimes confusing aspects of the language, missing the needed skills to deal appropriately with written production or oral production courses, feeling bored and unsatisfied in English classes, or simply lacking the communicative competence that truly reflects a good learner of English. In fact, these are not the only difficult factors that negatively interfere within the process of learning English. Students may still encounter serious difficulties in grammar, as it embraces too many details about English prepositions, articles and mainly tenses.

Evidence has accumulated on the issue that mastering the English grammar is of keen interest to students if they are truly willing to develop the four skills of language. Consequently, students tend to develop their communicative competence as well. These examples, besides others, are the basic reasons behind the significant consideration of grammar rules and lectures in educational settings where English is taught. Though being really important, English grammar is seen as a source of difficulties in the eyes of learners. This is the reason why the field of educational psychology carefully includes learning grammar among its debated topics in order to provide EFL learners with practical solutions to the main problems they may face.

One of the valuable suggestions of educational psychology concerns the idea of putting students together in cooperative groups, to help and assist each other along

their learning process. Before speaking deliberately about this method of teaching, it is important not to forget that cooperative learning is not the only pattern of interaction that may exist in classrooms. Students may also work competitively based on the idea that they need to show the best achievement among the classroom members, or can simply work individualistically without any consideration of the others' achievement. Accordingly, the pattern of interaction is the one that decides the way students should interact with each other, with the teacher, and with educational materials.

Back to cooperative learning, that is considered as an alternative solution to the student-centered approach, one should consider the sense of teamwork that is naturally developed among the cooperative group members. They all strive to help each other in order to achieve a one common learning goal and celebrate a one common success of the entire cooperative group. This method of teaching has been favoured among researchers and educators for that it led to positive results whenever applied in any educational setting, in any subject, and with any type of students. Almost any journal, book, or instructional material discusses cooperative learning and highlights its academic, psychological, and social effects.

Besides its usefulness in classrooms, cooperative learning is a wise way to raise good citizens, since graduate students will neither work nor live alone in this increasingly changing world. Throughout all life stages, including marriage, families, workplaces, and even daily activities, individuals encounter an abundant amount of interaction with others. Thus, introducing such a way of life at an early stage would probably do more good, as it prepares individuals to be skillful enough to develop positive relationships with classmates, colleagues at work, and family members.

Actually, the teaching approaches that are derived from the human development, teaching, and learning theories are the ones that demonstrated better positive influence on the learners' social and academic outcomes. Cooperative learning, then, is regarded as a fruitful approach for it has considerable theoretical foundations. Additionally, almost all studies done on the application of the cooperative method in various contexts showed better results in terms of academic achievement, social relationships and psychological adjustment to the school.

In addition to cooperative learning, this research work also embraces the idea of how beneficial it is to work with metacognitive strategies. Well, the notion of metacognition has been defined by several researchers from various standpoints. However, John Flavell who is considered to be 'the father of the field' speaks about metacognition as being our own knowledge about our own cognitive processes. Well, a significant proportion of research done on the impact of working with metacognitive strategies in instructional situations demonstrated that students can develop their thinking abilities and become more responsible towards their own learning process. Similarly, these strategies can be introduced in any subject with different age students.

Related to the idea of introducing metacognitive strategies in classrooms, students then may be directed towards identifying first their state of knowledge whenever any new content or task is assigned to them. Then, identifying the difficulty of the task is the one that leads to thinking aloud, careful planning to deal with the task, and conscious decisions about how they should proceed towards the accomplishment of the task. Finally, evaluating their own performance is a successful way towards reconsidering and critically thinking about their previous decisions.

The basic premise of this research work turns around the idea that in spite of the fact of being introduced in the field of education years ago, and despite all the positive results shown through studies about cooperative learning, it is till neglected in Algerian Universities. Teachers still cannot embrace the idea of splitting students into groups and let them work on the same task to achieve the same learning goal. Thus, the researcher aims through this work at changing the teachers' opinions about this method of teaching and direct their attention towards implementing the cooperative approach as an attempt to solve the educational problems encountered by students of English. More precisely, this research work proposes the idea that cooperative learning, if applied appropriately, may lead to a better understanding and utilization of metacognitive strategies, which in turn may be a useful way towards a better achievement whenever English tenses are concerned, i.e. working with metacognitive strategies in cooperative groups may help in enhancing the students' grammar competence, the understanding and correct use of English tenses.

This research is an experimental one, in which the sample is divided into two groups; the experimental and the control one. Students of the experimental group were split to work in cooperative groups with the metacognitive strategies. However, students of the control group worked with metacognitive strategies individually. Accordingly, the aim of this research can be summarized in the following points:

- To provide the reader with an account of the main aspects which characterize cooperative learning rather than other patterns of interaction.
- To highlight the necessary issues that teachers should consider when implementing cooperative learning in their classrooms.
- To examine the effectiveness of cooperative learning in making EFL students understand more and work better with metacognitive strategies.
- To examine the effectiveness of working with metacognitive strategies in cooperative groups on enhancing the grammar competence.
- To check the students' attitudes towards working cooperatively with their peers, and present those attitudes to their teachers in order to adopt this way of teaching.

To start this research, the investigator put forward this following general question: What might be the effects of working with metacognitive strategies in cooperative groups on the EFL students' understanding and use of English tenses? Considering the foregoing general question, the researcher set other sub-questions; the answers to which may cover the scope of this research:

- Would cooperative learning lead to a better understanding and utilization of metacognitive strategies?
- Would working with metacognitive strategies in cooperative groups lead to an enhancement of the EFL learners' understanding and correct use of English tenses?
- May EFL learners develop positive attitudes towards working in cooperative groups?

Related to the previously mentioned research questions, the following hypotheses have been proposed:

- Working cooperatively with peers may be useful in recalling and using the metacognitive strategies.
- Working with metacognitive strategies, when combined with the cooperative approach, may result in a better understanding and use of the English tenses.
- EFL learners may develop positive attitudes towards the cooperative learning experience.

Indeed, this research work is essentially composed of four chapters; each of which tackles a separate aspect. The first chapter represents the theoretical grounding of this research in that it introduces to the reader the basic concepts. Cooperative learning was highlighted including its definition, structure, characteristics, types, theoretical rationales, and basic elements. Then, metacognition was deliberately discussed in addition to all its related concepts.

Regarding the second chapter, it was devoted to describe the research setting, i.e., the Department of English at the University center Ahmed Salhi, Naama. Then, the type of research, the selection of participants, and the research instruments, including the test, the reflective questionnaire, and the interview have been all discussed.

The following chapter, with its analytical nature, dealt with both the qualitative and the quantitative analysis of the data gathered. The comparison of the pre-test and the post-test scores obtained from both the experimental and the control group, as well as the learners' answers to the reflective questionnaire and the interview are the ones through which the investigator was able to answer the research questions and draw conclusions.

Finally, the fourth chapter was provided in order to introduce to the reader valuable concepts that may be used as suggestions to considerable educational problems including, but not limited to, teachers' training, learners' autonomy, cooperative learning, and grammar teaching.

CHAPTER ONE

An Account of Cooperation and Metacognition

1.1. Introduction

It is widely believed that merely putting students to work with some classmates in the same group, on the same task, is not what makes cooperative learning implemented in the class; though both aspects should appear in the scene. Rather, cooperative learning is a whole process characterized by both teachers and learners playing their important assigned roles. Cooperative learning, when structured appropriately, resulted in, in most researches done, better outcomes in terms of academic achievement as well as social relationships and psychological health. The present chapter, then, is a theoretical framework; seeking basically to present most of the issues related to cooperative learning, including but not limited to, its definition, its types, the basic elements that should appear in every cooperative group and the theories that share the same premise with this instructional approach. Also, an account of the teachers' role in structuring cooperative learning is introduced in this chapter.

Parallel to the concept of cooperation, metacognition is being tackled; since the basic premise of this research work is to combine both cooperation and metacognition in the same class for the sake of obtaining better understanding and utilization of metacognitive strategies, and thus achieving better academic results. First, the researcher opted for clarifying the distinction between cognition and metacognition. Then, an account of the significant concepts related to metacognition has been proposed, i.e. metacognitive knowledge, experiences, tasks, strategies, and finally metacognitive skills.

1.2. Teaching EFL : *An Overview*

It is only during the twentieth century that teaching languages became as a profession on its own, thanks to the important contributions of researchers, among whom applied linguists, to make theoretical teaching methods effectively applicable. Basically, there has been a significant change in the teaching approaches which is due to the need of having better teaching methods; as far as this was a basic interest of researchers in the field at that time.

The way languages should be taught is tightly related to and highly influenced by conceptions of how and why people should learn languages. Accordingly, the history of foreign language teaching is generously discussed over years in various researches. However, Riches argues that **"Kelly's *25 Centuries of Language Teaching: 500 B.C.-1969 is the only thorough history that has been written"*** (2006, p. 52); though other researches tackled the same topic in a noticeable manner.

Accordingly, the following is an account of the various teaching methods that have been created and used in instructional situations over years.

1.2.1. The Grammar-Translation Method

The basic premise of the grammar-translation method was that each type of knowledge is located in a separate part of the brain, i.e., knowledge of mathematics in one part and knowledge of languages in a totally different part. During that early time, the teaching of languages involved the teaching of Greek and Latin, and the aim behind teaching languages was specifically to ensure the fact that the classics can still be read in their original languages; as this was highly appreciated as a 'mark of an educated person'. Also, teaching languages was regarded as an effective way to stimulate and exercise the part of the brain responsible for languages. The afore-mentioned aims, in combination, neglected in a clear way the speaking part of the language as well as the importance of communicating in that language being taught. However, the major focus was knowledge of the language, i.e., knowledge of grammar and rules. Admittedly, a longer time used to be devoted to learn a language, without even reaching the ability of speaking it (Zainuddin, Yahya, Morales-Jones & Ariza, 2011).

1.2.2. The Direct Method

This method is traced back to the 1880s, and it emphasized the fact that students associate meaning to words in the target language. As opposite to the grammar-translation method, the direct method asked for the total avoidance of the use of the native language, as well as explicit grammar teaching. However, its initial objective was to promote thinking and speaking the target language through:

- ✓ The use of objects and visual aids.
- ✓ Implicit grammar-rules use and teaching.
- ✓ The great focus on vocabulary.
- ✓ Teaching the reading and the writing skills, and
- ✓ Encouraging student-student and teacher-student interactions (Zainuddin et al., 2011).

1.2.3. The Audio-Lingual Method

During the World War II, the need for competent American students who can speak the language being taught led to a call from the government to better develop language teaching by Universities. Consequently, the Audio-Lingual method was proposed. This latter shared the premise of behaviouristic psychology, and thus emphasized rote learning and the memorization of dialogues, in addition to the avoidance of the native language use. Participating in drills and memorizing the structures were the basic activities selected for language learners, intending to help them speak the language. After some years of applying the audio-lingual method in language classrooms, it was discovered that becoming a competent user of the language was not truly achieved, since the audio-lingual method neglected in a clear way a basic characteristic of language, i.e., creativity, and taught language in a designed framework (Zainuddin et al., 2011).

1.2.4. Suggestopedia

This method was developed during the 1980s and aimed at reducing the "psychological barriers" that may prevent people from learning, or simply influences their learning (Zainuddin et al., 2011). In this respect, Zainuddin et al continued **"In this method, the classroom atmosphere is crucial. Creating a relaxed, nonthreatening learning environment is essential for its success. The goal is that students will assimilate the content of the lessons without feeling any type of stress or fatigue"** (2011, p.66). The tools being used to create such comfortable learning situations are mainly appropriate light and sometimes even calm music. Also, students should have the strong belief that they can reach success. Indeed, this method was not widely used

because it is not that appropriate for large classes and because it is not the center of textbooks (Zainuddin et al., 2011).

1.2.5. The Silent Way

This method was introduced by Caleb Cattegno and it is considered as **"…a fairly complex method that requires the teacher to receive extensive training in the use of the methodology"** (Zainuddin et al, 2011, p. 66). Indeed, this complexity is due to the fact that teachers are required to keep silent after modeling just once, and let students hold the responsibility of their own learning; for the sake of reproducing what has been produced by the teacher. Most of the activities according to the silent way, involve the use of colours and rods (Zainuddin et al., 2011).

1.2.6. Total Physical Response

Actually, the psychologist James Asher (1974) is the one who developed this method. It held the premise of involving students both physically and mentally for a better result. Considering the previous idea, teachers start training students to respond physically through some basic commands like 'stand up', 'sit down', or 'turn around'. The following step involves making students participate in activities through physical response. An example of that would be giving cards to students and ask the ones who have fruits drawn on them to stand up, and those who have vegetables on the cards to sit down. Accordingly, the writing and the reading skills are, to some extent, neglected within this method. However, listening is the key to the development of the speaking skill (Zainuddin et al., 2011).

1.2.7. The Natural Approach

Based on the monitor model of Stephen Krashen, the natural approach was developed by Tracy Terrel (1977, 1981), mainly to positively promote communication through creating natural acquisition atmosphere to students. Thus, **"… much opportunity for listening/speaking (when ready) is afforded to students"** (Zainuddin et al., 2011, p. 71). Also, error correction is considerably regarded as a negative

element; as it causes embarrassment and a lack of motivation to students, which in turn makes the affective filter up and the learning of academic content slower and more difficult. On the other hand, the use of visual aids is encouraged to provide a comprehensible input to students (Zainuddin et al., 2011).

1.2.8. The Communicative Approach

When it comes to this approach, various components are to be highlighted including:

- ✓ Emphasis on communication
- ✓ Task completion by students, and
- ✓ Authentic language activities and situations.

This method embraces the communicative competence as the principal objective, and calls to put students with different levels in communication situations to better complete the task, i.e., students need each other to achieve the learning goal. Additionally, different types of activities may be introduced into the classroom including games, plays, and even activities outside the classroom (Zainuddin et al., 2011).

1.2.9. The Competency-based Approach

The competency-based approach emerged during the 1970s in the United States of America, but it has come into practice only by the end of the 1970s, and has been only recently adopted by some countries like Australian ones (Richards & Rodgers, 2001). It can be, also, given the name of 'the pedagogy of integration', or 'the outcomes approach' since it is the type of approach that focuses on learning outcomes rather than inputs, i.e., it focuses on defining learning goals rather than syllabuses. Nkwetisama (2012, p. 516) stated that **"This approach seeks for linguistic and sociolinguistic competence in the language".** He also continued that the competency-based approach **"…consists of knowing what to do, where, when and with whom; or, being linguistically, communicatively and sociolinguistically competent with the learned language"** (Nkwetisama, 2012, p. 519).

The competency-based approach is described, according to Nkwetisama (2012), as a cyclical process. Weddel (2006) suggested that its first component is the assessment of students' needs which leads to the selection of expected competencies and which in turn leads to the target instruction. The fourth and the last component is the evaluation of the competence attained. The figure presented below clarifies more this point:

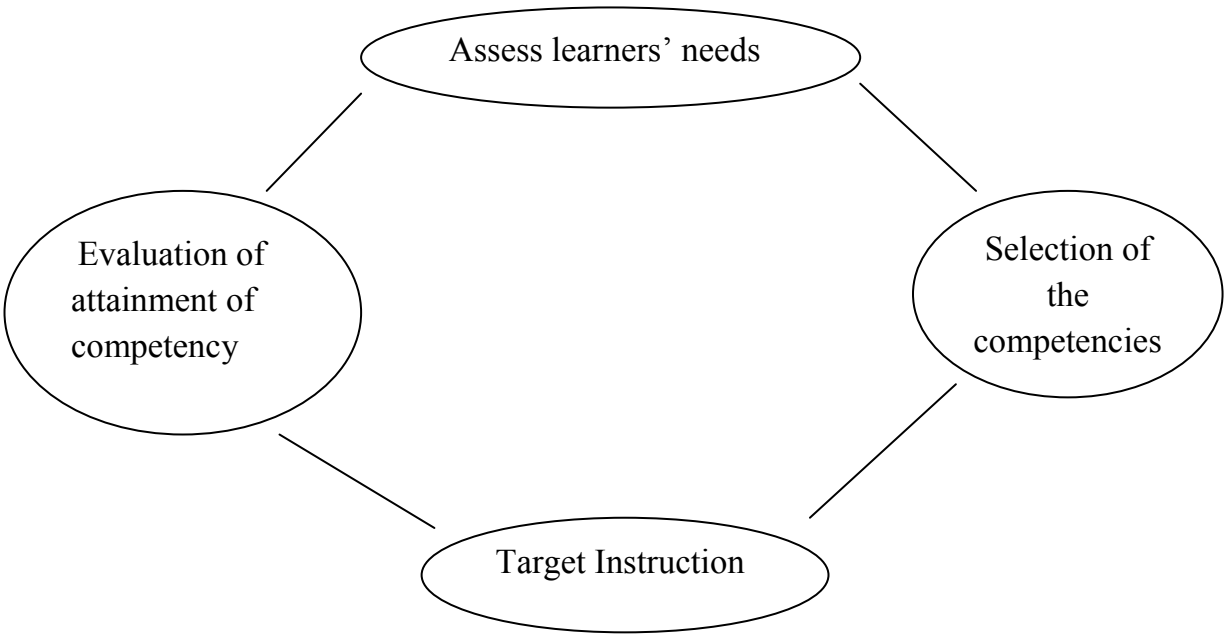


Figure 1.1: Components of the competency-based approach
Source: Nkwetisama, 2012, p. 520

Accordingly, to apply the competency-based approach, several issues must be ensured in the classroom; among which is the specification of the learners' needs and the learning goal, as well as the use of various teaching methods including group work. This approach also requires deliberate use of materials and providing students with feedback. As far as this approach specifically highlights the relationship between what might be going on in the class and the outside world, an attempt has to be made concerning the use of the four skills as a key element to effectively integrate individuals in their everyday life (Nkwetisama, 2012).

1.2.10. Embodying the Spirit of Teaching Approaches

Closely looking at these methods, previously mentioned, would lead to notice how strongly it is believed that communicative language teaching requires and involves engaging students in meaningful communications where, most of the time, comprehensible input is ensured (Chelli, 2012). This is, with no doubt, one of the aspects of cooperative learning. Thus, **"One of the primary predecessors leading up to the creation of Cooperative Learning theories was Communicative Language Teaching (CLT)"** (Arnadotir, 2014, p. 2). In cooperative groups, learners are put in situations where only the student-student communication exists, and where there is no role for the teacher except making sure that cooperation is being correctly implemented in the class and providing help and assistance to the groups if needed. Additionally, one of the activities that seem to be compatible with communicative language teaching is what is referred to as 'social interaction activities', including conversations, discussions, and debates; which can all be ensured through cooperative learning.

On the other hand, cooperative learning and the competency-based approach seem to have so much in common since the competency-based approach **"…seeks to teach language in relation to the social contexts…"** (Richards & Rodgers, 2001, p. 143). Also,

> **One of the most distinctive features of the CBA is its integration of the project work as part of the learning strategy… it also, makes cooperative learning a concrete reality and opens new avenues for action, interaction, and the construction of new knowledge. In short, it is only through carrying project work that we and our learners live the basic principles of the CBA.** (Chelli, 2012, P. 49)

1.3. Traditional Versus Cooperative Learning

Classroom interaction is a broad umbrella term that covers distinctive correlations between students, teachers, and materials. Extensive research on classroom

interaction was conducted to explore and unveil all the major related issues. **"Research focusing on the social interaction of the classroom is generally thought to have begun in the 1950s and 60s… [and it] focused mostly on whole-class interactions between the teacher and students"** (Kumpulainen, 2002, p. 9). Indeed, besides social interaction, i.e., teacher-student interaction and student-student interaction, there exists another type which is student-materials interaction. However, it is believed that social interaction has the most influence on the students' academic and social development (Johnson and Johnson, 1987; Kumpulainen, 2002).

Focusing on the student-student interaction makes it relevant, here, to mention that no matter what learning goal students and teachers aim to achieve, one of the three different types of interdependence can be structured among students, and which is in turn responsible for determining the way learners interact with each other. It is also a determinant element in how far they may progress in their learning process. The type of interdependence depends on what goal structure is dominating the classroom. Johnson and Johnson clarified this point saying that: **"A goal structure specifies the type of interdependence among students as they strive to accomplish their learning goals. It specifies the ways in which students will interact with each other and the teacher during the instructional session"** (1987, p. 3). Accordingly, the term 'goal structure' is used to refer to the state of working cooperatively, competitively, or individualistically in the classroom.

In every classroom, whatever the age of the learners or the subject being taught are, one of the following three goal structures can dominate the instructional situation. Students can either work in an individual manner where they basically feel carless about others' learning and achievement, competitively where everyone challenges the others to see who can do best, or cooperatively where students are placed to work together in small groups; to assist one another in order to achieve a one common learning goal.

Related to the previous idea, there is a wealth of research that indicates the importance of truly knowing how to structure interdependence among students. Areas such as academic outcomes, reasoning strategies, intrinsically-driven achievement motivation, interpersonal relationships, self-esteem, and subject appreciation are all

affected by the way interdependence is introduced in the class (Johnson, Johnson & Smith, 1991). Thus, teachers need, essentially, to know how and when to structure cooperation, competition, or individual learning among learners (Johnson and Johnson, 1987).

The basic philosophy of traditional classrooms is that there are not enough "A" grades for everybody in the class, and therefore students are required to work hard in an individual manner, if not in a competitive way, to get the "A" grade. Accordingly, traditional classes involve students who work competitively to determine who is best or individualistically without caring of others' performance. In such classes, students merely interact with printed materials, visual aids and their teachers (Hecox, 2010). At certain times, teachers seek to break the routine so they ask students to sit and work with their peers in groups, thinking of how helpful this might be to motivate them and to fasten the learning of academic content. Basically, this is not enough to say that cooperation is being structured among students. **"Traditionally, primary schools have often organised pupils to sit in groups of four or six, although interaction between them may be very limited"** (Jolliffe, 2007, p. 4). In such groups, pupils keep complaining 'He is copying me', simply because they do not even know that working collaboratively and sharing knowledge and materials are the main aspects of cooperative groups, and that if the elements of cooperative learning are not fully met; then there is nothing magical about just sitting next to each other. In some traditional groups, and within some tasks, only one student is asked by his/her group mates to do the work while they go for a free ride and only write their names on the report. These groups, indeed, are no more than putting students sit near each other while each participant does his individual work or only one student does a common work for the whole group (Jolliffe, 2007).

Thus, traditional classrooms might almost be one of the following:

- *Competitive:*

Actually, students absorb the sense of competitiveness from the need of getting the best grade. In competitive classrooms, then, the fact of working against each other

dominates the whole situation. Students try always to learn, focus, search, ask, and participate more than their peers do. Additionally, they benefit when their peers are deprived of knowledge and success; and they celebrate the failure of others, which means some students' success is conceived to be a detriment to others. They even work independently without seeking any help from others except the teacher. Thus, the learning goal can never be achieved by everybody; only one student or few ones might do so (Johnson et al, 1991).

This competitive atmosphere creates a type of interdependence that is referred to as 'Negative Interdependence'; as it is briefly and clearly explained by Johnson and Johnson: **"In such competitive situations there is a negative interdependence among goal achievements; students perceive that they can obtain their goals if and only if the other students in the class fail to obtain their goals"** (1987, p. 4). Negative interdependence embraces the fact that **"Students either work hard to do better than their classmates, or they take it easy because they do not believe they have a chance to win"** (Johnson et al, 1991, p. 2-3).

Significantly, schools are seen as 'competitive enterprises' in the eyes of the majority of students and they either do their best to faster and more accurately complete the task or they relax simply because they do not have enough self-confidence to engage in such struggles. Thus, **"…too much competition might…lower the teaching effects"** (Wang, 2007, p. 23).

- *Individualistic:*

Teachers may structure **"…lessons individualistically so that students work by themselves to accomplish learning goals unrelated to those of the other students"** (Johnson and Johnson, 1987, p. 4). This type of learning can be achieved only under one condition; when students' success or failure is not related in any way to their peers' success or failure. It is, actually, best recommended for the learning of skills and facts like historical events (Johnson and Johnson, 1987).

Admittedly, in such classes, students are passive participants in the learning process; they have no role except listening to the teacher attentively and doing the assigned tasks individually. Teachers, in such a type of learning situation, need to be precise and understood so that students do not feel the need for more explicit explanations and clarifications by the teacher. Interaction in individualistic learning situations requires help and feedback to be provided by the teacher, as well as material to be given to each student separately. However, there should be no interaction between classmates, and learning tasks should be accomplished in an individual manner. Each student takes care of only his/her own materials and achievement. Moreover, they believe that the learning of others does not by any mean influence their own learning. This appears to be the reason why no interdependence is related to this goal structure (Johnson and Johnson, 1987).

Traditional and cooperative classrooms are also different from each other in terms of teachers' roles, teaching activities, interaction and evaluation. Basically, traditional classrooms embrace the teacher-centered approach, where the teacher is the main actor and the students are just passive agents; whose main role is to listen. The textbook, on the other hand, is conceived to be the most essential learning material; where vocabulary and grammar rules are focused on. In this respect, traditional classes involve an emphasis on drills, practices and review of knowledge with authoritative teachers acting as controllers since **"…the teacher usually dominates and controls the activities of the whole class"** (Wang, 2007, p. 24). They just transmit knowledge through a one-way communication; and they evaluate only the academic outcomes of learners (Wang, 2007). In traditional learning situations, students may feel unmotivated, frustrated, and exhausted; as far as they are not included in the learning situation effectively, and because of the limited responsibility they hold towards their own learning and achievement.

On the other hand, cooperative learning situations involve students divided into small groups to work collaboratively for the sake of achieving common learning goals. They strive for making each one in the group benefits from the other members and for celebrating the success of the whole group. Students believe that they can achieve their

goals if and only if their peers reach their own goals (Zhang, 2012). What characterizes this goal structure most is, mainly, the sense of feeling responsible for one's own and others' learning. This feeling of caring of others is what makes 'Positive Interdependence' an essential part in these cooperative situations. Johnson and Johnson stated in this sense: **"Cooperative learning entails a positive interdependence among goals attained; students perceive that they can reach their goals for learning if and only if other students in the learning group also reach their goals"** (1987, p. 3). The following table summarises the difference between the previously-mentioned types of interdependence:

	Interdependence		
Characteristic	Positive	Negative	None
Fate	Mutual	Negatively linked	Individual
Benefit	Mutual	Differential	Self
Time Perspective	Long term	Short-term	Short-term
Identity	Shared	Relative	Individual
Causation	Mutual	Relative	Self
Affiliation Motives	Enhance	Oppose	Oppose

Table 1.1: Characteristics of Social Interdependence.

Source: Johnson et al, 1991, p. 29

The clear distinction between traditional and cooperative groups is the existence of some basic elements; which characterize the true cooperative groups. In this sense, Jolliffe explained: **"To become cooperative, groups must work together to accomplish shared goals. They need to discuss work with each other and help each other to understand it"** (2007, p. 4). Thus, teachers who seek to structure cooperative learning in the class should take into real consideration this fact, otherwise, the groups would not be cooperative ones.

It is believed that unlike traditional classes, cooperative learning promotes enjoyment of the learning experience to students. Related to this fact, Johnson and Johnson (1987, p. 67) added: "**In the process of working together to achieve shared**

goals students can come to care about one another on more than just a professional level. Extraordinary accomplishments result from personal involvement with the task and each other". This only emphasizes the fact that cooperative learning helps in increasing the students' learning outcomes and strengthens their psychological health and their relationships with their peers.

1.4. Should-be-known Features of Cooperative Learning

Under the view of having three clear patterns of interaction in the classroom, one has to strongly emphasize the fact that the three goal structures are not in a win-lose challenge; since each one of them can result in success, if structured appropriately. However, it is worth pointing that the great deal of research, including 600 studies over 90 years, showed the better results that cooperative learning may lead to; in terms of academic achievement, peer relationships and psychological health. For this reason, cooperative learning is believed to be a potential solution to a number of problems in the field of education. Sharing their knowledge and material with others in the cooperative groups makes the students able to understand more, learn better, and develop positive attitudes towards their peers, their classroom and the entire school. In this line of thought, Zhang mentioned that:

> **Even though these three goal structures are effective in helping students learn concepts and skills in some conditions, students can learn to interact more effectively and positively in cooperative learning process. Compared with competitive and individualistic goal structure, therefore, cooperative goal structure should be the best choice of our life, schooling, family, career, etc.** (2012, p. 1)

Evidence shows that, in the early days of this century, there has been little research on cooperative learning. Later, it became the concern of extensive researches which led to the fact of having a large and sprawling literature on it. At present, it is the topic of so much literature since it is relatively rare to find a scientific journal or an

instructional book that does not tackle cooperative learning as being a useful approach to teaching (Johnson & Johnson, 2008). In spite of this fact, and though it is considered the most influential of the three goal structures, it is still currently not considered for relevant use (Johnson et al, 1991).

In an attempt to define cooperation, Slavin said that **" The term refers to classroom techniques in which students work on learning activities in small groups and receive rewards or recognition based on their group's performance"** (1980, p. 315). In such groups, students become active participants because working cooperatively extensively demands helping each other to master the assigned academic content. Students, then, experience discussions among the group members, the evaluation of each other's knowledge, ensuring each other's understanding and caring about their peers' learning (Slavin, 1995). Accordingly, Johnson *et al* added that:

> **Cooperation is working together to accomplish shared goals. When engaged in cooperative activities, individuals seek outcomes that are beneficial to themselves and to all other members of the group. Cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other's learning.** (1991, p. 3).

This instructional approach may be traced back to the beginning of the 20th century with John Dewey **"…who emphasized education as a vehicle for teaching citizens to live cooperatively in social democracy"** (Cooper, Robinson & Mckinney, 1994, p. 1). Later, the 1930s and the 1940s witnessed the work of the social psychologist Kurt Lewin on group dynamics and the work of his student Morton Deutsch who could develop the theory of interdependence; precisely cooperation and competition among students. All the previous ideas set the stage for the new active researchers in the field of cooperation. These include the professor of educational psychology David W. Johnson from the University of Minnesota and his brother Roger T. Johnson. Also, they achieved a noticeable progress in research with their colleague

Karl A. Smith and Robert Slavin from Johns Hopkins University. These researchers practice regularly teaching with cooperative learning, and have published numerous works on the same topic.

Johnson and Johnson, when defending this method of teaching, stated that **"Cooperation is appropriate for any instructional task"** (1987, p. 44). Thus, Cooperative learning is believed to be relevant for any cognitively demanding task including problem solving tasks, conceptual tasks, and tasks that require creative answers. It is also appropriate for every age learners and for the teaching of any subject matter. According to what has been stated previously, and considering the fact that it can result in better achievement, good interpersonal relationships and psychological health, one can assume that cooperative learning is an educational psychology success story, though some see it as a difficult way of teaching.

If teachers seek to structure cooperation in their classrooms, they may first decide the learning goals that their students should achieve, and they may take into account the advice of Johnson and Johnson to beginning teachers and which concerns putting students in groups of a small number, i.e. groups of two to six (1987). Additionally, the teacher should ensure that the group members are sitting in a way that facilitates discussion, and that the five elements of cooperative learning are carefully included. The teacher only intervenes to:

- ✓ provide assistance and help if needed
- ✓ make an end to group conflicts, or
- ✓ evaluate each student's achievement using a criterion-referenced evaluation system (Johnson and Johnson, 1987).

1.4.1. Theoretical Rationales

Though researchers strongly agree that cooperative learning, as a teaching method, holds so many promises concerning not only academic achievement, but also psychological and social positive effects, there still exists a dispute over why and how these outcomes could be achieved (Slavin, 2010). To a great extent, this was a convincing reason for scholars to look deeper into what theoretical perspectives do

really exist on cooperative learning. In this respect, theoretical perspectives represent, for Slavin, **"…relevant dimensions that contribute to our understanding of the effects of cooperative learning"** (Su Hoon, 2004, p. 42-43).

Actually*, The Social Interdependence Theory, The cognitive development theory and The Behavioral Learning Theory* are basically the ones considered by researchers such as Robert Slavin (1995) and Roger and David Johnson (1999) as a foundation for cooperative learning (Hecox, 2010). Based on the above explanation, then, cooperative learning is considered to be underlined from various theories. It is worth pointing out that this fact highlights more the fruitfulness of the cooperative approach.

As it was previously mentioned, these theories provide different insights about the functioning of cooperative learning and how it positively influences the achievement of learners. Moreover, they provide accumulated evidences and support for some aspects of cooperation.

1.4.1.1. The Social Interdependence Theory

Historically speaking, the emergence of the social interdependence theory, which focuses on learning in social contexts, is tightly related to the school of gestalt psychology at the University of Berlin during the 1900s (Johnson and Johnson, 2009). Indeed, till the 1970s, only individualistic and competitive learning dominated education. For Slavin, Competition does not contribute in any way to the motivation of low-ability students as they do not consider themselves neither as able to compete with high-achievers, nor as able to achieve. However, social researchers brought to the scene the effectiveness of social interaction, and the application of the premise of the social interdependence theory to education could make the difference (Su Hoon, 2004).

It is argued that the social cohesion perspective

> **…suggests that the effects of co-operative learning are largely dependent on the cohesiveness of the group. In this perspective, students help each other to learn because they care about the group and its members and**

> **come to derive the benefits of self-identity from group membership.** (Slavin, 2010, p. 168).

Hence, it is one of the students' interests to help their peers learn to achieve the common learning goal. This sense is driven from the fact that each one's success contributes to the success of the whole group, and also from the fact that they begin to like each other thanks to being members of the same group.

Basically, the premise of this theory began with Koffka, one of the founders of the school of gestalt psychology, and his followers; namely Kurt Lewin when they suggested that the common learning goal unifies members of the cooperative group where interdependence exists. It is thanks to the work of Lewin that the state of each group member became seen as dependent on the state of other members. Later, Deutch (1962), the graduate student of Lewis, further developed the idea and proposed that interdependence might be positive when students cooperate together; or negative when competing against each other (Hecox, 2010). Then, the social interdependence perspective was developed once again by Johnson and Johnson when they described the theory as the most influential, adding that:

> **Social interdependence theory posits that the way social interdependence is structured determines how individuals interact, which, in turn, determines outcomes. Positive interdependence (cooperation) results in promotive interaction as individuals encourage and facilitate each other's efforts to learn. Negative interdependence (competition) typically results in oppositional interaction as individuals discourage and obstruct each other's efforts to achieve.** (Hecox, 2010, p. 16-17)

Since Slavin regards the success of the cooperative group as being drawn from its cohesiveness, then the most common used procedures of cooperative learning, as

explained by the theory of social cohesion, have to be ensured through social and interactive tasks, to promote interaction and learning among students.

1.4.1.2. The Cognitive Development Theory

Research brought together the essence of the cooperative method and the conclusions drawn by the Swiss child psychologist Jean Piaget (1926) and the Russian developmental psychologist Lev Vygotsky (1978).

The whole cognitive premise highlights the idea that interaction is beneficial to achieve better learning outcomes. For Piaget, students should be given the opportunity to become active participants in their learning process, as far as cognitive development is believed to result in learning, and that uploading students with new knowledge is increasingly showing no fruitful results. Then, it may be worth mentioning that **"when individuals cooperate with the environment, sociocognitive conflict occurs, thus creating cognitive disequilibrium, which in turn stimulates perspective-taking ability and cognitive development"** (Johnson, Johnson, & Holubec, 1998, p. 1).

The concept of cognitive disequilibrium is one of the aspects introduced in the theory of Piaget, and it is clearly involved in discussions about cooperative learning. This later is a context where conflicts, occurring between group members whenever a new information or skill contradicts their prior knowledge, represent a huge part of the scene. This, significantly, reflects the centre of cooperative groups and it is regarded as positively affecting the learning process. This is explained thanks to the fact that, during collaborative discussions, students may face opposing views of the group members. Because there is only one common learning goal that should be achieved after the cooperative work is done, students try their best to solve the conflict through agreeing on the same answer and reach the stage of consensus. Therefore, knowledge can be constructed (Hecox, 2010).

The cognitive strand also highlights the cognitive elaboration concept, which represents another key feature of cooperative learning. It is highly acknowledged that some methods of cooperative learning require students to do some roles, including 'the

teacher' role; and this makes the students, to some extent, obliged to elaborate their thinking and their explanations according to their peers' level. Also, the other members will be in a situation where explanations are provided in an easy and understood language by their partners in the group, and not by the teacher, which is again a facilitating element of the learning process (Su Hoon, 2004).

On the other hand, it is demonstrated that cooperative learning is a perfect way to create the learning atmosphere that Lev Vygotsky described as the Zone of Proximal Development, and as a result the effects of cooperative learning were once more explained. Particularly, Vygotsky highlighted in his theory interaction between learners as helpful to deal with cognitive tasks, and that students need to interact with more competent classmates if they wish to develop their learning. This interaction enables them to learn new skills and information that are available in the zone of proximal development which, in turn, refers to the difference between what the learner can achieve alone and what he/she can achieve when being assisted by somebody else who is normally more competent (Hecox, 2010). In this context, Newman and Holtzman stated that:

> **Vygotsky's strategy was essentially a cooperative learning strategy. He created heterogeneous groups of…children […], providing them not only with the opportunity but the need for cooperation and joint activity by giving them tasks that were beyond the developmental level of some, if not all, of them. Under the circumstances, children could create a ZPD for each other, […].** (as cited in Fehling, 1990, p. 4)

In brief, it appears that cooperative learning shares a lot with the cognitive learning theory when considering the aspects discussed above. As Su Hoon explains, **"Typically it is the cognitive-development strand that investigates outcomes of homogeneous and heterogeneous groupings, usually by ability or competence level…"** (2004, p. 44).

1.4.1.3. The Behavioural Learning Theory

Considering the fact that cooperative learning is built with an essential element, referred to as individual accountability, members of the cooperative group feel accountable for their peers' learning and they seek to motivate them for a better achievement. This is, indeed, related also to the fact that extra grades are provided to groups that achieve the assigned criteria; which makes members of the group motivated to learn and leads them to motivate each other as well. This whole rewarding experience, named also extrinsic motivation, is a considerable aspect of behaviourism.

In a similar vein, other researches including the ones of Stevens (2008) introduced other theoretical rationales for cooperative learning, namely:

1.4.1.4. The Generative Learning Theory

The basic premise of this theory is that when students explain the academic material or task to their classmates using their simple language, they get a better mastery themselves; as this is regarded as an effective way to recall the background knowledge and, thus, understand better the new assigned material. As explained by Stevens, **"Generative theory provides a rationale for the evidence that high-ability students gain as much or more academically from cooperative learning as do average-or lower-ability students"** (2008, p. 189).

Thus, no matter what the level of the group members is, one of the essential elements of establishing cooperative learning in the class is to make sure all the members participate in the group discussion and the solving of the task, rather than only one of them providing the final answer to the whole group.

1.4.1.5. The Sociocognitive Learning Theory

The learners' positive academic outcomes, achieved through working cooperatively, can also be explained by the principles of Albert Bandura's theory, since it discusses mainly the usefulness of modeling to one's own learning. In a similar vein, Stevens contended that **"Sociocognitive theory suggests that the learner will benefit**

from models in the environment, such as interacting with peers to promote both learning and motivation" (2008, p. 190). Observing others, then, is a key feature to meeting new information and skills, and learning them in turn. Observational learning, as suggested by Bandura, starts with the attention given to a specific behaviour, then moving to retention of the main aspects of the behaviour, and finally motor reproduction of the same behaviour. Accordingly, what students may face when working collaboratively in groups seems to be the heart of Bandura's ideas (Stevens, 2008).

1.4.2. Distinctive Methods

The good news about cooperative learning is that it does not take one form and does not follow one way. However, researchers have introduced distinctive methods of cooperative learning through the last decades. As it is known, cooperative learning is interestingly a famous and an influential teaching approach. One of the factors

> **contributing to the widespread use of cooperative learning is the variety of cooperative learning methods available for teacher use… Almost any teacher can find a way to use cooperative learning that is congruent with his or her philosophies and practices.** (Johnson, Johnson & Beth Stanne, 2000, p. 3).

Extensive research on cooperative learning methods highlighted basically eight methods that showed very positive results in terms of students' achievement. These include: Learning Together (LT), Academic Controversy (AC), Student-Team-Achievement-Divisions (STAD), Teams-Games-Tournaments (TGT), Group Investigation (GI), Jigsaw, Teams-Assisted-Individualization (TAI) and Cooperative Integrated Reading and Composition (CIRC) (Johnson et al, 2000).

Regarding the previous explanation, though teachers are able to integrate various methods of cooperative learning in the classroom, the famous question asked is about which method can be best useful and influential, and the answer to this question addresses the following points:

- ✓ The amount of research done on a given method to support its effectiveness.
- ✓ The various degrees of effectiveness promoted by the different cooperative methods available.
- ✓ The academic content specified, and
- ✓ The students addressed (Johnson et al, 2000).

It is relatively impossible to include an exhaustive and thorough list of cooperative learning methods in this literature. Thus, the following methods are only some of the forms that cooperative learning can take. This selection is based on two aspects. First, the methods that are best used to improve students' academic performance, and second, the ones that are best relevant to teaching languages.

1.4.2.1. Jigsaw

Jigsaw is a method developed by Elliot Aronson in 1971 in Austin, Texas, and it represents one of the earliest models of cooperative learning. It is noted that **"Jigsaw is best used with students in elementary school through college…"** (Stevens, 2008, p. 190). The premise of the jigsaw technique turns around the idea that each member's understanding and mastery of the material is required as an essential part for the completion of the academic task. This method seems to be appropriate when the learning of narrative content is desired rather than the learning of skills.

Basically, what determines the jigsaw technique is what was referred to by Mengduo and Xiaoling (2010) as an 'expert group'. This latter is formed by members coming from other groups. They are all gathered in the expert group because they have been given the same part of task or material. They work in the expert group till the assigned material is fully conceived and they go back later to their original groups to make their peers in the group also master it (Stevens, 2008). Evaluating the students' performance in jigsaw involves giving students grades for their individual examination.

A great number of researchers have made use of the jigsaw method in their classrooms with various age students and various subject areas to examine to what extent it is influential and it **"…was considered effective in increasing positive educational outcomes"** (Mengduo and Xiaoling, 2010, p. 113). The jigsaw strategy is

said to be effective for the fact that it is influential in including students positively in their learning process, as well as for how relaxed students can feel when working with such a method. In addition to that, it reduces the sense of competitiveness among students and the sense of teachers' authority in the class.

It is interesting to note that jigsaw was not the final version of working in groups in such a way. Indeed, a set of modifications have been added to this method by some researchers; which led to the introduction of Jigsaw II by Slavin in 1978 which emphasized the importance of the familiarity of the task to the group members. On the other hand, Jigsaw IV was proposed by Holliday in 2002; who added that:

> **Several additional features such as teacher introduction of material, expert group quizzes, review process prior to individual assessment and re-teaching of any material that wasn't adequately explored in the collaborative group work.** (as cited in Mengduo and Xiaoling, 2010, p. 114)

Whatever the form of the method is, Jigsaw is generally believed to be a successfully effective technique.

1.4.2.2. Student Teams-Achievement Divisions (STAD)

Another method that can be applied into classroom instruction is Student Teams-Achievement Divisions and which consists of some essential components including teams and quizzes. Stevens defined this method as:

> **… a cooperative learning method developed by Robert Slavin that is used in learning factual content (e.g., vocabulary, social studies or science information) as well as discrete skills (e.g., spelling, math computation, or language mechanics skills) for students in second through twelfth grade.** (2008, p. 191)

The groups in STAD are heterogeneous and may include four or five students. It can be best used when students are intending to prepare for an end-of-the-unit- test. The procedure goes through the following steps. First, the students sit for a pre-test that determines their score and then they go through a process of testing each other's knowledge on the assigned material. Finally, the end-of-the-unit test is the one which determines the difference between their scores in the pre-test and their scores in the final test, i.e. their improvement points. In fact, STAD demonstrates a great positive influence on both students' achievement and relationships when applied in the classroom.

Likewise, Teams-Games-Tournaments (TGT) is similar to STAD since it **"…is used to promote students' learning of factual content or discrete skills, and is typically used near the end of a unit of instruction"** (Stevens, 2008, p. 191). However, it takes the form of a competition between students who have similar abilities but at the same time belonging to different groups; in order to answer questions about the content they are intending to learn.

1.4.2.3. Learning Together

This method is considered as one of the famous methods; to which so much attention is given. It was first introduced and developed by David Johnson and Roger Johnson in the mid 1960s (Johnson et al, 2000), and it is based on the social interdependence theory. Accordingly, it focuses on the implementation of the basic elements of cooperative learning in each group including: face-to-face interaction, positive interdependence, individual accountability, and interpersonal skills (Stevens, 2008). Indeed, carefully including these elements in the process is the significant reason behind positively affecting the students' achievement, their relationships with peers, and their psychological health. On this aspect, Johnson et al said: **"When the impact of cooperative learning was compared with competitive learning, Learning Together (LT) promoted the greatest effect… [and] when the impact of cooperative lessons was compared with individualistic learning, LT promoted the greatest effect…"** (2000, p. 1).

This method either makes students study together the assigned content and then test each other's knowledge for the sake of being ready for their individual tests, or study the content together in order to be ready for the group test. Thus, group members share materials, divide labour, and strive to achieve the common learning goal.

1.4.2.4. Guided Reciprocal Peer Questioning

This method was developed by Alison King and it is best used with college students or upper primary graders, seeking to master the academic content which usually takes the narrative form. Applying this method requires students to ask each other questions that generally take the following forms:

- ✓ "What does…mean?"
- ✓ "Describe…in your words"
- ✓ "Explain why…"

So, **"Students ask a question to a partner, who attempts to answer it and then reciprocates by asking another question"** (Stevens, 2008, p. 192). Evidence shows that this method is really beneficial as it enables students to memorize and remember things they read or hear during the lecture. It also enables students to effectively use the metacognitive skills to accomplish these metacognitive tasks (Stevens, 2008).

1.4.2.5. Reciprocal Teaching

This method was developed by Annamarie Palincsar, and it is selected when the teacher seeks to develop the reading comprehension skills of elementary and middle school students. First, the lecture begins with the teacher directly explaining to his/her students the comprehension strategies they should consider when reading; including questioning, clarifying, summarising, and predicting. Then, the teacher continues to support the students with more questions as they progress in using the strategies. The next step in Reciprocal Teaching requires the students to do what was done by their teacher, i.e. to ask one another questions in a form of a dialogue. The role of the teacher, here, is to guide the students as they practice Reciprocal Teaching and to ensure that they are using the strategies in the right way (Stevens, 2008).

On the effect of Reciprocal Teaching, Omari and Weshah stated that:

> **…reciprocal teaching is one of the most effective methods that develop the cognitive and the meta-cognitive processes for the students since it includes organizational procedures which enable them to choose the strategies of planning, controlling, and evaluating at their own pace** (2010, p. 26).

In fact, research on reciprocal teaching proved its effectiveness as it enables students to retain information even after the completion of the instructional unit. The obvious positive side of this method lies on the fact that it leads the students to share responsibility with their teachers, and that it allows more discussions in the classroom (Omari & Weshah, 2010).

Indeed, there are only few studies that can be found when the comparison of cooperative learning methods is concerned. However, there are numerous other studies that compare these cooperative methods with the traditional way of teaching; a significant proportion of which concludes that they are influential in promoting a better learning process (Hecox, 2010).

1.4.3. Basic Elements

A great amount of early research shows that working in groups has often been implemented in instructional situations through making students to work in pairs or groups. Those groups were generally a situation of discomfort to most of the students as far as competition among the group members, noticeable limited interaction between them, and a number of group conflicts characterize the groups (Jolliffe, 2007). Thus, cooperative learning may sound simple for some teachers and they may try to implement cooperative learning, but after a while they just realize that the whole classroom is in a total mess. This is generally based on the fact that the classroom becomes so noisy and students in the group may not agree on what roles exactly they should play; including ‘who is responsible for writing the final report?’. Others may

simply be unable to participate to make the final report because they are shy or busy talking about a different matter. In this sense, Johnson et al stated that **"Simply placing students in groups and telling them to work together does not mean that they know how to cooperate or that they will do so even if they know how"** (1991, p. 6).

Conspicuously, cooperation does not mean to be physically near each other. Indeed, it is much more than having students sit side-by-side at the same table to do individual tasks (Johnson et al, 1991). Being near other students only facilitates discussions and helps them in completing the common task. However, there are other essential aspects of cooperative learning that should be considered if cooperation is to be implemented in the class. Consequently, some troubles within traditional groups such as self-induced helplessness, ganging-up against one student or against the given task, unfair divisions of labour, as well as dependence and group conflicts may all be avoided thanks to the basic elements of cooperative learning. Otherwise, cooperation will go **"…wrong because of a lack of understanding of the critical elements that mediate its effectiveness"** (Johnson et al, 1991, p. 15).

1.4.3.1. Positive Interdependence

To clarify the meaning of the first element of cooperative learning, i.e. positive interdependence, Johnson et al (1991) used in their book *'Cooperative Learning: Increasing College Faculty Instructional Productivity'* what Alexandre Dumas said: *All for one and one for all.* Thus, the first requirement for a well-structured and a successful cooperative group is this feeling that students have towards themselves and towards the other members in the group. Johnson and Johnson mentioned that **"Positive Interdependence results in individuals promoting each others' productivity and achievement"** (2008, p. 23). Students, then, should perceive that they should master the assigned academic content and that also all their peers in the group should master it. Thus, each one's endeavour is inevitably indispensible for the success of the whole group; and that is why this element is usually described as the heart of cooperative learning (Sachs, Candlin, & Rose, 2003).

Besides the feeling itself, students should act positively to maximize their own and their peers' learning; such as when they share academic material and provide mutual assistance and encouragement. Essentially, in cooperative learning, groups and tasks should be structured so that all the group members contribute. In this respect, Johnson et al (1991, p. 6) added that: **"To implement positive interdependence…students must believe that they are linked with others in a way that one cannot succeed unless the other members of the group succeed (and vice versa); that is, they sink or swim together".** Indeed, it is this idea of sinking or swimming together that can increase the sense of cooperation among students.

1.4.3.2. Individual Accountability

Teachers should ensure that the second requirement is included in each group to well structure cooperative groups. In fact, this element is referred to as 'Individual Accountability'. Ekawat describes this element as being **"…the other side of equal participation"** (2010, p. 23). Thus, it concerns the feeling of responsibility that students have towards their own learning, and also towards the learning of their peers in the group. In other words, each group member should feel accountable for his/her own learning and should consider his/her contribution as indispensible (Johnson & Johnson, 1987).

This element is the true description for the sense of being able, as group members, to participate within the group. This common opportunity enables all group members to share their academic material with the other members in the group, to ask and answer questions, elaborate ideas, discuss, and evaluate the progress of the entire group towards the common learning goal. This would guarantee that there are neither sleeping members nor free riders in the group. Therefore, teachers must carefully ensure that individual accountability is implemented in each group. In this respect, Johnson et al (1991, p. 7) claimed that: **"Individual accountability exists when each student's performance is assessed and the results are given back to the group and the individual"**. For the sake of assessing the students' level, teachers can adopt many forms including making students sit for an individual test and then choosing randomly

one student's performance to represent the whole group's level. When doing so, all group members would try to be always ready for this procedure. Otherwise, learners can know who is mastering the assigned academic material so to help the others, and who is facing troubles in learning so that the whole group would interfere to assist him/her.

Students cannot feel responsible for others' learning if they do not first feel responsible for their learning. Only once students develop this feeling of responsibility towards the success or the failure of the group, one can determine that individual accountability emerged and is ensured in the cooperative group. As a result, they can offer help to their peers in order to master the assigned content; because for a cooperative group to achieve the common learning goals, all members of the group should learn the assigned material (Tuan, 2010).

1.4.3.3. Face-to-face Interaction

The third element that should be present in each cooperative group is face-to-face interaction; which refers to the state of facing the other members when working in small cooperative groups. Indeed, students are put in an interaction atmosphere as they are assigned to work cooperatively. This generally takes the form of verbal interaction; mainly through agreeing and disagreeing with each other, explanations and elaborations; and linking their current educational content to their prior knowledge.

Students' interaction among the cooperative group takes many forms and touches many areas. Johnson and Johnson (2008, p. 24) mentioned an exhaustive list of the roles and the functions that students may do in a cooperative group; in order to promote positive interaction. The following are some examples. Students then should be ready to:

- Provide help and assistance to their classmates.
- Help each other with the needed materials.
- Accept feedback from each other.
- Cooperate all for the sake of solving problems and making decisions.
- Feeling the individual responsibility to achieve mutual goals.

- Trust the other members in the group, and
- Consider each other's opinions and beliefs.

In this sense, Johnson and Johnson added that **"Promotive interaction occurs as individuals encourage and facilitate each other's efforts to accomplish the group's goals"** (2008, p. 23). In traditional classrooms, the teacher is most of the time the only person who speaks in the classroom; which makes interaction very limited if not completely absent. However, if group work is implemented in the class, at least one student in each group speaks; which leads then to several students speaking at the same time. The result is, due to that, an active classroom where explanations, discussions, and learning are taking place (Ekawat, 2010)

When describing the group work, Tuan stated that **"In this process, learners are provided with abundant verbal and face-to-face interaction, where they can explain, argue, elaborate and link current material with what they have learned previously"** (2010, p. 66). Thus, it is the duty of both the teacher and the learners to make sure group members are sitting in a comfortable way that enables them to easily interact with each other. Additionally, if teachers seek to get positive results, they should also try to help students through showing them the relevant use of the social skills needed for human interaction.

1.4.3.4. Social Skills

Cooperative groups cannot function effectively if there is no careful implementation of the fourth element of cooperative learning. It is highly acknowledged that working together with other members in the same group to accomplish mutual goals is not an easy task. It demands from students, however, to be socially skilled. In simple words, students must be able to use interpersonal and small-group skills; in order to deal appropriately with conflicts among the group, trust each other, communicate with each other, and to make the right decisions. In this line of thought, Johnson et al continued: **"The whole field of group dynamics is based on the premise that social skills are the keys to a group's productivity"** (1991, p. 21).

For cooperative learning to take place effectively, students must be taught directly, clearly, and deliberately the social skills, i.e. how they should communicate with and trust each other, lead the group, and resolve the group conflicts. This is what has been stated by Tuan (2010, p. 66): **"Sufficient social skills entail an explicit instruction on appropriate communication, leadership, trust and conflict resolution skills so that the term can function effectively"**. In fact, there is a further key element about social skills and which concerns the two divisions that researchers could identify. First, Group-related Skills, which refer to the way group members take turns, support and praise each other, and find a way to deal with the conflicts they face. The second set represents task-related Skills; including summarizing, paraphrasing, asking, answering, and explaining (Tuan, 2010).

After identifying the four previous elements, researchers conducted deeper analyses of the cooperative groups, and could suggest another fifth element which is also prerequisite in cooperative learning (Johnson et al. 1991; Johnson & Johnson 2008, 2009). The following is a summarized description of the element.

1.4.3.5. Group Processing

The fifth proposed element of cooperative learning is referred to as group processing. **"Group processing can be defined as reflecting on a group session to describe what actions of the members were helpful and unhelpful and to decide what actions to continue or change"** (Johnson et al, 1991, p. 22). The aim behind such a reflective process is to evaluate the efforts of each member in the group, for the sake of improving the whole functioning of the group. As a result, students may achieve their common learning goal successfully.

To ensure the presence of such an element in the cooperative process, teachers may allocate some time at the end of the session for the groups to reflect on their cooperative work. It goes through a process of discussions among the members about how far they progressed towards the goal and how well they learned the assigned academic content (Sachs et al, 2003). This would noticeably help students to strengthen their relationships, provide and receive feedback on how well they did in the group, and

most importantly think metacognitively; which is indeed of a great value to this research (Johnson et al, 1991).

1.4.4. Main Varieties

Researchers in the field of educational psychology have identified and explained several variables that may interfere negatively in the process of educational success. One of the most recognized variables is the fact of being a new student in any classroom, school, or college; as it may cause feelings of helplessness and discouragement. Teachers, then, may think of structuring groups to integrate students in an atmosphere where positive relationships and progress in learning may be ensured. Johnson et al further explained this point saying that **"Cooperative learning groups empower their members by making them feel strong, capable, and committed"** (1991, p. 9). However, teachers may have different options to structure cooperation in the class. They may either go for formal, informal, or base groups.

1.4.4.1. Formal Cooperative Groups

Formal cooperative learning groups **"…can be used to teach specific content"** (Johnson et al, 1991, p. 9). The process of formal cooperative learning generally starts with the lecture that is done by the teacher. Then, a learning task is given to students in order to accomplish within cooperative groups. It is the teacher's responsibility to decide about the size as well as the members of each group. Indeed, consisting of fixed members and being carefully heterogeneous are essential elements for promoting higher achievement. The teacher, then, only intervenes to explain the task, provide help if needed, teach them the needed skills, provide feedback, and evaluate their work (Johnson et al, 1991).

Formal cooperative groups **"…may last for several minutes to several class sessions to complete a specific task or assignment such as doing a set of problems, completing a unit of work…"** (Macpherson, 2007, p. 10). Students, then, are given a huge opportunity to make sure that they and their group mates are learning the assigned

academic content. They support each other either with materials, knowledge, and/or encouragement.

1.4.4.2. Informal Cooperative Groups

Informal cooperative learning groups can be used **"… to ensure active cognitive processing of information during a lecture"** (Johnson et al, 1991, 9). Making students actively cooperative with their peers is the basic premise of this type of cooperative learning; as a result, it is so beneficial in making students able to overcome the obstacles of lecturing and processing cognitively the academic content. The difference between formal and informal cooperative learning groups is that the informal ones are randomly created and that they can be used at any time during any lecture (Macpherson, 2007). About the same aspect, Macpherson (2007, p. 10) added that **"These groups are temporary, ad hoc groups that last for a few minutes, one discussion or class period"**. Teachers may simply ask a student to turn and work with his/her peer on the right/left. This is often called 'The turn to your neighbor' in the literature of cooperative learning (Rossetti and Nembhard, 1998).

Informal cooperative groups are well-meant for directing students' attention to the assigned material, to be dealt with in only one session. They generally take the form of three- to five-minute discussions before, during, or after a lecture. Students discuss, in pairs, what they know about a given topic, or what the lecture was about. Other fruitful aspects about informal cooperative groups is that they are useful to break the usual process of lectures and help students remain focusing rather than drifting away after some minutes. Besides, students feel responsible for learning, contribute to accomplish the task, and enjoy the group learning experience.

1.4.4.3. Base Cooperative Groups

To define base groups, Macpherson stated that **"Base groups are long-term cooperative learning groups with stable membership"** (2007, p. 10). The idea behind creating base groups is that, most of the time, college life is different from the school experience that students may have had before, as far as the former is characterized by

meeting people from different regions and with different backgrounds. Interaction among students in college is the key to establish a healthy college life (Macpherson, 2007). Base groups are, said to be, influential in creating friendships that last even after college time and help in providing assistance and encouragement to students along their academic career. They also set an atmosphere of love and caring among members; which is considered as a supportive issue for students in college (Johnson et al, 1991).

Base groups are characterized by heterogeneity and they last at least for a term. They are considered as a key solution to large number classes and to complex and difficult subject matters because they are a bit larger than formal cooperative groups. In base groups, students should be supportive. One way to be so is to help each other learn the academic content even if they are informed to sit for individual tests (Macpherson, 2007). Other characteristics of base groups include the fact that students should have different academic levels and their interaction may expand beyond the classroom walls where they can also meet and work.

1.4.5. Major Outcomes

As it is previously mentioned, there is a huge difference between traditional and cooperative classes (see section 1.3). The difference lies in the fact that traditional classrooms only allow the one-way communication between the teacher and his/her students. In such a situation, EFL learners are unable to practice the language enough. Indeed, the case is different with cooperative classrooms since they create environments of interaction and with two-way communication opportunities.

To become competent users of the language, learners need to have both the linguistic and the communicative competence. The relevance of cooperative goal structure in EFL classrooms lies, then, in the fact that it provides students with such a chance of practicing the target language. On this issue, Sachs et al added that **"Research on cooperative learning, in contrast, indicates that cooperative learning provides second language learners with opportunities to hear more language and more complex language during interaction with peers"** (2003, p. 185).

It is interesting to consider the idea that when interacting with each other, students may be exposed to a language input that can be complex, easy, new, and interesting; which all help in the language learning process. Moreover, they are provided with comprehensible input; which is defined according to Krashen's input hypothesis as messages that the learner can understand, to develop his/her current level of acquisition from state 'i', to the next level represented by 'i+1' (Baker & Jones, 1998). Additionally, cooperative tasks enable students to develop the four skills in language classrooms, basically the speaking and the listening skills as they are the most frequently used in the classroom. On the other hand, shy and lower-ability students can better feel at ease to express themselves in front of their group mates, rather than feeling anxious to talk in a classroom containing a large number of students.

Research has shown that cooperative learning is the most capable instructional strategy to achieve numerous outcomes simultaneously. On the countless and the diverse benefits of working cooperatively, Felder and Brent added that:

> **…cooperatively taught students tend to exhibit higher academic achievement, greater persistence through graduation, better high level reasoning and critical thinking skills, deeper understanding of learned material, greater time on task and less disruptive behavior in class, lower levels of anxiety and stress, greater intrinsic motivation to learn and achieve, greater ability to view situations from others' perspectives, more positive and supportive relationships with peers, more positive attitudes toward subject areas, and higher self-esteem.** (2007, p. 1).

Every single researcher tackles the issue of cooperative learning outcomes from a different perspective, but in general, the overall body of research conducted highlights the basic ones such as:

- ✓ Academic achievement.

- ✓ Psychological health including self-esteem, motivation, reduced anxiety, critical thinking, and cognitive development, and
- ✓ Social relationships.

This distinction has been made by interesting researchers such as Johnson et al (1991) and Jolliffe (2007), and Sachs et al who said that **"When compared with competitive and individualistic efforts, cooperative learning typically results in greater efforts to achieve, more positive relationships among students, and greater psychological health"** (2003, p. 184-185). The following, then, is a summary of the main categories of outcomes:

Figure 1.2: Outcomes of Cooperation

Source: Johnson et al, 1991, p. 29

1.4.5.1. Effort to Achieve

Carefully structuring cooperation and considering the five previously highlighted elements of cooperative learning results in positively astonishing results. The first, indeed, is higher achievement. A great deal of studies on the impact of cooperative

learning showed greater results in terms of students' achievement, compared to traditional classrooms (Tuan, 2010). In this respect, Tuan continued: **"Group goals and individual accountability are factors contributing to achievement effects of cooperative learning"** (2010, p. 68). Other researchers also confirmed this issue; like Cohen (1994) who stated that working cooperatively enables the students to better master the academic content. Besides, Johnson et al (1991) added that students who work in cooperative situations perform much better than students who work individualistically or competitively. They confirm that the idea of **"…working together to achieve a common goal results in higher achievement and greater productivity than does working alone is so well confirmed by so much research that it stands as one of the strongest principles of social and organizational psychology"** (Johnson et al, 1991, p. 40).

Actually, enhanced achievement is regarded as the most important outcome of cooperative learning (Sachs et al, 2003). Thus, it is carefully dealt with in this section. To better understand the positive effect of cooperation on the achievement of students, one shall consider the different variables that play this role. Researchers agree on the fact that the five elements of cooperative learning are the ones that make the difference. This may be also due to the fact that cooperative learning promotes a better utilization of critical thinking and reasoning strategies; which is in turn a recommended key feature for certain subjects. Cohen pointed out that:

> **…discussion within the group promotes more frequent oral summarizing, explaining, and elaborating what one knows; cooperative learning promotes greater ability to take the perspective of others…; in the group setting, one's thinking is monitored by others and has the benefit of both the input of other people's thinking and their critical feedback.** (1994, p. 15)

Students in cooperative groups, then, discuss the academic content and the learning goals, work hard to accomplish the task and solve the groups' problems, and

are most of the time metacognitively active as far as they talk to each other about the methods and the procedures used. Moreover, it is highly acknowledged that working cooperatively develops the positive attitudes of students towards the subject being taught, towards their teachers, and towards their whole learning experience. As a result, students feel much more motivated to participate in their learning process and achieve better academic results (Johnson et al, 1991).

1.4.5.2. Interpersonal Relationships

Social support is a needed element to accomplish the learning goal, and cooperative learning is the primary teaching method that encourages social support. As it is known, students in cooperative groups make sure to assist each other along their learning process, and this in turn helps in enabling students to deal appropriately with stressful and frustrating situations. Working in such an atmosphere helps the students to create positive relationships in the classroom. The type of positive relationships that students develop is not restricted to their peers only; however, they develop also good relationships with and positive attitudes towards their teachers. It is worth pointing out that, even when put in post instructional situations, students keep a strong interaction with their college peers (Johnson & Johnson, 2009).

Researchers went further to propose cooperative learning as a required method in heterogeneous classrooms, i.e., classrooms with different ethnic groups, social classes, languages, and academic levels; since most colleges nowadays accept students from all over the world. Accordingly, having multicultural classrooms should encourage teachers to think of making students in groups to work with other members; as it seems to be a worthy solution for maintaining positive relationships among peers, and for reducing the feelings of difference and exclusion, even if they get wrong first impressions of each other. On this matter, Johnson et al provided that **"Studies on desegregation indicate that cooperation promoted more positive cross-ethnic relationships…"** (1991, p. 44). Moreover, students feel more responsible for their own and their mates' learning, and they do their best to increase their academic achievement and productivity.

Researchers agree that students should engage in a friendly atmosphere at schools and colleges, which in turn prevents them from dropping out of school and continue in a successful way till they reach graduation. Johnson et al (1991) justified this point saying that it is the student's failure to establish good relationships with classmates that creates the feeling of exclusion and that leads most of the time to dropping out of school. They continued: **"…students' involvement academically and socially in college is the cornerstone of persistence and achievement…"** (Johnson et al, 1991, p. 7). Significantly, cooperative learning is a successful way to provide students with the support they need; for a long and an enjoyable learning career.

It is proved that students can easily learn positive attitudes, more social and cultural values, and more social academic skills from their peers rather than from parents and family members. This is, indeed, due to the fact that they interact with each other; sometimes in a way of imitation. Based on several studies conducted, one can infer that relationships with peers are influential in terms of students' autonomy, decision making, productivity, and the feeling of belonging. In this respect, Johnson et al said that:

> **Being accepted by peers is related to willingness to engage in social interaction, using abilities to achieve goals, and providing positive social rewards for peers. Isolation from peers is associated with high anxiety, low self-esteem, poor interpersonal skills, emotional handicaps, and psychological pathology.** (1991, p. 51).

It is important, then, that teachers ensure students' interaction with each other before thinking of structuring the cooperative goal structure.

1.4.5.3. Psychological Health

The third basic area on which cooperative learning has an influence is the psychology of students. Several researches have demonstrated that greater psychological health is resulted from working cooperatively with classmates. It is highly

acknowledged that interaction in the classroom is influenced by affective factors such as self-esteem and motivation. Cooperative groups are a perfect atmosphere where students have great self-esteem since all the group members conceive that their efforts are needed for the success of the whole group; whether they have high or low abilities (Johnson et al, 1991). Thus, **"If learners realize that their contributions are accepted in a group and even necessary and useful for the aim of the group, their self-esteem might rise"** (as cited in Fehling, 1990, p. 3). Cooperative learning strengthens students' self-confidence and the feeling of appreciating themselves (Johnson & Johnson, 2009).

Also, the idea of 'we sink or swim together' makes all the members in the group motivated to participate and accomplish the common task. Increasing the intrinsic motivation of students is indeed a great achievement in itself as it has always been conceived as superior to extrinsic motivation. On the other hand, engaging in cooperative groups will teach students how to feel committed to their own and their peers' success and that **"…promoting the success of others is a natural way of life"** (Johnson and Johnson, 2009, p. 372). As a result, it is fair to determine that, besides other effects, working in groups also prepare students to be good citizens.

Students develop the sense of psychological adjustment to their schools and colleges thanks to the fact that even their teachers get the chance to know them more. Making students to work in groups does not mean that the teacher would have a free time. However, checking the group's progress towards the common goal and intervening to provide assistance helps in building good personal relationships with students (Johnson et al, 1991).

In relation to all what has been said about psychological health, studies on cooperative learning also proved that working cooperatively reduces the sense of egocentrism, and drives students towards a more understanding and acceptance of the others' viewpoints and perspectives. To sum up, one can only say that cooperative learning positively influences sensitive elements in the process of teaching and learning; including self-esteem, motivation, attitudes, adjusted social relations, and optimism (Johnson et al, 1991).

1.5. Structuring Cooperative Groups

When dealing with the teacher-student interaction during the cooperative sessions, Johnson and Johnson (1987) described the teacher as consultant and classroom manager. The teacher's opinions and guidance may not be often the solution; as far as the teacher makes, always, sure that all the members in the group discuss the issue first and agree on one opinion, even before feeling the need for the teacher. On the other hand, students themselves should be the source for ideas and assistance to each other; which can be achieved through making students in the group close to each other, and groups far from each other.

Structuring cooperative groups specifically demands, from the teacher, to:

- Purely and clearly identify the desired academic goal, as well as the desired collaborative skills that should appear within members of the cooperative group. Examples of collaborative skills may be: beginning or ending a conversation, asking for help, giving and accepting compliments, acknowledging peers' roles and efforts, understanding others, listening, negotiating, taking turns, respecting roles, dealing with fear and conflicts and feeling responsible for completing the task.
- Consider the fact that groups should include two to six students, and that groups of three members seem to be the best choice for beginner teachers in the field.
- Ensure the heterogeneity of the groups, through **"…placing high-, medium-, and low-ability students within the same learning group"** (Johnson and Johnson, 1987, p. 47). Teachers may achieve this through asking the students first to choose the members with whom they seek to work, and then making changes on the groups to ensure having both heterogeneous and comforting groups.
- Arrange the room in a way that students in the same group have access to each others' eyes, so they can easily and effectively interact with each other.
- Help students follow an organized and systematic way of working cooperatively through assigning a specific role for each member of the group. Examples of members' roles may be: *summarizer, checker, recorder, encourager,* etc, and

- Clarify the lesson objectives as well as the related concepts to students before letting them finally interact and learn in cooperative groups (Johnson and Johnson, 1987). The following table summarizes all what have been explained above.

Interdependence	Positive
Type of Instructional Activity	Any instructional activity. The more conceptual and complex the task, the greater the superiority of cooperative over competitive or individualistic learning.
Perception of Goal Importance	Goal is perceived to be important
Teacher-student Interaction	Teacher monitors and intervenes in learning groups to teach collaborative skills.
Student-Materials Interaction	Materials are arranged according to purpose of lesson.
Student-Student Interaction	Prolonged and intense interaction among students, helping and sharing, oral rehearsal of material being studied, peer tutoring, and general support and encouragement.
Student Expectations	Group to be successful. All members to contribute to success. Positive interaction among group members. All members master the assigned material.
Room Arrangement	Small groups.
Evaluation Procedures	Criteria referenced.

Table1.2. Appropriate Cooperative Learning

Source: Johnson and Johnson, 1987, p. 44

1.6. Reviewing Cognition and Metacognition

In educational psychology, the concept of cognition has grown to attract so much attention in research, which in turn provided education with numerous practical implications in the field (Collins, Greeno & Resnick, 1996). Originally, the word 'Cognition' comes from the Latin word 'Cognitio' (Brandimonte, Collina, & Bruno, 2006), and it can be used, according to some scholars, to mean one of two different things; either a process defined as **"…something that humans do"**, or a product mainly **"…as mental representations that surface to consciousness when we perceive, reason, or form mental images"** (Brandimonte et al, 2006, p. 2).

Beyond all dispute, researchers highlight knowledge in a clear manner when it comes to defining cognition. Examples of definitions may be the one provided by Ulrich Neisser and which describes cognition as **"…the activity of knowing: the acquisition, organization, and use of knowledge"** (as cited in Brandimonte et al, 2006, p. 3). However, Brandimonte et al stated that:

> **…cognition indeed refers to the mental process by which external or internal input is transformed, reduced, elaborated, stored, recovered, and used. As such it involves a variety of functions such as perception, attention, memory coding, retention, and recall, decision-making, reasoning, problem-solving, imaging, planning and executing actions.** (2006, p. 3).

On the other hand, a simpler definition was given by Salkind (2008, p. 164) when he contended that **"*cognition* refers to thinking and the mental processes humans use to solve problems, make decisions, understand new information or experiences, and learn new things".** Actually, it may be worth remembering that cognition, as a notion, was developed over decades in various researches, and thus new concepts and notions have been introduced in the field.

The sprawling literature on cognition also presents the notion of cognitive styles, which was coined and developed by some scholars, and which covers issues related to personality and preferences. In the same vein, Salkind described cognitive styles as **"…styles of personality that determine how students like to learn, the ways in which they prefer to relate, the types of rewards that make success in school meaningful, the preferred manner of communication, and leadership style"** (2008, p. 153). Indeed, cognitive styles begin to appear in earnest during the first years of schooling, and which may not be, in most cases, similar to and appropriate with what the school and the teacher provide. Thus, it is argued that teachers should approach their teaching styles to the students' cognitive styles; for a more motivating and satisfactory learning environments (Salkind, 2008).

Research on cognition and learning did not stop at this level since **"Because educational psychologists know how critical it is to use effective cognitive strategies for learning, the importance of metacognition for learning is widely recognized"** (Salkind, 2008, p. 164). Thus, Salkind defines metacognition as a notion which **"…refers to thinking about thinking. It is a metaprocess, that is, a process that goes along with another process to support it in some way"** (Salkind, 2008, p. 164).

Indeed, trying to provide a one comprehensive definition for the concept of metacognition is not an easy task; as far as it has been defined by several researchers, from various standpoints, and has been gradually widened to include other related concepts. The last 40 years witnessed a noticeable growth in research about metacognition; however, the early basic researches started with John Flavell who is named 'the father of the field', thanks to the great conclusions he achieved (Louca, 2008). In this respect, Flavell, in 1976, presented the concept of metacognition as being:

> **…one's knowledge concerning one's own cognitive processes and products or anything related to them…[and] the active monitoring and consequent regulation and orchestration of these processes in relation to the cognitive objects or data on which they bear, usually in the service of**

some concrete goal or objective (as cited in Stephen and Singh, 2010, p. 146).

The following table introduces a selected list of the, seemingly, most useful and appropriate definitions in the field:

Magaldi (2010)	"Learners who are metacognitively aware are highly desirable; they think about how they learn and make an effort to improve their learning outcomes" (p. 79)
Magaldi (2010)	"metacognition is the knowledge and control of one's entire learning process" (p. 80)
Oz (as cited in Magaldi, 2010)	"learners who are skilled in metacognitive self-awareness are more strategic and perform better than those who are unaware" (p. 79)
Schraw and Dennison(as cited in Magaldi, 2010)	"According to cognitive psychology, cognition is the mental ability to learn and acquire knowledge; it refers to the processing of information, applying knowledge, and changing preferences, whereas metacognition refers to what learners do to plan, monitor and evaluate the process" (p. 80)
Magaldi (2010)	"…Metacognition is much more than control of cognition: Metacognition is the knowledge and control of one's entire learning process" (p. 80)

Table 1.3: Definitions of Metacognition

As mentioned earlier, research on metacognition keeps expanding and including more aspects. This can be explained by the fact that researchers began recently to include, not only cognitive issues, but psychological ones as well within metacognition. An ideal example of that might be one's own awareness about his/her own anxiety when sitting for an exam. Magaldi, in this sense, added that:

> **Metacognition is not only about planning for mental processing, it is also about planning for control of anxiety, timing, interaction, practice, and evaluation of learning. It is the executive organizer of all the elements which intervene in the whole learning process"** (2010, p. 80).

1.7. Raised Concepts about Metacognition

In the literature about metacognition, it is repeatedly mentioned that the model proposed by Flavell in 1979 classifies four basic concepts related to the notion of metacognition. These include: metacognitive knowledge, metacognitive experiences, metacognitive goals (also referred to as tasks), and metacognitive strategies (also referred to as actions) (Louca, 2003). The following figure illustrates the four concepts as well as the interactions among them:

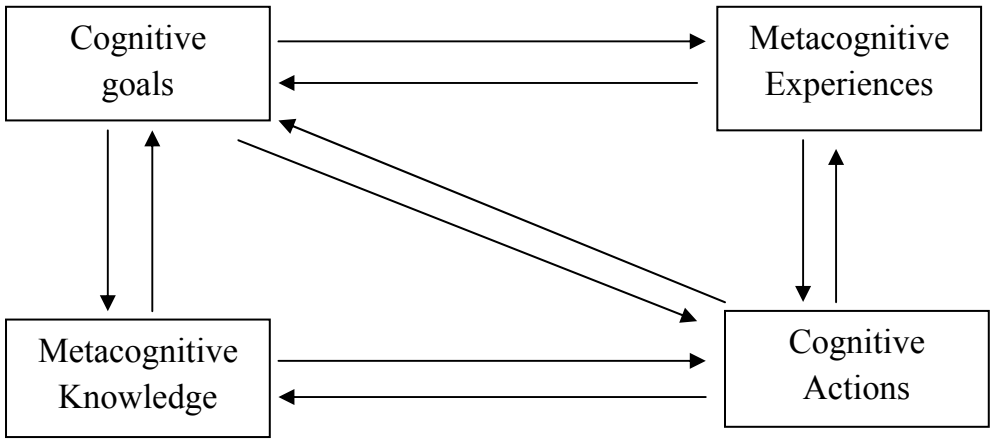


Figure 1.3: Flavell's Model of Cognitive Monitoring

Source: Louca, 2003, p. 14

1.7.1. Metacognitive Knowledge

Louca defines metacognitive knowledge as **"…the knowledge or beliefs accumulated through experience and stored in long-term memory that concern the human mind and its doings. Some of this stored knowledge is declarative ('knowing that') and other procedural ('knowing how')"** (2008, p. 12). Thus, any metacognitive issue can be known on both declarative and procedural levels. For example, a translator may know that using a dictionary is a helpful strategy when translating any given text or document and may also know when and how to use the dictionary.

Indeed, metacognitive knowledge in learning comprises the students' knowledge about themselves, about the task and about the strategies they should use to accomplish their task. So basically, three types of knowledge are emphasized:

- ✓ Self-knowledge
- ✓ Task-knowledge, and
- ✓ Strategic-knowledge (Carson, 2012)

As far as self-knowledge is concerned, it is stated that **"The person category encompasses everything that you might believe about the nature of yourself and other people as cognitive processors"** (Louca, 2008, p. 13). Examples of person knowledge might be that of a teacher knowing that one of his students has higher abilities than the others, or that his/her students can remember better the things they learn at a quite an early age. The second category is **"…knowledge of task variables. The individual learns something about how the nature of the information encountered affects and constrains how one should deal with it"** (Louca, 2008, p. 13). An example of task knowledge might be that of a student knowing that he/she has to respect the instruction given by the teacher if he/she wants to get correct answers. If the instruction says to conjugate the verbs in the present simple or the present continuous; the student should by no mean, then, use another tense rather than the ones mentioned. The last category is about **"…what strategies are likely to be effective in achieving what goals in what sorts of cognitive undertakings"** (Louca, 2008, p. 13).

An example of strategy knowledge might be that of a student knowing that the best way to remember information is by repeating them to him/herself using his/her own simple words rather than the teacher's words.

Wenden (1999) speaks more about metacognitive knowledge when students are given a task to accomplish. Accordingly, students should:

- ✓ Identify the nature of the problem it poses.
- ✓ Consider whether it is similar to one they have already done.
- ✓ Determine how to approach the task, the knowledge, and skills they will need to do so (as cited in Carson, 2012, 36)

It is believed that metacognitive knowledge plays an important role in learning; as justified by Cotterall and Murray (2009) **"It represents the knowledge base that students draw on as they make decisions about their learning"** (as cited in Carson, 2012, p. 36). It is considered effective for individuals as far as they can think, choose, revise, or even cancel their choices whenever a task, a goal, or a strategy is concerned (Louca, 2008).

1.7.2. Metacognitive Experiences

Louca carefully explains the difference between metacognitive experiences and the other experiences. Indeed, the difference lies in the fact that the former are related basically to any currently ongoing metacognitive process (2008). He says that **"Metacognitive experiences are conscious feelings during some cognitive activity that relate to the process- for example, during a communication task, feeling that you do or do not understand; or feeling hesitant about the choice you have made"** (2003, p. 12). A person may feel that he/she is not able to understand, memorize, or retain a given information. He/she may further think that these difficulties are negatively interfering in the process of achieving a certain goal. These feelings are exactly what make a metacognitive experience what it is (Louca, 2008).

It is proved that metacognitive experiences affect metacognitive knowledge, tasks, and strategies. Knowledge can be expanded, goals can be redefined, and strategies

can be well thought about and well used (Louca, 2008). Louca illustrates more by stating that **"…metacognitive experience also contributes in adding information about persons, tasks, and strategies to one's developing store of metacognitive knowledge…"** (2008, p. 15).

1.7.3. Metacognitive Tasks (Or Goals)

This term refers **"…to the objectives of a cognitive enterprise…"** (Louca, 2003, p. 14). Metacognitive tasks, or goals, are of paramount importance because **"…goals or tasks have to do with the actual objectives of a cognitive endeavour"** (Mahdavi, 2014, p. 530). They are basically classified under two main categories. The first one is referred to as 'mastery goals' and it has to do with students developing their competence and progressing in their learning process. The second, however, is referred to as 'performance goals' and it has a strong relation with one's performance in comparison to the performance of the other group members, and also to how should one deal with academic materials and final products (Paulson and Bauer, 2011). In fact, to have successful and comprehensive learning as a result, the components and concepts of metacognition are interrelated. An ideal example of that is what Weinstein et al (2000) mentioned about these connections. They stated that **"strategy use must be goal-directed"** (as cited in Paulson & Bauer, 2011, p. 43). Students, though, may opt for different creative strategies for the same goal.

1.7.4. Metacognitive Strategies (Or Actions)

The notion of metacognitive strategies seems to get interesting focus among researchers whenever the issue of metacognition is concerned. Oxford argues that **"Metacognitive means beyond, beside, or with the cognitive. Therefore, metacognitive strategies are actions which go beyond purely cognitive devices, and which provide a way for learners to coordinate their own learning process"** (as cited in Magaldi, 2010, p. 80). On the other hand, Louca stated that metacognitive strategies **"…refer to the cognitions or other behaviors employed to achieve them"** (2003, p. 14). As a matter of fact, there are various strategies that can be really

beneficial to develop the way students think about their own thinking; and which in turn have a positive influence on their learning. Among the numerous available strategies, the researcher chose only a selected list to speak about and define in this section. The following strategies, accordingly, are the ones that the researcher made sure to teach to students before the cooperative learning method was deliberately implied. It is important to note here that the selection was based neither on the age nor on the level of the students. However, what seemed to be easy to deal with and more appropriate for the cooperative work was selected.

A. Identifying the State of Knowledge:

By identifying the state of knowledge researchers mean that students should precisely think about what they already know and about what they still do not know. This is in fact a very positively influential way to retain and strengthen the already existing knowledge and to try to expand it with more new information (Louca, 2003).

B. Planning:

If teachers seek to develop self-directed learners and promote autonomy in their instructional situations, they must, then, think to let students discover how to be responsible by their own. **"In schools, effective teachers are those who engage in continual prompts to get children to plan and monitor their own activities"** (Louca, 2003, p. 18). Thus, the plans that students might do include prior decisions about the time allocated, the materials needed, and the steps that should be followed to complete the task.

C. Conscious Decisions:

Teachers have to explain to students that they should wisely think about their decisions, and consider their effects on them as well as on their peers. Only this way, students can think critically about what they should adopt and what they should leave in any learning situation (Louca, 2003).

D. Setting Goals:

It is the duty of both teachers and parents to teach children to always think and consider their goals. This means that students, along the process, should think about how far they progressed towards their goals and what they still have to do to progress further (Louca, 2003).

E. Evaluation:

In relation to the explanation of the previous strategy, **"Teachers can enhance metacognition by helping students reflect upon and evaluate their own thoughts and actions according to multiple criteria"** (Louca, 2003, p. 20). The criteria that students are meant to meet can be deliberately discussed with the students. Then, they can successfully discover all about the related issues to their tasks in terms of the time spent, the effectiveness of their strategies, and how successful they were in accomplishing the task.

F. Identifying the difficulty:

To ensure the successfulness of the whole process, teachers need also to develop in students a positive behaviour in what concerns their difficulties. Thus, instead of negative talk, students might direct their attention to the lacking skills and materials and which they truly need to develop in order to accomplish their work. Negative talk, to better clarify, includes issues like 'I can't' and 'I don't know' (Louca, 2003).

G. Problem Solving:

It is really important for both teachers and students to know that problem solving is a very helpful way to develop the metacognition of students. Thus, **"Regardless of how much experience or knowledge a problem solver has, each new problem situation is in some ways unique, requiring creative application of strategies for posing, solving and resolving the problem at hand"** (Louca, 2003, p. 21). Indeed, self-awareness, reflection, ability to find alternatives, and the ability to choose the right strategies are all characteristics of problems solvers.

H. Thinking Aloud:

Louca states that **"One of the most effective ways of helping students to organize and enhance their thoughts is to invite them to 'think aloud' while they are working, especially during problem solving processes"** (2003, p. 22). What researchers call 'a thinking vocabulary' seems to be a worthwhile strategy; as far as it allows more accurate planning of and progress towards their goals.

I. Modeling:

Among all the proposed strategies, this one was significantly highlighted by researchers for how beneficial it is. In this respect, Louca (2003, p. 23) continued: **"… teachers should think aloud so that the students can follow demonstrating thinking processes. Since students learn best by imitating the adults around them, the teacher who publically demonstrates metacognition will probably produce students who metacogitate"**. Explaining to students the reasons behind taking a certain decision, deliberately discussing their goals, and even talking about their limitations and difficulties and the ways adopted to overcome them are exactly what teachers need to do in front of their students to give the real example of the model they need to follow (Louca, 2003).

1.7.5. Metacognitive Skills

Although there is not much literature about metacognitive skills, however, an important definition was provided by Louca. Indeed, he stated that **"Metacognitive skills refer to conscious control processes such as planning, monitoring of the progress of processing, effort allocation, strategy use and regulation of cognition"** (2008, p. 15). Also, it is worth mentioning the list of metacognitive skills that Hennessey (1990) presented. These include:

- ✓ Considering the basis of one's beliefs;
- ✓ Temporarily bracketing one's conceptions in order to assess competing conceptions;

- ✓ Considering the relationship between one's conceptions and any evidence that might or might not support those conceptions;
- ✓ Considering explicitly the status of one's own conceptions;
- ✓ Evaluating the consistency and generalizability inherent in one's conceptions (as cited in Lai, 2011, p. 12).

1.8. Metacognition in Education

On the significance of metacognitive strategies in successful learning, Louca (2008, p. 17) provided that **"If we wish to develop intelligent behavior as a significant outcome of education, instructional strategies intended to develop children's metacognitive abilities must be infused into our teaching methods, staff development, and supervisory processes"**. Indeed, the educational application of metacognition started to receive recently so much attention. Practitioners in the field of education approve the relevance of metacognition to the learning process. In this line of thought, Paris and Winograd argued that:

> **Students can enhance their learning by becoming aware of their own thinking as they read, write and solve problems in school. Teachers can promote this awareness directly by informing students about effective problem solving strategies and discussing cognitive and motivational characteristics of thinking.** (as cited in Louca, 2008, p. 17).

The considerable proportion of research done on the effects of metacognition in instructional situations prove that students develop their way of thinking as well as their feeling of responsibility towards their own learning, if metacognitive strategies are carefully introduced to them. Thus, successful learning is a simple result of this process. Flavell (1979), who is considered to be the father of metacognitive research, stated that:

> **I find it hard to believe that children who do more cognitive monitoring would not learn better both in and out of school than children who do less. I also think that increasing the quantity and quality of children's**

> **metacognitive knowledge and monitoring skills through systematic training may be feasible as well as desirable** (as cited in Louca, 2003, p. 26).

Accordingly, it is important to mention the very significant advantage of metacognition, and which lies in the fact that it can be applicable to any learning situation, regardless of the subject being taught, or to the students' level and age. Louca (2003) stated that Flavell (1979) mentioned oral communication, oral comprehension, reading comprehension, writing, and language acquisition among other issues that metacognition can positively affect and develop. On the other hand, Little et al define **"appropriate target language use"** as **"[a] metacognitive dimension"** (as cited in Magaldi, 2010, p. 80). Teachers, then, should move from the stage of teaching students facts and rules to the stage of teaching them how they can proceed in any learning situation by their own. The result is, basically, that metacognition goes beyond making students only master the academic content presented to them, to creating expert thinkers who are able to plan, monitor, and evaluate their own learning. Moreover, it enables them to even apply these capabilities to other similar contexts (Louca, 2003). The following figure is introduced to summarize the information mentioned above:

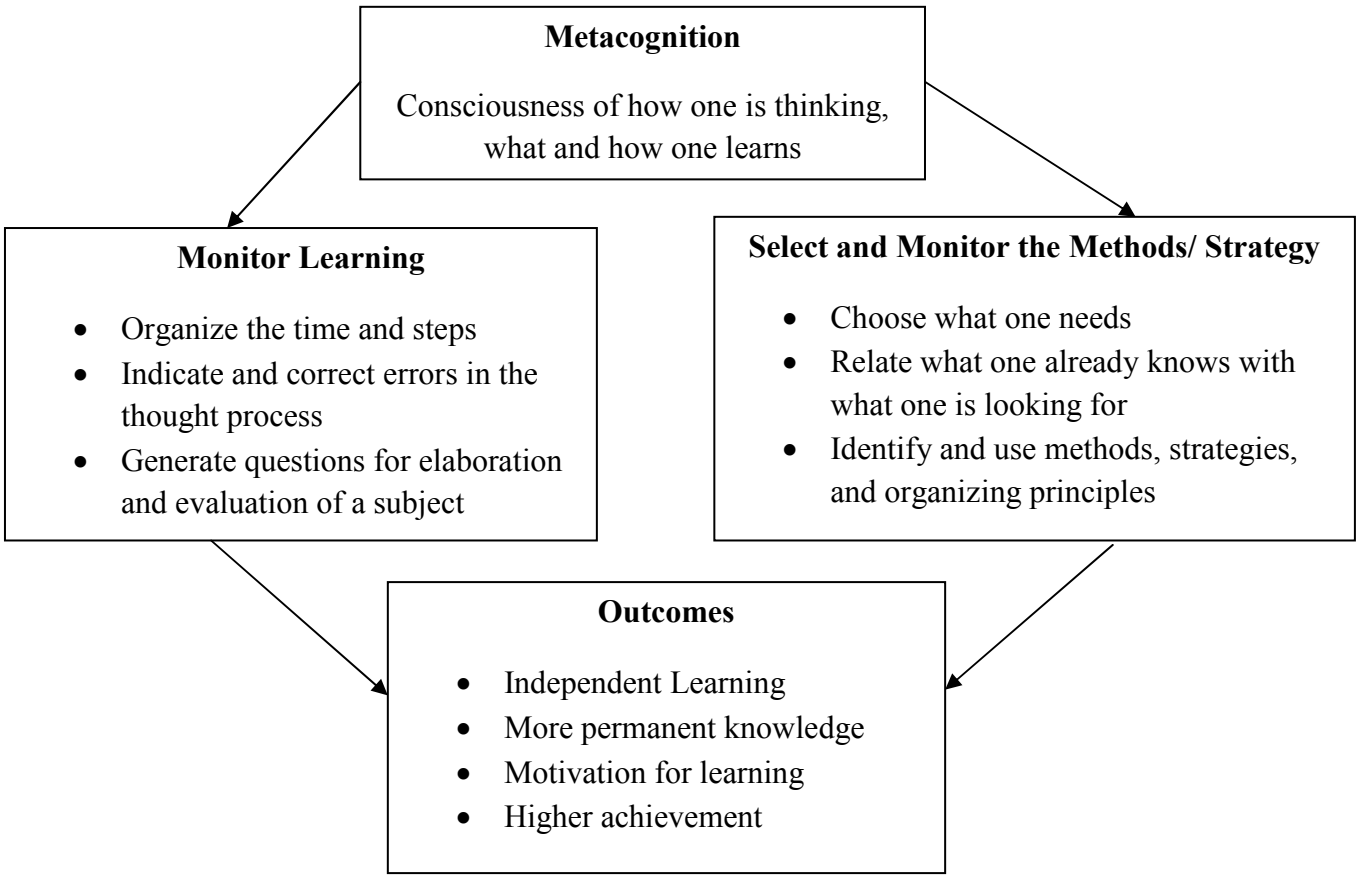


Figure 1.4: Components and Outcomes of Metacognition

Source: Adapted from Louca, 2003, p. 26

1.9. Conclusion

The focus of this chapter is the grounding of research on cooperation and metacognition. First, the chapter presented a detailed background of cooperative learning; highlighting the fact that putting students in teams does not necessarily represent all what cooperative learning is. Thus, the successful application of this method of teaching requires teachers to have considerable knowledge of the basics of cooperation including its types, various methods, and main elements. A great emphasis was put, equally, on the positive outcomes of cooperative learning; namely students' achievement, their relationships with their peers, and their psychological adjustment to schools.

On the other hand, the researcher opted for an account of metacognition; which shed light on its basic related concepts like metacognitive knowledge, experiences, tasks, strategies and skills, without forgetting the fruitful usefulness of introducing metacognition to the learning situations. Accordingly, it drew the conclusion that general knowledge of the learning process can fasten and facilitate the academic achievement of students. All the above is a theoretical framework of this research, the next chapter however, focuses on the methodological framework, to better understand the design and the steps that this research went through.

CHAPTER TWO

Research Design and Methodological Framework

2.1. Introduction

No one can deny the vital role that teaching methods play; to enhance the quality of teaching in general, and TEFL in specific. They, accordingly, help in enhancing the competence of our students. The present research, then, was conducted for the sake of examining the extent to which cooperative learning can be influential when combined with metacognitive strategies. The basic premise of this research turns around the idea that working cooperatively may enhance the students' awareness in working with metacognitive strategies. As a result, better academic achievement in grammar classes may be witnessed. On the other hand, students of the control group may face some difficulties to work on their grammar tasks, compared to the other students in the experimental group, as far as only metacognitive strategies are introduced to them at the beginning of the semester. As the explanation above shows, this research is an experimental one that went through the selection of participants, the selection and the design of the research instruments, gathering data and finally analyzing them.

This chapter aims at describing the data collection phase that the researcher went through along this research. First, a comprehensive description of the setting in which the study took place is provided. After identifying the research participants and the way they were selected, the researcher specified a great deal of the chapter to talk about the characteristics of the experimental research and a detailed description of the research tools used including the students' interview, the learners' both pre-training and post-training tests, and the learners' reflective questionnaire.

2.2. Description of the Research Setting

Being students of English in Algerian Universities requires basically passing the baccalaureate exam, and then checking whether their average allows them to choose English as a major or not. Actually, the required average for English, as a major, is different from one stream to another. This means that students who studied for example Sciences and others who studied Letters and Languages in secondary school are not all evaluated and selected the same way. Also, one important element in the

selection of English as a major is the capacity of departments of English and how much students a University can receive per year.

The process of studying English in Algerian Universities generally ends first with the licence degree; which is the equivalent of 'BA' in other foreign countries' educational systems. This process is basically one in which students of English are required to fulfill courses of different subjects along three years; according to the LMD system that has been adopted by Algerian Universities since 2004. In this respect, Mami stated that **"In the year 2004-2005, Algeria has joined the rules and principles of the Bologna Process by adopting the LMD principles (Licence, Master, and Doctorate)"** (2013, p. 910). The subjects' names and order, it may be worth remembering, vary from one University to another; however, the aim is common since they all seek to introduce the needed knowledge to students of English, and to have at the end competent users and teachers of the language.

As it is previously noticed, this study was conducted at the department of foreign languages/ section of English, at the University Center Ahmed Salhi, Naama. Thus, the following table lists the main subjects taught to students of English, as well as their distribution over three years of studies.

Level	**1st Semester**	**2nd Semester**
	Subjects	
1st Year	• Written Expression and Comprehension • Oral Expression and Comprehension • Grammar • Phonetics • Introduction to Linguistics • Introduction to Literature	• Written Expression and Comprehension • Oral Expression and Comprehension • Grammar • Phonetics • Introduction to Linguistics • Literature • Culture and

	• Culture and Civilization • Research Methodology • Social and Human Sciences • Foreign Language (French)	Civilization • Research Methodology • Social and Human Sciences • Foreign Language (French)
2nd Year	• Written Expression and Comprehension • Oral Expression and Comprehension • Grammar • Phonetics • Introduction to Linguistics • Literature • Culture and Civilization • Research Methodology • Introduction to Translation • Foreign Language (French)	• Written Expression and Comprehension • Oral Expression and Comprehension • Grammar • Phonetics • Introduction to Linguistics • Literature • Culture and Civilization • Research Methodology • Introduction to Translation • Foreign Language (French) • Information and Communication Technologies
3rd Year	• Linguistics • Literature	• Linguistics • Literature

	• Civilization • Written Expression and Comprehension • Oral Expression and Comprehension • Translation • Introduction to Didactics • Introduction to Languages of Specialty • Research Techniques • Cognitive Psychology • Foreign Language (French)	• Civilization • Written Expression and Comprehension • Oral Expression and Comprehension • Translation • Introduction to Didactics • Introduction to Languages of Specialty • Research Techniques • Cognitive Psychology • Foreign Language (French)

Table 2.1: Subjects Taught at the Department of English/ University Center Ahmed Salhi, Naama

Since its foundation, in 2011, the department of foreign languages included two sections: English and French. Also, it witnessed a considerable progress in the capacity of the department, i.e. the total number of students accepted each year in the department. Well, since the focus is basically on the English major, the following table illustrates the increased number of students of English as well as their distribution in groups:

Academic Year	Number of 1st Year LMD Students	Number of Groups
2011/2012	62	2
2012/2013	57	2

2013/2014	55	2
2014/2015	70	2
2015/2016	95	3
2016/2017	123	3
2017/2018	113	3

Table 2.2: Number of Students Joining the English Major Since 2012

The increased number of students joining the English major is not the only remarkable event in the department of foreign languages at the University Center Ahmed Salhi, Naama. However, the department witnessed also the acceptance of the first Master program by the ministry of Higher Education and Scientific Research entitled "Applied Linguistics" in 2014. Since then, the department has attempted to ensure good and academic learning process of students. The table below shows the total number of students accepted in the department for the fulfillment of the Master degree and their distribution in groups.

	First Year Master Students		Second Year Master Students	
Academic Year	Total Number	Number of Groups	Total Number	Number of Groups
2014/2015	50	2	/	/
2015/2016	60	2	36	1
2016/2017	59	2	51	2
2017/2018	58	2	61	2

Table 2.3: Number of Students Joining the Master Program since 2014

As shown previously, grammar is among the subjects introduced to students of English during their first two years at the department. Teachers make sure to show a great deal of emphasis on grammar along the process of teaching English as a major. Thus, a satisfactory amount of knowledge about the English grammar is received by students during the academic year, divided basically into two types of sessions. First, lectures of grammar in which the grammar content is taught to students, and second,

practice sessions in which it is the duty of students, for example, to try to solve tasks and activities about the grammar content taught.

2.3. Research Participants

It is believed, in any research, that the sample population is a determinant factor, as much as the methodology and the research instruments chosen. It was clearly stated by Dornyei (2007, p. 96) that **"The sample is the group of participants whom the researcher actually examines in an empirical investigation and the population is the group of people whom the study is about".** He, further, suggested that for a sample to be good and representative, it should have the same significant characteristics as the population.

2.3.1. Profile and Sampling Technique

Researchers in the field have, so much, emphasized the way the investigator should select the appropriate sample for his/her research. Generally speaking, novice teachers are most of the time uncertain about the size of their samples. Indeed, there is no clear-cut answer to the question about the sample size. Yet, there is no wonder that the researcher should select the minimum sample which represents the population targeted. In this respect, Cohen, Manion & Morrison (2000, p. 93) added that **"…the correct sample size depends on the purpose of the study and the nature of the population under scrutiny".**

To choose a specific sample, it is also indispensible to think about the way the researcher intends to collect and analyze data. Cohen et al mentioned that **"…a sample size of thirty is held by many to be the minimum number of cases if researchers plan to use some form of statistical analysis on their data"** (2000, p. 93). These explanations seem to be of great importance as far as it guides researchers throughout their process of sampling, and facilitates for them the selection of the suitable and the appropriate samples for their studies.

When it comes to the sampling strategy that should be followed, researchers may have to select one of the two available methods. They either go for a probability or a non probability sample. In a probability sample, **"…every member of the wider population has an equal chance of being included in the sample; inclusion or exclusion from the sample is a matter of chance and nothing else"** (Cohen et al., 2000, p. 99). However, for a non-probability sample, the investigator is certain about whom to select and whom to exclude from the sample. The inclusion/exclusion process becomes clearer and easier since it is based on a specific reason and purpose.

As indicated previously, researchers distinguish between two groups of sample strategies, precisely:

- *Probability Samples:*

This type of samples is best chosen when the investigator seeks to make generalizations; as far as the representativeness issue is ensured. However, Dornyei describes probability sampling as one **"…which involves complex and expensive procedures that are usually well beyond the means of applied linguistics…"** (2007, p. 97)

- *Non-probability Samples:*

On the other hand, this type of sample cannot represent the wider population, since the researcher deals with a specific group of people which only represents itself. Thus, this type of sample **"…seeks only to represent a particular group, a particular name section of the wider population [like] a class of students, a group of students who are taking a particular examination, a group of teachers"** (Cohen et al., 2000, p. 102). Additionally, it is usually appropriate for small scale research and does not allow any generalizations.

Indeed, both probability and non-probability samples can be categorized into different types, but since the sample population designated for the study is not a probability sample, the focus here, then, will be on the various types of the non-

probability sample. The Following table is made to summarize the main types mentioned by Cohen et al (2000, p. 102-104):

Non-probability Sample Types	**Main Characteristics**
Convenience Sampling (Also called Accidental or Opportunity Sampling)	✓ The nearest persons to the researcher are chosen for the sample. ✓ Easy access to those individuals is the reason behind this choice. ✓ It does not represent the wider population and it does not serve the generalization issue, and ✓ It is a suitable sample for the 'case study' type of research.
Quota Sampling	✓ Researchers seek to have a sample with the same characteristics of the wider population. E.g. the wider population is composed of 60% females and 40% males. The Quota sample, then, should be composed of 60% females and 40% males.
Purposive Sampling	✓ It does not represent the wider population, and ✓ There is a specific purpose behind choosing members of the sample.
Dimensional Sampling	✓ It is an improved version of Quota sampling.
Snowball Sampling	✓ It is best used when the researcher is dealing with a sensitive topic, or when he/she faces difficult access

	to some individuals. ✓ The researcher selects first a small number of people who carry the needed characteristics. These individuals, in turn, help the researcher by putting him/her in touch with others who carry also the needed characteristics and so on.

Table 2.4: Main Types of Non-probability Samples.

Cohen, Manion & Morrison (2007) added later two other types of non-probability sampling; namely, 'Volunteer Sampling' which is also suitable when the researcher faces difficult access to individuals. In this respect, they stated that:

> **…the researcher may have to rely on volunteers, for example, personal friends, or friends of friends, or participants who reply to a newspaper advertisement, or those who happen to be interested from a particular school, or those attending courses. Sometimes, this is inevitable (Morrison, 2006), as it is the only kind of sampling that is possible, and it may be better to have this kind of sampling than no research at all.** (Cohen et al., 2007, p. 116)

The second type is referred to as 'Theoretical Sampling', and which turns around the idea that the researcher should continue gathering data without even knowing in advance the sample size. **"The researcher proceeds in gathering more and more data until the theory remains unchanged or until the boundaries of the context of the study have been reached…"** (Cohen et al., 2007, p. 116)

Well, the current study, accordingly, involves the use of a non-probability convenience sample, mainly for the following reasons:

- Easy access to participants, as far as the researcher was designated by the administration to teach grammar to second year LMD students of English at the University Center Ahmed Salhi, Naama, and
- **"Most actual research in applied linguistics employs 'non-probability samples'"** (Dornyei, 2007, p. 98).

Accordingly, and considering the fact that Borg and Gall proposed that **"…experimental methodologies require a sample size of no fewer than fifteen cases…"** (as cited in Cohen et al., 2000, p. 93), the sample population in this study included two classes of second year EFL students. The first consisted of 29 students among whom 18 females and 11 males, and the second class consisted of 24 students; mainly 20 females and 04 males. The researcher could have this total final number after the exclusion of some students from the study, since some of them have been absent during the pre-test, and others during the training sessions or the post-test. The students' ages range from 18 to 26 and all of them are Arabic native speakers. As far as their educational background is concerned, they all hold the Baccalaureate degree from different streams; mainly Life and Natural Sciences, Letters and Philosophy or Letters and Foreign Languages. They had the chance to be exposed to the English language since their first year at the middle school; which makes it at the end an eight years exposure to English courses, taking into account their first year at the University Center Ahmed Salhi, Naama.

The researcher chose to work specifically with second year LMD students for the fact that already studying together for one year would help in reducing problems of shyness and anxiety when being placed to work with classmates in cooperative groups. Also, after already studying English for a previous year, students gain some awareness about the importance of grammar to their learning of English. This has been clearly stated by Kennedy and Bolitho (1984, p. 13-14) who said: **" The older a learner is, the more likely to have his own definite ideas on why he is learning English…the utility of learning English is likely to be apparent".** This issue is regarded to be a helpful way to ensure the validity of the research.

2.3.2. Needs Analysis

Previously deciding about students' needs has gained so much attention by several researchers in the field (Songhori, 2008). For teachers to identify where their students are in terms of knowledge, competencies and skills, and to consider what learning goals students are supposed to achieve, the learners' needs analysis seems to be the key. As a result, teachers may better decide about the academic content which they should provide to their students.

Grammar is certainly an important part to consider when learning a foreign language. It has always been the topic of many debates; which in turn, all confirm its significance. Researchers consider it to be a determinant factor in the mastery of any language being learnt (Kao, 1998). Accordingly, learners of English should be exposed to a considerable amount of grammar knowledge in the educational settings, for a better enhancement of their communicative competence.

In this study, the researcher opted for a learners' needs analysis through the use of a pre-training test; in order to identify the students' current grammar competence, i.e. their strengths and weaknesses, and to better determine what learning goals are to be achieved as well as the relevant grammar content required. The pre-training test results ideally gave the investigator a clear idea about how lectures should be structured, in order to better suit the participating students.

2.4. Experimental Design

Indeed, there is so much to say about experimental designs. Researchers dealt with such a topic thoroughly in the literature of research methodology; as it was of keen interest to them. Nunan proposed that **"Generally speaking, experiments are carried out in order to explore the strength of relationships between variables"** (1992, p. 24-25). On another hand, Saeidi suggested basically that the objective of any experimental research is **"…to test a particular theory or hypothesis"** (2002, p. 8). Experimental research, then, relates itself with some key words including; but not limited to, causes, influence, relationships, variables, and so on. In this sense, Cohen et al claimed that experimental research is **"…the only method that directly concerns itself with causality…"** (2000, p. 211).

Then, it seems to be important here to discuss the notion of 'variables', and to distinguish between two types of variables. First, the independent variable which refers to the one that influences the other; and second, the dependent variable **"…upon which the independent variable is acting…"** (Nunan, 1992, p. 25). In a similar vein, Nunan added **"A variable, as the term itself suggests, is anything which does not remain constant… [like] language proficiency, aptitude, motivation, and so on"** (1992, p. 25).

Actually, even in simple experiments, researchers predict that the independent variable shall make an effect on the dependent variable, as Mackey and Gass mentioned **"The independent variable is the one that we believe may "cause" the results; the dependent variable is the one we measure to see the effects the independent variable has on it"** (2005, p. 103). Cohen et al went further to talk in their book *"Research Methods in Education"* about the independent variable in classroom settings' learning experiments, and to describe it under the name 'Stimulus'. On the other hand, the dependent variable was given the name 'Response' (2000).

Back to the focus on experimental research, one of the indispensable things to do when conducting such a type of research is to test both groups at the beginning of research and make sure they are at the same level. Also, the process; of selecting which group is to be the experimental one and which group is to be the control one, should be totally random in order to exclude any possibility that other variables are interfering within the research process. It is only this way that researchers can determine, at the end of the study, the effectiveness of the independent variable applied in the experiment (Nunan, 1992).

To sum up, there are few conditions that researchers should meet, if they are to conduct a healthy experiment:

- ✓ Determine the independent and dependent variables.
- ✓ Randomly assign students to control and experimental groups, and

- ✓ Opt for a pre-test at the beginning of the study to make sure that both control and experimental groups are at the same level, and then retest them at the end of the study.

One essential element to mention about experimental research is that researchers are able to control their experiments with all their conditions, determinations and effects. Other characteristics of experimental research may be selected from what Saeidi mentioned:

- The researcher begins with a clear hypothesis, which is tested by the experimental procedures.
- It is necessary for the variables involved to be clearly and operationally defined, i.e. defined in such a way that a measurement can be made.
- The purpose of the experiment is to test the relationships between variables as predicted by the experimenter.
- Parameters of the experimental design are clearly identified, i.e. what are you going to compare with what?
- Results from before and after are compared within groups and between groups.
- Researcher establishes what outcome would be needed to consider the experiment to be a success and how the predicted outcome can best be measured.
- Data are normally quantitative and are systematically collected by means of test scores, validated questionnaires, systematic observations, physical measurements, etc (2002, p. 8-9).

Indeed, in language studies, the experiment is a quite important research tool. However, it is of a great usefulness to point that there are types of experiments; depending on the circumstances that the researcher faces **"…such as the impossibility of randomly assigning subjects to experimental and control groups…"** (Nunan, 1992, p. 40). The following table lists the types of experiments:

Type	Characteristics
Pre-experiment	May have pre- and post treatment tests, but lacks a control group
Quasi-experiment	Has both pre- and posttests and experimental and control groups, but no random assignment of subjects
True Experiment	Has both pre- and posttests, experimental and control groups, and random assignment of subjects

Table 2.5: Distinctions of Experimental Research

Source: Nunan, 1992, p. 41

Well, in true experimental research; given the name 'True Experimental' by Campbell and Stanley (1963) and the name 'good' design by Kerlinger (1979), randomization helps in eliminating any difference between participants of control and experimental groups, which makes the groups equivalent and the results valid (as cited in Cohen et al., 2000). In such a type of research, and after the groups are assigned, any additional elements to the experimental group should also appear within the control group. In this sense, Kerlinger (1970) states:

> **If the mental ages of the children of the experimental group increase, so should the mental ages of the children of the control group…If something happens to affect the experimental subjects between the pretest and post-test, this something should also affect the subjects of the control groups.** (as cited in Cohen et al., 2000, p. 214)

In educational settings, it is not always possible for researchers to conduct a true experimental research as far as the randomization issue is not in the scene. What they do, then, is quasi-experimental research instead. To be brief and precise, most researchers, in educational settings, are doing quasi-experimental and not true experimental research since the later requires a random assignment of the participants

to the control and the experimental groups. The research, certainly, cannot be named 'experimental' if the groups are "**… constituted by means other than random selection"** (Cohen et al., 2000, p. 212).

As far as quasi-experimental research is concerned, Cook and Campbell (1979) introduced many types of it; as cited in *"Essentials of Research Design and Methodology"* (Marczyk, DeMatteo & Festinger, 2005). The following is an account of them:

A. Nonequivalent Comparison-Group Designs:

It is believed that this type of design is commonly used and that it shares so much characteristics with the experimental one. However, they are different when randomization is concerned; since nonequivalent comparison-group designs **"… do not employ random assignment"** (Marczyk et al., 2005, p. 138). In such a research, the researcher's role is to try, as much as possible, to choose groups that seem to be similar.

B. Nonequivalent Groups Posttest-Only:

With this type of design, researchers claim that the results obtained from the study are almost uninterpretable, as far as the influence of the independent variable on the dependent variable becomes difficult to identify. The reason lies in the fact that other influential elements were not identified at the beginning of the study. Marczyk et al (2005) illustrated this; saying that may be high ability students are the ones who received the assigned intervention. In such a situation, higher grades cannot be interpreted taking into consideration only the teaching method applied to them.

C. Nonequivalent Groups Pretest-Posttest:

As the name suggests, measurement of the dependent variable should be ensured both before and after the application of the teaching method. Basically, this type is favoured compared to the previous mentioned design since it allows the researcher, to a certain extent, to assume that **"…the independent variable was responsible for changes in the dependent variable"** (Marczyk et al., 2005, p. 139). Additionally,

thanks to the pretest, researchers are able to infer the basic differences between the experimental and the control groups, and therefore ensure more the validity of results.

D. Interrupted Time-Series Designs:

To describe this type of research, Marczyk et al stated that **"The *Time-Series Design* is perhaps best described as an extension of a one group pretest-posttest design – the design is extended by the use of numerous pretests and posttests"** (2005, p. 139). This means that the group is exposed to several measurements before the application of the teaching method; as this would help more to extract correct and valid interpretations later. Likewise, other measurements are made along the intervention.

Related to what has been previously explained, the current study represents a quasi-experimental research in which the researcher embraced the use of both the pre and the post tests, as well as both the control and the experimental groups. The random selection of participants is, therefore, absent in this study since members of both groups were already assigned by the administration and given to the researcher to teach them grammar. However, it was possible for the researcher to randomly select which group is to be the control one and which group is to be the experimental one. Being, mainly, a nonequivalent groups pretest-posttest type of research, the investigator can be able, to some extent, to determine at the end of the study that the changes are due to the independent variable.

2.5. Data Gathering: *Methods and Procedures*

Basically, quantitative research appeared within the natural sciences context. Then, researchers in the field of social sciences started to embrace this method of research. Dornyei presents the three stages that any quantitative research generally goes through. They are in fact **"…(a) observing a phenomenon or identifying a problem; (b) generating an initial hypothesis; and (c) testing the hypothesis by collecting and analyzing empirical data using standardized procedures"** (2007, p.

31). It is believed that, through quantitative research, much of the bias is avoided and thus more reliable results are provided.

Accordingly, the basic premise of the quantitative approach is using numbers. In this respect, Dornyei (2007, p. 32) added, **"The single most important feature of quantitative research is, naturally, that is centered around numbers"**, and thus quantitative data is most preferred as it can be analyzed using statistical computer software. Researchers, also, need to identify the variable and prepare well the research instruments they are intending to use. One important characteristic of the quantitative method is that it is interested more in the common features of a certain group rather than the individual, and which may lead at the end of the research to make appropriate generalizations as do proponents of quantitative research propose (Dornyei, 2007). However, being unable to uncover the reasons behind a specific phenomenon is recognized as one of the limitations of quantitative research.

On the other hand, though qualitative research is by no mean a new approach, it regained recently so much interest among researchers. **"Seale *et al.* (2004), for example, examined the output of the main publisher of methodology texts, Sage Publications, and found that during the last decade there was a four-fold increase of published qualitative methods textbooks"** (Dornyei, 2007, p. 36). Therefore, it is characterized by its 'emergent nature'. Interestingly, qualitative research is said to be a useful way to answer and interpret the 'why' questions, leading consequently to understanding more aspects of the examined phenomena. However, it is criticized by the fact that the generalizability issue is not guaranteed due to the small samples selected.

Literature on qualitative research introduces some aspects that purely characterize it including, but not limited to:

- The fact that it has an emergent nature, i.e. it is always open for new issues to emerge in the study.
- The researcher transforms the data gathered into texts.
- The result is basically rich data.

- The researcher's understanding of the whole situation thanks to the rich data obtained.
- The great focus on individuals' experiences and viewpoints, and
- Smaller samples are required for qualitative research (Dornyei, 2007).

The 1970s and the 1980s witnessed what researchers call 'The Paradigm War'; and which means basically the disagreement among researchers and the non-achieved consensus on whether it is the qualitative research which provides better data or the quantitative one. Indeed, Strauss and Corbin, when speaking about both qualitative and quantitative approaches said: **"The issue is not whether to use one form or another but rather how these might work together to foster the development of theory"** (as cited in Dornyei, 2007, p. 43).

Combining quantitative and qualitative methods is traced back to the 1970s; as the notion of 'triangulation' was first presented (Dornyei, 2007). Researchers propose triangulation for the sake of testing hypotheses using different methods, as far as some of them claim that **"Monomethod research is the biggest threat to the advancement of the social sciences"** (Onwuegbuzie and Leech, 2005, p. 375).

Multimethod research; also referred to as combined, integrated, or mixed methods, earned consideration in the 1990s. However, **"currently, there is a general call on the part of applied linguists of both QUAL and QUAN orientation for more engagement in this practice…"** (Dornyei, 2007, p. 44). The reason lies in the fact that combining methods strengthens research and provides better results compared to those provided by only quantitative or qualitative methods. The following is a summary of what Dornyei (2007) mentioned as strengths of mixed methods research:

- The best of each method helps in dealing with the shortcomings of the other.
- Researchers may understand better complex situations through combining both numeric and qualitative data.
- Ensuring better the validity of results.
- Almost all researchers can benefit from the study whatever their preferred research type is.

In a similar vein, Gorard and Taylor stated that "**…both approaches have strengths, and that even greater strength can come from their appropriate combination"** (2004, p. 1). They believe that combining various methods to collect data is a key feature in developing social; and more precisely educational research. Thus, it is a useful way towards the mastery of both qualitative and quantitative approaches. They presented other evidence on the fruitfulness of combining methods in their book *'Combining Methods in Educational and Social Research'*. These might be summarized as follows:

- The increased validity of research.
- Providing a trustworthy results' discussion.
- The ability to have a free-of-bias research, and
- Ensuring the support of one method to the other (2004).

In any research, it is generally the nature of the research topic and the research approach which determine the research instruments that should be used. Also, if the researcher aims to ensure the validity of the whole research work, the use of the multi-method approach is then recommended. In the literature about research methodology, the multi-method approach is also given the name 'triangulation'. Hence, it is worth pointing out that triangulation means **"…the use of two or more methods of data collection in the study of some aspects of human behaviour"** (Cohen et al., 2007, p. 14). It opens up, then, fruitful avenues for obtaining rich data, and helps in explaining the research situation from different perspectives.

The present research is actually one in which the investigator opted for the use of a multi-method approach. The basic premise behind this choice is indeed the considerable amount of positive description of the multi-method approach; given by researchers in the field of research methodology. Also, it is an important opportunity for both qualitative and quantitative methods to complement each other, and which in turn helps the investigator to describe and understand the situation on which the research is based. This would lead easily to the following stages of the development of the research process. As far as the techniques used in the qualitative method are concerned, both the interview and the reflective questionnaire are rich sources of

qualitative data. The learners' tests, on the other hand, provided more quantitative data; since the learners' scores were basically analyzed and compared. Accordingly, the following sections are made to clarify the research instruments used, in terms of both definition and content (see sections 2.5.1, 2.5.2, and 2.5.3).

2.5.1. Interview

As a research instrument, the interview is defined by Cannell and Kahn as **"a two-person conversation initiated by the interviewer for the specific purpose of obtaining research-relevant information, and focused by him on content specified by research objectives of systematic description, prediction, or explanation"** (as cited in Cohen et al., 2000, p. 269). It is the verbal communication between the interviewer and the interviewee which enables the interviewer to collect the information he/she seeks. It usually takes the form of ordinary conversations and therefore enables more the exchange of information.

The interview proved itself as a commonly used research tool in sociolinguistics, applied linguistics, and researches about second language acquisition. Indeed, it can be used either as a primary research instrument, or among other research tools for the sake of triangulating the data gathered. In spite of the fact that the interview seems to be a sensitive research tool, it gained so much preference among many researchers as it is, in fact, more relevant if the investigator intends to take the individual differences and tone into account. In this line of thought, Cohen et al mentioned that **"The use of the interview in research marks a move away from seeing human subjects as simply manipulable and data as somehow external to individuals, and towards regarding knowledge as generated between humans, often through conversations"** (2000, p. 267). Researchers, then, see interviews as an exchange of knowledge and opinions between people who share interest on the same topic.

McDonough and McDonough consider interviews as **"… just another way of asking questions, this time in face-to-face interaction"** (1997, p. 182). Thus, interviewers and interviewees have the opportunity to discuss important matters about

their lives and about the way they see things. Indeed, gathering data is not the only purpose of interviews as far as they can be also used for:

- ✓ Hiring an employee
- ✓ Testing or changing a hypothesis
- ✓ Evaluation purposes, and
- ✓ Offering therapeutic help in psychiatric clinics (Cohen et al, 2000).

Researchers often compare interviews with self-administered questionnaires as they think they have a lot in common. Thus, the results show that **"each has advantages over the other in certain respects"** (Cohen et al., 2000, p. 269). Questionnaires are seen as more reliable since respondents feel at ease to provide honest answers without being obliged to mention their names. On the other hand, they may not be willing to answer all the questions; more precisely open-ended questions. Indeed, this is not a big issue with interviews as they allow more discussions between the interviewer and the interviewee; which enables the interviewer to have some sort of answers at the end in a way or in another.

As far as the interview types are concerned, literature about interviews provides the reader with numerous types of interviews, which might be a bit confusing. Accordingly, the following table is provided for the sake of unveiling the major categories of interviews:

Type of Interview	Characteristics	Strengths	Weaknesses
Informal Conversational Interview	Questions emerge from the immediate context and are asked in the natural course of things; there is no predetermination of question topics or wording.	Increases the salience and relevance of questions; interviews are built on and emerge from observations; the interview can be matched to	Different information collected from different people with different questions. Less systematic and comprehensive if certain questions

		individuals and circumstances.	don't arise 'naturally'. Data organization and analysis can be quite difficult.
Interview Guide Approach	Topics and issues to be covered are specified in advance, in outline form; interviewer decides sequence and wording of questions in the course of the interview.	The outline increases the comprehensiveness of the data and makes data collection somewhat systematic for each respondent. Logical gaps in data can be anticipated and closed. Interviews remain fairly conversational and situational.	Important and salient topics may be inadvertently omitted. Interviewer flexibility in sequencing and wording questions can result in substantially different responses, thus reducing the comparability of responses.
Standardized Open-ended Interviews	The exact wording and sequence of questions are determined in advance. All interviewees are asked the same basic questions in the same order.	Respondents answer the same questions, thus increasing comparability of responses; data are complete for each person on the topics addressed in the interview. Reduces interviewer effects	Little flexibility in relating the interview to particular individuals and circumstances; standardized wording of questions may constrain and limit naturalness and

		and bias when several interviewers are used. Permits decision-makers to see and review the instrumentation used in the evaluation. Facilitates organization and analysis of the data.	relevance of questions and answers.
Closed Quantitative Interviews	Question and response categories are determined in advance. Responses are fixed; respondent chooses from among these fixed responses.	Data analysis is simple; responses can be directly compared and easily aggregated; many short questions can be asked in a short time.	Respondents must fit their experiences and feelings into the researcher's categories; may be perceived as impersonal, irrelevant, and mechanistic. Can distort what respondents really mean or experienced by so completely limiting their response choices.

Table 2.6: Strengths and weaknesses of different types of interview

Source: Cohen et al, 2000, p. 271

In other simplified words, it seems easier then to highlight the three types of interviews based on their structure. These are essentially the structured, the semi

structured, and the unstructured interviews. This classification is based on their degree of formality and the extent to which the interviewer wants to hold control over the participants.

Structured Interviews

The structured interview is regarded as a **"… formal interview in which set questions are asked and the answers recorded on a standardized schedule"** (Cohen et al, 2000, p. 268). Seemingly, it shares a lot of similarities with the questionnaire; namely, the format and principles as far as the questions are asked using the same words and following the same order. McDonough and McDonough added, in this sense, that structured interviews **"…offer practitioners a very useful tool in a number of areas, particularly when the population is small enough to make personal interviewing realistic, rather than requiring a questionnaire format"** (1997, p. 187).

Semi-structured Interviews

This type of interview is seen as a **"… less formal [one] in which the interviewer is free to modify the sequence of questions, change the wording, explain them, or add to them…"**(McDonough and McDonough, 1997, p. 187). This does not mean that the overall design of the interview is not structured; it only means that this category permits more flexibility if the interviewer wants to change or modify the way and the order of asking questions. Accordingly, the interviewer may guide him/herself with only an agenda which contains general ideas about how the interview has to go (Nunan, 1992).

As a result, **"Because of its flexibility, the semi-structured interview has found favour with many researchers…"** (Nunan, 1992, p. 149). The reasons might be displayed as follows:

- ✓ It allows more spontaneous and real answers.
- ✓ It promotes more interaction between the interviewee and the interviewer.

- ✓ It creates a comfortable atmosphere for the interviewee; so to provide a kind of rich data, and
- ✓ It provides the interviewer with access to others' private lives as they express themselves freely.

Unstructured Interviews

Likewise, the unstructured interviews cannot be composed of predetermined questions. However, the interviewee is given more space and flexibility to express his own viewpoint about the general topic proposed by the interviewer (Nunan, 1992). Cohen et al contended that **"…the unstructured interview is an open situation, having greater flexibility and freedom"** (2000, p. 273). Indeed, the researcher is guided only by the general idea of the research; however, total freedom is what characterizes the whole scene. The researcher can opt for any question content, any wording, and any order; as far as they serve the general purpose of the interview. As a matter of fact, it is acknowledged that unstructured interviews bring out more qualitative data.

To ensure the reliability of the interview, the interviewer should consider some other important aspects besides the selection of the interview type and the wording of its items. Among the significant practical tips about interviews is piloting. Thus, after structuring the interview, the investigator should ensure that its items are relevant to the sample population he/she desires to work with. On this issue, Nunan stated that:

> **Because of the potential problems in the use of the interview that we have already identified, it is very important that interview questions are piloted with a small sample of subjects before being used. This gives the researcher the opportunity to find out if the questions are yielding the kind of data required and to eliminate any questions which may be ambiguous or confusing to the interviewee.** (1992, p. 151)

On the other side, McDonough and McDonough (1997) presented another issue that should be also carefully treated when dealing with interviews. They highlighted the interviewer-interviewee relationship dimension. The point is that the interviewer should take into account the extent to which he/she is close to the participants selected when formulating the items, as well as when interviewing the participants. Certainly, interviewing teachers, students, or friends would never be the same. Accordingly, the interviewers are required to briefly explain to the participants the necessary points about the interview including the way he/she is intending to collect the data and whether other people will have access to the data gathered or not (Nunan, 1992).

When it comes to data gathering, McDonough and McDonough (1997) highlighted the different opinions that researchers have on which method is fruitful to record the interview data. It is mentioned that interviewers may opt for the *Write-up after the interview* method, which is considered as the best record data. This preference is built on the idea that it allows more time for the interviewer to interpret the interviewees' answers. Researchers can also choose the *Audio-recording* method through the use of a tape/cassette-recorder. The third available option is the *Note-taking* method which is believed to provide little data compared to the other methods, as it may distract both the interviewer and the interviewee.

Based on what has been discussed above, the researcher designed this interview to include eight questions divided into three main sets. The first three questions were asked in order to know more about the teaching background of the respondents including the way they used to study grammar as well as whether they have been introduced before to cooperative learning and/or metacognitive strategies. The second set of questions enables the researcher to know more about what students think about their grammar level and about their skills after working in cooperative groups with their peers. The last questions, on the other hand, are well-meant to check the students' attitudes about the cooperative experience and the main difficulties encountered.

It is well known that close-ended questions are the ones which include a set of suggestions and which give the respondent the sense of being limited when choosing

his/her answer from the provided list of responses. On the other hand, open-ended questions provide more freedom to respondents as far as they answer using their own words to describe their own ideas and convictions. From a data analysis perspective, researchers argue that close-ended questions are easy to analyze, though they provide limited data. By way of contrast, the data gathered from open-ended questions are more insightful, rich, and inspirational. For this reason, the researcher opted for a mixture of questions including open-ended, multiple choice and yes/no questions; in order to obtain the best possible.

Although the interview questions were designed before conducting the interview with respondents, the researcher decided in advance to keep the idea of a semi-structured interview as it allows more discussions with the students and it gives more freedom to the researcher. Indeed, the interview was conducted only with the experimental group and not with the control group. The reason behind this is basically the fact that:

- ✓ Cooperative learning was implemented only in the experimental group lectures, and
- ✓ The researcher wanted to rely on a third instrument for the sake of triangulation.

The interview, then, was conducted with 24 students and interviewing each one lasted for about 10 to15 minutes. The data were collected through the audio recording method using a recorder. It is important to note here that the researcher piloted the interview with other students to ensure that there is no ambiguity about the questions asked. Consequently, some questions have been reformulated till reaching the final version of the interview.

2.5.2. Learners' Tests

This research instrument is considered to be a widely common used one. Over decades, researchers have opted for the use of tests; for the sake of studying and measuring some aspects such as personality, stress, intelligence, language proficiency

and so on. Cohen et al stated that **"In tests, researchers have at their disposal a powerful method of data collection, an impressive array of tests for gathering data of a numerical rather than verbal kind"** (2007, p. 414). Tests are also known with their usefulness in EFL contexts. On this idea, Selinger and Shohamy (1989, p. 167) added that tests are useful in order to **"…collect data about the subject ability and knowledge of the language in areas such as vocabulary, grammar, reading, metalinguistic awareness and general proficiency"**.

For a test to be used as a research instrument, Cohen et al (2007) proposed a list of issues that researchers need to well identify. Namely, the investigator needs to know precisely what element he/she is testing. Also, a clear decision should be made on whether the test is to be parametric, non-parametric, norm-referenced, criterion-referenced, or domain referenced. Another determinant factor, actually, concerns the fact that whether the test is commercially available for use or is it the researcher who should create his/her own test.

A reliable test is the one which provides the researcher with trusted data. Indeed, the validity and reliability of the test can be ensured by:

- ✓ Designing the test items with reference to the objectives that the investigator seeks to achieve.
- ✓ Testing what is supposed to be tested, i.e. the test should not include issues beyond the learners' current knowledge, and
- ✓ The test should be clear to students in terms of form, items included and instructions (Cohen et al., 2007).

Before moving to talk about the pre and post-tests that have been used in this research, it seems worth explaining in brief the previously mentioned types of tests. Thus, the table below summarizes them:

	Types of Tests				
	Parametric	Non-parametric	Norm-referenced	Criterion-referenced	Domain-referenced
	Made for the wider	Made for only a	Made to compare the	Made to check	Made to focus

Characteristics	population, and it is published and commercially available.	specific group. E.g. the end-of-year examination of a class in school.	achievement of a certain group with the achievement of another group.	whether a student can meet certain criteria that are previously defined.	basically on the domain that is intended to be tested. The student score represents what he/she masters in that field. E.g. if a student achieves 50% of the test, this means that he/she knows 50% of that field.

Table 2.7: Types of Tests

Cohen et al., 2007, p. 414-416

Providing feedback and informing teachers and learners about the students' current knowledge and future needs are among the general aims of tests. Related to the current study, it is worth mentioning that Johnson et al (1991, p. 69) said that: **"For cooperative learning to be successful, the learning of group members must be**

evaluated by a criterion-referenced system". The aim behind using a criterion-referenced test is to check whether students have met a set of predetermined criteria. Indeed, **"A criterion-referenced test provides the researcher with information about exactly what a student has learned, what he or she can do…"** (Cohen et al., 2007, p. 416).

When speaking about the construction of pre and post-tests, Cohen et al (2007) presented some valuable pieces of advice to researchers. Those included the following points:

- ✓ Both the pre- and post-test should test the same content, and
- ✓ Both the control and the experimental groups should sit for the same pre and post-tests, which in turn should have the same level of difficulty.

Accordingly, the pre and the post-training tests should be different in wording; however, they should, with no doubt, be similar to each other in objectives. The following sections (2.5.2.1 & 2.5.2.2) speak about the pre and post-training tests, which were both designed with reference to the criterion-referenced test norms.

2.5.2.1. Pre-test

As it was previously highlighted in this research, the input hypothesis of Stephen Krashen (1982) emphasizes the fact that the input presented to students, if teachers consider it to be understood and effective, should be comprehensible, i.e. a little beyond the current level of understanding of students. Thus, besides its usefulness in determining the effectiveness of working collaboratively with peers, this research instrument was also used for the sake of specifying learners' needs. Indeed, this was an essential requirement before dealing with the training phase as far as:

- ✓ It gives the teacher a clear idea about the effectiveness of the previous ways of teaching grammar.
- ✓ It helps the researcher to better select the content of the training sessions, and
- ✓ It guides the researcher when grouping students; since cooperative groups should be heterogeneous and should include members of different levels of competence (Johnson & Johnson, 1987).

Considering the fact that EFL students receive during their second year at University elaborated lectures about English tenses, the investigator structured the pre-training test to check the extent to which her students master the English tenses, and the weaknesses they encounter when dealing with this significant part of the English language. Accordingly, the following points describe briefly the form, the content and the duration of the test:

- ✓ Students were informed in advance that they would be tested on English tenses.
- ✓ They were given time to revise their prior knowledge on English tenses.
- ✓ The test was designed to include four grammar exercises with clear written instructions.
- ✓ The chosen exercises were different from each other in the form as well as the content
- ✓ The use of different tenses was distributed over the four exercises.
- ✓ The students were asked to complete their test sheets with the appropriate answers, and
- ✓ The test lasted for one hour and a half, and at the end the teacher collected the students' sheets for correction and deep analysis.

Though most activities about the English tenses include a leading word, a previous expression, or a description for the situation that may facilitate to students the conjugation of verbs, students demonstrated through their answers that they still do not master numerous things about the English grammar. Learners had, specifically, serious problems in choosing the appropriate tense to be used. On the other hand, some other students, even if knowing which tense to be used, could not conjugate verbs using the mere right form of the tense.

2.5.2.2. Post-test

If the pre-training test was carried out in this research to check the students' current knowledge about English tenses as well as to define their learning needs, the post-training test then aims at checking the students' progress towards the mastery of tenses and how well their grammar competence has been enhanced after working in

groups with metacognitive strategies for a semester. It is worth remembering that this research is a nonequivalent groups pretest-posttest quasi experimental one, and thus the researcher can be able to a great extent to infer that the independent variable is influential on the dependent one. In this case, if the post-training test scores demonstrate an improvement, then the researcher can infer that the training was successful and that the method used in teaching the English grammar content was appropriate.

Since both the pre-training and the post-training tests should be structured to measure the same academic content, the researcher designed the present post-training test keeping in mind the idea that they should be almost similar to each other in terms of difficulty. Accordingly, even the post-test contained four grammar exercises which intended to measure the students' knowledge about English tenses. For each task, there has been a written instruction to better ensure the students' understanding of the required solution for the assigned task. The nature of each exercise is different from the others since the investigator made sure to include a mixture of English tenses distributed over the four exercises. Likewise, the students were informed in advance that they are going to be tested on English tenses and they were given enough time to revise for the test. The test lasted for one hour and a half and the copies were collected by the investigator for a later comparison with the pre-training test scores.

2.5.3. Reflective Questionnaire

The term questionnaire seems familiar to almost every investigator; however, researchers in the field find it a hard task to provide a straight definition. Brown, for example, stated that questionnaires are "**Any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting them among existing answers"** (as cited in Dornyei, 2007, p. 102). It is believed that this research instrument helps in gathering data which is stated by respondents about themselves, including their attitudes and behaviour. These characteristics make it, relatively, a popularly used research instrument. In this vein, Dornyei added **"The popularity of questionnaires**

is due to the fact that they are relatively easy to construct, extremely versatile and uniquely capable of gathering a large amount of information quickly in a form that is readily processible" (2007, p. 101-102).

Though questionnaires seem to be an easy research tool that anybody can construct, the truth is some researchers still fail to have at the end fine questionnaires. Thus, it is indispensable to consider the various issues related to this instrument including its length, the wording of items, and the types of questions. Starting with the wording of items leads to mention the fact that researchers have highlighted its importance in constructing a good questionnaire. It is preferable, then, to form short items with simple and clear language. Also, each item should treat only one single idea and ask one single specific question. After all items have been specified, one has to decide about their order, not to have at the end one answer influencing the answer to the following questions. This can open the avenue to mention that it is better to keep the factual and the open-ended questions at the end of the questionnaire (Dornyei, 2007). In this sense, Dawson said **"I tend to include [factual questions] at the end, as I believe people are more likely to fill in this information when they have already invested time and energy in completing the rest of the form"** (2009, p. 97-98). Indeed, this provides respondents with more confidence and helps in providing rich and neutral data (Dornyei, 2007).

Questionnaires generally include factual questions that the researcher use to collect information about the participants such as gender, age, native language, marital status, incomes and so on. Also, behavioral questions that seek to uncover information about what the participants did or are still doing in a specific area or topic. The last set of questions is referred to as attitudinal questions and which unveil at the end the participants' opinions, preferences and attitudes (Dornyei, 2007).

Nunan (1992) has drawn the conclusion that a questionnaire may include only one type of questions or a mixture of types of questions. In the literature about questionnaires, the commonly mentioned types are: factual questions, Yes/No questions, multiple-choice questions, ranked questions, open-ended questions, and scaled questions. **"…most professional questionnaires are primarily made up of**

'closed-ended' items, which do not require the respondents to produce any free writing; instead, respondents are to choose one of the given alternatives" (Dornyei, 2007, p. 107). However, questionnaires may still include some open-ended questions for it is highly acknowledged that they provide rich data.

To sum up, it seems of a great importance to highlight the questionnaire design checklist that Dawson provided. It includes 18 tips for constructing a good questionnaire. The following are some of them:

- ✓ Make your questionnaire as short as possible.
- ✓ Make sure people will be able to answer your questions.
- ✓ Start with easy to answer questions. Keep complex questions to the end.
- ✓ Ask for personal information at the end.
- ✓ Use a mix of question formats.
- ✓ Avoid double-barrelled questions.
- ✓ Avoid jargon and technical words.
- ✓ Avoid leading questions, and
- ✓ Avoid vague words such as 'often' and 'sometimes' (2009, p. 101-102).

As far as questionnaire-based research in language teaching is concerned, McDonough and McDonough (1997) mentioned several examples; among which there is research about metacognitive strategies, i.e. it could be of a great significance for research about metacognitive strategies to opt for the questionnaire as a research tool. Thus, one of the research instruments used for this study is the questionnaire; more specifically a reflective questionnaire adapted from Stephen and Singh (2010).

Due to the great favor given by researchers to administering the questionnaire to a group of people in situ, the investigator chose to opt for this way. Indeed, this helps in giving the opportunity to the researcher to explain any ambiguities that may be faced by respondents when filling in the questionnaire.

The questionnaire was administered to students of the experimental group after they finished working on their first and fourth tasks cooperatively. Likewise, for the control group, it was administered to the students after they finished working on their

first and fourth tasks individually; which makes it at the end two times for each group, i.e. at the beginning and at the end of the training phase. This will be all deliberately explained later when talking about the training episodes (see section 2.5.4).

The reflective questionnaire adapted from Stephen and Singh (2010) is actually composed of 16 reflective questions distributed as follows:

- The first part was made for the sake of helping the students to plan and monitor. Thus, the planning part included one yes/no question and four open-ended questions. The monitoring part, on the other hand, included four yes/no questions and one open-ended question.
- The second part of questions, finally, centered on the idea of evaluating their own procedure of solving the task. It was composed of four yes/no questions and two open-ended questions.

It is important not to forget the factual questions, including name, sex and age, and which were kept at the end of the questionnaire. Respondents were informed that their names will be kept anonymous when analyzing and reporting the results; and that the aim of those factual questions is just to facilitate the analysis and the statistics part for the researcher.

It is acknowledged that asking people, who did not help in constructing the questionnaire, to read and say their opinion about the questionnaire can help in reducing any ambiguity that may exist among its items. Later, the researcher may move to asking some individuals, who are similar to the sample selected for the study, to answer the questions and provide their feedback about the questionnaire's length as well as the wording of items (Dawson, 2009). The investigator, then, made a try-out by asking two colleagues to read the questionnaire and give their opinion, and by distributing the questionnaire to 10 students that do not make a part of the selected sample population.

2.5.4. Describing the Research Journey: *Training Episodes*

In the present study, the training phase is with no doubt the longest and the most important phase. Since the pre-training test scores demonstrated each student's level of grammar competence and, as well, their weaknesses which need to be focused on by the teacher when preparing the lectures, the investigator could decide in advance what points have to be introduced, emphasized, or elaborated during the grammar lectures presented to students. The whole training phase included:

- ✓ Presenting cooperative learning to students of the experimental group.
- ✓ Teaching metacognitive strategies to students of both the experimental and the control group.
- ✓ Lectures about English Tenses for both groups, and
- ✓ Grammar tasks that should be accomplished cooperatively by students of the experimental group, and individually by students of the control group.

The investigator attempted to better select the content of lectures about the English tenses; so that they would be comprehensive and comprehensible for students. Also, the tasks were carefully chosen. On the other hand, she tried to implement cooperative learning effectively through respecting all the norms discussed in literature about cooperative learning. Thus, the training phase included 13 episodes for the experimental group, and 12 episodes for the control group since the investigator needed an additional session to introduce cooperative learning to students of the experimental group. The following is a detailed description of the training phase and the included episodes:

Training Phase		
Episode	Experimental Group	Control Group
1	Introducing Cooperative Learning	/
2	Teaching Metacognitive Strategies	Teaching Metacognitive Strategies
3	Teaching Metacognitive	Teaching Metacognitive

	Strategies	Strategies
4	The Pre-test	The Pre-test
5	Present Tenses	Present Tenses
6	1st Task + The Reflective Questionnaire	1st Task + The Reflective Questionnaire
7	Past Tenses	Past Tenses
8	2nd Task	2nd Task
9	Future Tenses	Future Tenses
10	3rd Task	3rd Task
11	Perfect Tenses	Perfect Tenses
12	4th Task + The Reflective Questionnaire	4th Task + The Reflective Questionnaire
13	Post Test	Post Test

Table 2.8: Episodes of the Training Phase for Both the Experimental and the Control Groups

- ✓ *First Episode:* Introducing Cooperative Learning

Due to the various learning strategies that students have, it is not an easy task to introduce cooperative learning to them. Some students may easily appreciate the idea of working with their peers in the same group; however, some others may not accept it as far as they are more familiar with the individualistic and the competitive approaches. Thus, the teacher tried to choose the right way to deliver aspects of cooperative learning to students; focusing on its positive academic, social and psychological outcomes. It is important not to forget that the investigator specified a great deal of the session in order to explain the five elements of cooperative learning as it represents a basic requirement to understand the difference between real cooperative groups and traditional team works which students used to witness before in other subjects with other teachers.

Related to the same idea, the teacher, felt the need to explain to students all the necessary information about how cooperative groups should be structured, including

aspects such as heterogeneity and group size. They were, then, asked to choose whom they want to work with in the cooperative group; however, the researcher informed them that some changes will occur in the structure of groups depending on the level of each student as far as this element can be a determinant factor in structuring heterogeneous groups. Although Johnson & Johnson (1987, p. 47) stated that **"… [The] best advice to beginning teachers is to start with pairs or threesomes"**, the investigator asked students to form groups that contain four participants just for the sake of not having a large number of groups. Indeed, this does no harm to any aspect of cooperative learning since it is also known that **"Cooperative learning groups tend to range in size from two to six"** (Johnson & Johnson, 1987, p. 46).

- ✓ *Second and Third Episodes:* Teaching Metacognitive Strategies

It seemed that metacognitive strategies are somehow a long and an important issue that cannot be covered in just one session. That is why the researcher specified two sessions to deliberately talk about the metacognitive strategies to students. In this sense, it was highlighted that **"…students can enhance their learning by becoming aware of their own thinking as they read, write, and solve problems. Teachers can directly promote this awareness by informing students about effective problem-solving strategies and discussing cognitive and motivational characteristics of thinking"** (Paris and Winograd, 1990, p.7).

The teacher divided the content over two sessions and explained it following two steps. The first session was basically specified for defining the concepts of cognition, and metacognition, as well as metacognitive knowledge, experiences, tasks, strategies, and skills. Then, the second session was made to talk only about the metacognitive strategies following the order below:

1. Identifying the State of knowledge:

The teacher made sure to explain to students that if they want to succeed in their tasks, they should think first of the knowledge they have about the topic of the task as well as to identify their weaknesses in order to work on them and develop them.

2. Planning:

The researcher advised the students that planning their own learning facilitates the process for them. Thus, they should decide in advance the time, the materials, and the strategies that they need to use in order to solve a certain task.

3. Conscious Decisions:

Students have been told that they should wisely and critically think about their decisions since they affect later the way they progress with any learning task.

4. Setting Goals:

It was also important for students to consider what learning goals they have already achieved and what other goals they still need to consider.

5. Evaluation:

In relation to planning, students have been informed that it is of a great value to evaluate themselves in terms of what they have already planned, i.e. the time spent, the strategies selected and so on.

6. Identifying the Difficulty:

The teacher tried to convince the students that negative talk does harm more than good. Thus, identifying their difficulties should be treated in a different positive manner; which leads to trying to strengthen their weaknesses rather than only talking about them.

7. Problem Solving:

To solve problems, students should be creative, because no learning situation is typically similar to another one. This is what the teacher focused on when dealing with problem solving as a metacognitive strategy in addition to the characteristics of successful problem solvers.

8. Thinking Aloud:

As far as problem solving is concerned, thinking aloud might be a good strategy since it helps students to reflect more about their problems and the strategies that might be used to solve them.

9. Modeling:

The investigator, deliberately, talked about this important issue to the students. Effective teachers are the ones who make their decisions and difficulties clear to students, and effective students are the ones who adopt their teachers' deeds as a model that would help them to better proceed in their learning process.

- ✓ *Fourth Episode:* The Learners' Pre-test

As explained previously (see section 2.5.2.1), the pre-test lasted for one hour and a half and it basically included four activities about the English tenses. The first activity tackled the present tenses in which students were asked to complete the given paragraphs with one set of verbs, using the present simple or the present continuous. Similarly, the second activity was about the use of either the past simple or the past continuous. Then, the following activity turned around the idea of choosing the right form of the future tense. Finally, the last activity was about the shift from the use of the simple to the perfect tenses.

- ✓ *Fifth Episode:* Teaching the Present tenses

This session was indeed devoted to teach the lecture of the present tenses. Time was spent to explain the form of 'The Present simple' and 'The Present Continuous' to students. The teacher, then, tried to summarize the main cases in which both tenses are used and highlighted the main contrasts between them. The teacher started, gradually, to involve students in the discussion because they have been already introduced to these tenses before, i.e. they have some background knowledge about them. Later, it was indispensible to highlight also 'state' and 'dynamic' verbs which seemed to be one ideal example about the difference in use of both tenses.

✓ *Sixth Episode:* The First Task and the Reflective Questionnaire

This session started first by the teacher moving around the class and advising students of the experimental group to sit in a way that enables them to work easily in cooperative groups; by having access to each other in the group as far as it facilitates discussions and accomplishment of the given task. Moreover, the teacher would be also able to intervene whenever her help is needed for the sake of solving a conflict or providing a sort of assistance to students to complete the task. In this sense, Johnson and Johnson added **"Teachers should not intervene any more than is absolutely necessary in the group"** (1987, p. 58). So basically, in the practical sessions, the teacher focused on engaging students of the experimental group in the real cooperative learning process (Sessions six, eight, ten, and twelve). On the other hand, students of the control group were given the task to solve the grammar activities without any engagement in any teaching method except working individually.

This task included two activities. The first one asked the students to choose the correct form of the verb for a better mastery of the present simple and the present continuous. The second, however, introduced three conversations to students and they were asked to conjugate the verbs between brackets in each conversation (see appendix 2). For both the experimental and the control groups, the session was divided into three main parts; the first part was the longest in which students worked on the assigned grammar activities. The second part was devoted for a classroom discussion to correct together the activities of the given task. At the end, the teacher specified some minutes to the students in order to answer the reflective questionnaire (see appendix 6) which is going to be analyzed later in the third chapter of this work.

✓ *Seventh Episode:* Teaching the Past Tenses

In this session, the researcher focused on teaching the past tenses to students. She explained the forms of both 'The Past simple' and 'The Past Continuous' to students as well as the main cases in which both tenses are used. After that, the teacher moved to highlight the major uses of 'used to', 'would', and the 'unfulfilled past events'; for a better comprehension.

Eighth Episode: Second Task

Students of the experimental group worked in formal cooperative groups since they were placed again with the same members, and asked to focus on the five basic elements of cooperative learning. Students of the control group, however, were asked to work individually to accomplish the task. Both groups were given almost one hour to answer the questions and the last 30 minutes were assigned for a classroom discussion, where students provided the teacher with their opinions and answers, in order to correct the activities. This task included two activities; the first one took the form of a paragraph that includes wrong verbs and students were asked to correct the mistakes in the use of tenses. The second activity provides multiple choices instead and students were asked to fill in the gaps using the right form. Indeed, both activities tackled basically the past simple and the past continuous tenses (see appendix 3).

- ✓ *Ninth Episode:* Teaching the Future Tenses

In this session, the teacher treated basically the future tenses with both groups. She started first by providing students with the main forms, and then moving to the rules to better use the 'will', the 'going to', and 'the future continuous' forms.

- ✓ *Tenth Episode:* Third Task

The session specified for the third task is really similar to the one specified for the second task in almost everything; except the content. Students worked this time to solve activities about the future tense. The task included, similarly, two activities. The first one turned around the idea of matching sentences to get a full meaning and the verbs used were conjugated in either the future simple or the future continuous tenses. However, the second one asked the students to fill in the gaps with the correct form of 'be going to' using the verb provided between brackets to show future actions. After completing the task, the teacher and the students corrected all together the activities (see appendix 4).

✓ *Eleventh Episode:* Teaching the Perfect Tenses

The investigator explained to students the main rules that indicate the use of:

- The present perfect Vs the present perfect continuous.
- The past perfect Vs the past perfect continuous.
- The future perfect Vs the future perfect continuous.

Additionally, the teacher also highlighted the main differences in use between the present perfect and the past simple which is considered a very important part of the English tenses. The main time expressions were also deliberately explained including 'since', 'for', 'never', 'all my life' and so on.

✓ *Twelfth Episode:* Fourth Task and the Reflective Questionnaire

Students of the experimental group worked in formal cooperative groups with the same peers and students of the control group worked individually to solve activities about the perfect tenses. Indeed, this practical session is the last one before asking students to sit for a post-test. Similar to the previous tasks, this one also included two activities. The first one asked the students to choose an answer for the provided questions without forgetting to conjugate the verbs either in the present perfect or the present perfect continuous. The second activity, on the other hand, took the form of a text and students were supposed to fill in the gaps using the list of the suggested verbs and conjugating them either in the past perfect or the past perfect continuous. Similar to the sixth session, the students were given some time at the end of the session in order to answer the reflective questionnaire (see appendix 6) which is going to be used later in the third chapter of this work for analysis and comparison.

It seems to be important to mention at this level that the four practical sessions in which students accomplished grammar tasks are similar to each other in terms of length, the way of working in cooperative groups for students of the experimental group and individually for students of the control group, as well as the way of discussing the assigned tasks in order to correct the activities. However, they differ in

the content of the activities, i.e. present tenses, past tenses, future tenses, and perfect tenses.

- ✓ *Thirteenth Episode:* The Learners' Post-test

As mentioned earlier in this chapter (see section 2.5.2.2), the aim behind making students sit for a post-test is to check their progress towards the understanding and the appropriate use of the English tenses, and how beneficial it was to work in cooperative groups using metacognitive strategies. It is clearly known now that the pre-training test and the post-training test should be similar to each other in terms of content and difficulty. Accordingly, the post-test lasted also for one hour and a half and it included four activities about the English tenses. The first activity was about the present tenses in which students were given multiple choice questions and asked to choose the correct conjugated verb. The second activity, on the other hand, took the form of a story that students should complete by conjugating the verbs between brackets either in the past simple or the past continuous. As far as the future tenses are concerned, the third activity was about the use of the future simple and the future continuous. Finally, the last activity was about completing each paragraph with one set of the verbs and conjugating them using either the present perfect or the past simple (see appendix 7).

2.6. Conclusion

This chapter started with a brief description for the setting where this research was conducted, i.e., the department of English at the University Center Ahmed Salhi, Naama. Then, the researcher moved to highlight the main aspects related to the research participants including the sampling technique as well as their profile. Additionally, the research instruments selected for this study were also given so much attention since the researcher tried to provide an account of those instruments; highlighting basically their definitions, their importance in research methodology, the way of designing the learners' interview, both their pre-training and post-training tests, and their reflective questionnaire.

It is important not to forget that this research aims at checking the students' grammar competence enhancement through engaging them in a cooperative learning experience in parallel to working with their peers with the metacognitive strategies. Accordingly, this research is a nonequivalent groups pretest-posttest quasi experimental one, and the researcher gave a deliberate explanation of this type of research in this chapter. Then, she dealt with a comprehensive description for the training phase with its major stages and sessions. The next chapter is precisely made for the sake of analyzing the data gathered through the previously mentioned research tools, to either confirm or disprove the research hypotheses. Significantly, if the post-training test scores demonstrate an improvement, the researcher, then, can infer that the training was successful and that the method used in teaching the English grammar content to students of the experimental group was appropriate.

CHAPTER THREE

Research Findings: Analysis and Discussion

3.1. Introduction

The content of this chapter is entirely different from the previous ones; since it deals with almost all the issues that basically have a relationship with reporting and analyzing the data gathered. Almost all researchers acknowledge the fact that the chapter of data analysis, in any dissertation or thesis, is a very important one, since it represents a building block for a good research. It is, indeed, the one on which the researcher relies in order to determine final results, draw conclusions, and provide recommendations. Accordingly, the chapter introduces to the reader the basic issues related to data analysis including the data gathered through the previously mentioned research instruments as well as the way opted for in order to analyze and interpret the data.

It is quite important at this level to mention that the researcher opted for both a quantitative and a qualitative data analysis. She relied on the use of some graphic representations in order to clearly talk about the learners' pre and post-test scores; considering essentially some significant quantitative data analysis procedures, as well as the students' achievement in each separate given task. Additionally, items of both the reflective questionnaire and the learners' interview were analyzed separately for a better understanding of the students' progress in using metacognitive strategies and their attitudes towards the cooperative experience. Finally, the researcher also attempted to interpret the data in order to confirm or disconfirm the previously given research hypotheses.

3.2. Quantitative and Qualitative Data Analysis: *An Account*

When talking about quantitative and qualitative research, it seems to be highly recommended to mention the fact that quantitative data are regarded to be easy to collect, easy to analyze, and useful for making generalizations. This is, indeed, due to the fact that the central idea of analyzing data quantitatively is the use of numbers. It is common knowledge that this easiness and usefulness come from the ability to analyze quantitative data using statistical computer software. Thus, it is fair to say that quantitative analysis provides data that is clear and straight, more than does qualitative

analysis; thanks to the procedures used that are universally known, and to the computer which helps in a noticeable manner in completing the analysis. Based on the results obtained after the completion of the analysis, one **"…can answer the research questions and accept or reject the research hypotheses"** (Dornyei, 2007, p. 197). However, there are still some limitations of the quantitative research; being mainly unable to uncover the reasons behind the studied phenomenon.

Qualitative research, on the other hand, is not an easy topic to discuss as far as **"It has no theory or paradigm that is distinctly its own…Nor does [it] have a distinct set of methods or practices that are entirely its own"** (as cited in Dornyei, 2007, p. 35). Researchers could only identify some elements that purely characterize the qualitative research, including the data that is primarily gathered based on personal experiences and viewpoints; which in turn give the investigator more opportunities to have a kind of rich data and to better understand the whole research situation.

However, it received so much criticism for:

- Being easy to be influenced by the researcher's own viewpoints, and
- How tiring and time consuming is the process of collecting and analyzing such a data (Dornyei, 2007).

The third available type, as explained in the second chapter of this work, is referred to as 'mixed methods research'. It was defined by Dornyei as: **"…some sort of a combination of qualitative and quantitative methods within a single research project…Furthermore, qualitative and quantitative principles can also be combined at the data analysis stage by 'quantifying' or 'qualitizing' the data."** (2007, p. 45). Considerably, words give deeper meanings to numbers, and numbers give more specification to words, which can all provide valid research findings at the end.

Quantitative Analysis

It is known that when it comes to quantitative data, researchers should **"…analyse it using a set of mathematical procedures"** (Dornyei, 2007, p. 197).

Indeed, mathematical procedures range from simple to more complex ones; depending on the number of groups and variables that the researcher is intending to study and analyze. Before, mathematical procedures for data analysis were simply and manually done. However, **"Nowadays the mathematical aspects of quantitative data analysis are largely left to the computer, and several statistical programs have been developed to direct the computer's work"** (Dornyei, 2007, p. 197).

If researchers seek to analyze the data quantitatively using statistical procedures, they need first to prepare the data for analysis. On this issue, Brown (2001) mentioned that **"…having collected the data is half the battle…"** (as cited in Dornyei, 2007, p. 198). Thus the researcher needs first to code the data. Coding the data only means to transform the information or responses that he/she has into numbers to facilitate the analysis process. In this case, **"With numerical variables, such as test scores, the coding is simple because the value range of the variable will be the same as the possible scores for the test".** (Dornyei, 2007, p. 199). The second step is actually referred to as inputting the data which means that the researcher should create a computer file and define his/her codes for the variables; so it can be all ready for later easy analysis.

In fact, quantitative data can be distinguished under three categories: 'nominal' (or categorical) which concerns data that have no numerical values like gender and race. 'Ordinal' data that is the one which is resulted from ranked questions. The last category is 'Interval' data, which is the most precise one. It is in the form of values rather than variables like test scores. The type of quantitative data that the researcher has should be clearly specified because, in turn, it is the one that specifies which type of statistical procedure to be selected for the data analysis (Dornyei, 2007).

The researcher needs to identify which statistical procedures he/she opts for in order to analyze the data. At this point, it seems of a great significance to start first talking about descriptive statistics. Dornyei (2007) defined them as being "**…used to summarize sets of numerical data in order to conserve time and space"** (p. 209). Descriptive statistics are classified under two main categories: measures of central tendency and measures of variability. Measures of central tendency, on one hand, are:

- ❖ The mean: this is the most commonly used measure and it describes the average of the scores.
- ❖ The median: this is generally defined as the middle score in a set of scores.
- ❖ The mode: it is the most frequently repeated score.

On the other hand, measures of variability are:

- ❖ The range: it can be calculated considering the difference between the lowest and the highest scores.
- ❖ The variance (and the standard deviation which is its square root): they are calculated for the sake of checking how far the scores are from the mean.

In fact, high values of the variance and the standard deviation mean that the group is heterogeneous thanks to scores that are far from the mean on both extremes. Whereas, low values of the variance and the standard deviation mean totally the opposite, i.e. a homogeneous group considering scores that are close to the mean. It is said that the most frequently used measures in educational and applied linguistics research are: the mean (M), the standard deviation (SD) and the number of respondents (n); though the mean **"…has a disadvantage, namely that extreme scores skew it considerably"** (Dornyei, 2007, p. 214). All these measures are most of the time summarized in tables (Dornyei, 2007).

Descriptive statistics do not represent the only issue that researchers should understand when dealing with quantitative data analysis. However, equal attention should be given to inferential statistics because descriptive statistics **"…do not allow drawing any general conclusions that would go beyond the sample"** (Dornyei, 2007, p. 209). They are, in fact, inferential statistics which serve this mission. **"Broadly speaking, inferential statistics are the same as descriptive statistics except that the computer also tests whether the results that we observed in our sample are powerful enough to generalize to the whole population"** (Dornyei, 2007, p. 209). Accordingly, the aim of inferential statistics is to test the 'statistical significance'. Results, then, should be significant, to make the researcher able to draw generalizations and to exclude the idea that the results obtained might be due to

coincidence. To measure significance, the researcher needs to calculate what is known in the field as the probability coefficient (p) "**…which can range from o to +1"** (Dornyei, 2007, p. 209). Regarding this fact, researchers say that results can be determined significant if $p < 0.05$.

In fact, researchers have at their disposal numerous options and procedures to compare groups because "**Comparing various groups of people is the most common statistical procedure in applied linguistic research"** (Dornyei, 2007, p.215). However the number of groups that the researcher wishes to compare is the one which determines which procedure to opt for, for example the 't-test' is best applied with two groups and 'ANOVA' is best appropriate for more than two groups. Thus, it is fair to say that the 't-test' is helpful when the researcher seeks to determine that there is some sort of noticeable difference between two sets of scores.

In the literature about research methodology, there is a distinction made between two types of t-tests. The first one is referred to as independent samples t-tests which is related to comparing two sets of results obtained from two different groups of respondents. The second one referred to as paired samples t-tests, however, concerns comparing two sets of results or scores that are basically obtained from respondents of the same group. The common point between these two types of t-tests is that **"Both types are similar in that we test whether the difference between two sets of scores is big enough to reach statistical significance"** (Dornyei, 2007, p. 215).

Another aspect to be added is what researchers call the 'eta squared' which is an effect size indicator for independent samples t-tests. It can be calculated using the following formula:

$$\frac{t^2}{t^2+(N\ 1+N\ 2\ -2)}$$

The eta squared can be interpreted using the following rules: 0,01 = small effect; 0,06 = moderate effect; and 0,14 = large effect.

In the present chapter, the investigator will be analyzing the gathered data considering the following procedure:

1. Identifying the pre-test and the post-test scores of both the experimental and the control groups.
2. Calculating the descriptive statistics, i.e. measures of central tendency and measures of variability for both groups.
3. Compare both groups using the t-test procedure to determine the statistical significance of the results.

Qualitative Analysis

Qualitative data analysis does not seem to be an easy task. This is what has been stated by Dornyei (2007, p. 243): **"Thousands of pages have been written about the main principles of qualitative data analysis, which reflects the complexity of the question".** To better summarize the characteristics of qualitative data analysis, it is appropriate to highlight the following points:

1. Qualitative data analysis is precisely free from the use of any quantitative or statistical procedures.
2. Researchers when analyzing the data qualitatively try to extract the hidden meaning from such a data.
3. This type of data analysis is considered as a language-based analysis, i.e. the analysis of the data is done basically with words. Dornyei stated that **"… qualitative data analysis is inherently a *language-based* analysis"** (2007, p. 243).
4. Researchers argued that the investigator can analyze the qualitative data simultaneously as the research progresses (Dawson, 2009).
5. Qualitative data analysis concerns the fact of being an iterative process. This means that, opposed to quantitative data analysis, qualitative data analysis does not follow a one pre-determined linear process. However, **"…we move back and forth between data collection, data analysis and data interpretation depending on the emergent results"** (Dornyei, 2007, p. 243).

Thus, researchers in the field advise novice investigators not to collect too much qualitative data as this can distract them from deeply analyzing the existing data.

If researchers seek to analyze qualitative data, they need first to transform the recordings into texts. At the beginning, qualitative data may seem to be in a mass. The investigator, then, is required to make the existing information taken from the respondents in a considerable order, to better facilitate the process of analysis.

As far as the mixed methods approach is concerned, some researchers argue that quantitative and qualitative data should be analyzed separately, and that mixing them can appear only at the data interpretation phase. On this matter, Dornyei added, **"…in many cases it may be better to keep the analyses separate and only mix the QUAL and QUAN results at a late stage to illuminate or corroborate each other"** (Dornyei, 2007, p. 268). Only after analyzing the data, the researcher can move to the following step which is data interpretation, in order to confirm or disconfirm the already set hypotheses. Accordingly, McDonough and McDonough (1997, p. 151) stated that: **"Having established whether a result is significant, the researcher has to go back to the design and purpose of the research to decide what the result actually means"**. In the following sections of this chapter, the researcher will be dealing with the analysis of the gathered data, mainly the students' pre and post-tests scores, the reflective questionnaire, and then the students' interview, and which will be all accompanied with data interpretation.

3.3. Results of the Learners' Pre-test

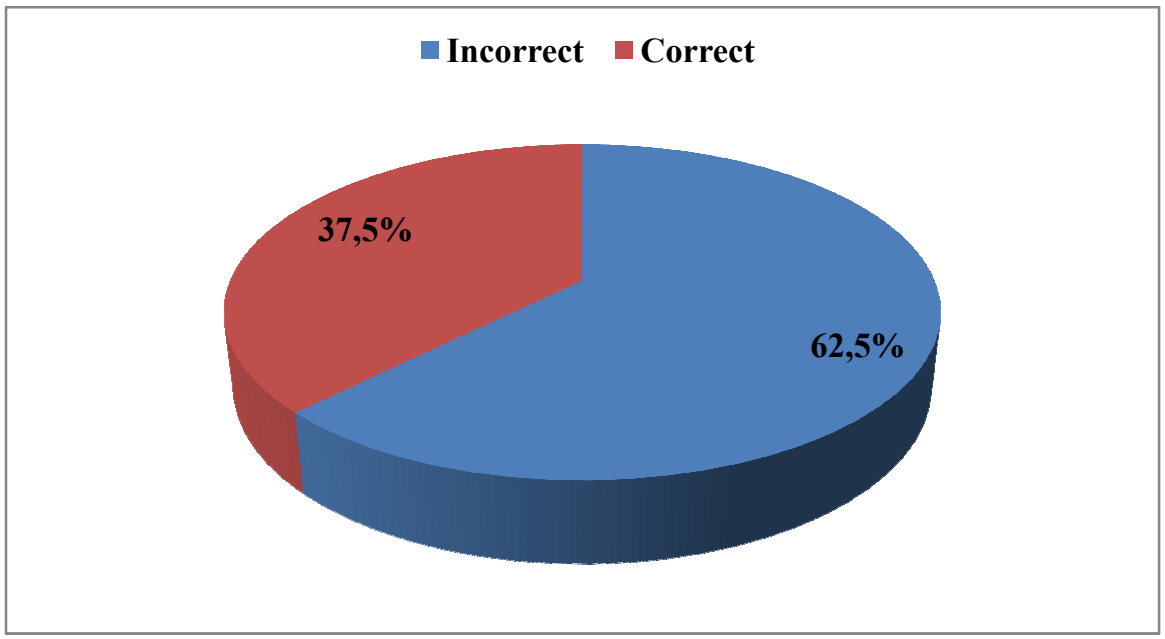
As it was previously mentioned, tests are useful when the researcher aims at collecting data about knowledge of the language (Selinger and Shohamy, 1989). Accordingly, the central aims of this pre-test were:

- ✓ To check the students' current knowledge about the English tenses.
- ✓ To better identify their needs; which will be of a great importance in selecting the appropriate content of the lectures of the training phase.
- ✓ To better assign students to cooperative groups considering the fact that they should be heterogeneous, and
- ✓ Use the scores for later analysis.

It is important to reiterate that this test is not commercially available and was created by the researcher herself. It is, indeed, a criterion-referenced one, which was made for the sake of checking whether students of both the experimental and the control groups can meet certain criteria; namely the right choice of the tense, and the right form of the conjugated verb.

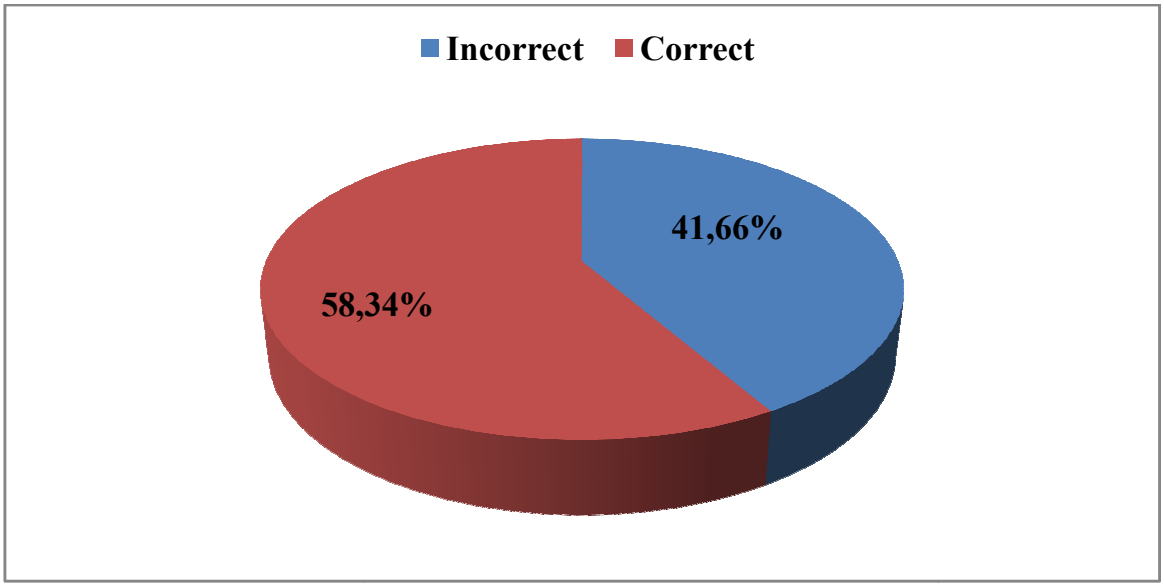
3.3.1. The Experimental Group

Related to the idea of meeting the needed criteria, and starting with students of the experimental group, the researcher noticed that fifteen students, representing 62.5% of the group, have mistaken at least once, when it comes to the selection of the appropriate tense. Some students still feel confused to choose either the present simple or the present continuous; others have problems with the past tenses, but most of the mistakes have been done in relation to the future simple and the future perfect as well as the present perfect Vs the past simple, i.e. the third and the fourth activities. The following pie-chart shows better the results:



Pie-Chart 3.1: Students' Choice of the Correct Tense in the Pre-test

As far as the second criterion is concerned, most of the students' mistakes turned around the 's' of the third person singular, the past simple of irregular verbs, and the past participle of irregular verbs when it concerns the present perfect form. The researcher found that ten students from the experimental group, representing 41.66 % of the students, have mistaken at least once, when providing the right forms of the conjugated verbs. The following pie-chart illustrates the results:

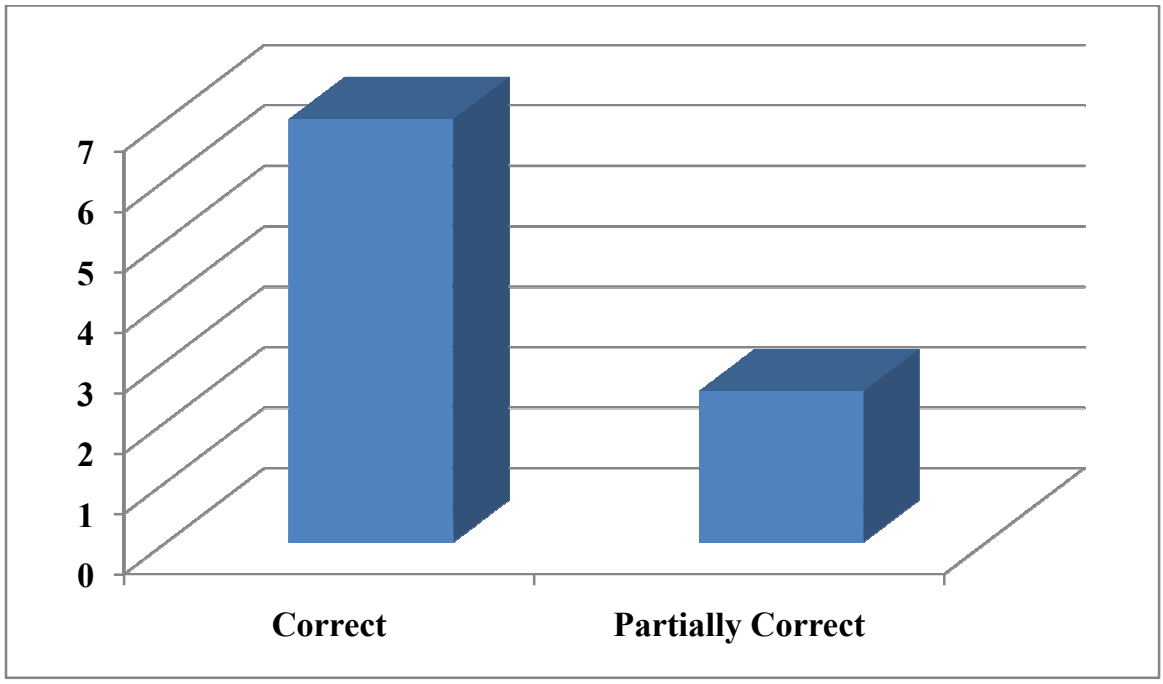


Pie-Chart 3.2: Students' Production of the Verbs' Forms in the Pre-test

The researcher decided to deeply analyze the students' performance in each activity of the pre-test. The aim behind this operation is to identify the students' weaknesses and to compare the results later with the post-test performance, in order to determine the effectiveness of the method applied to the experimental group, i.e. working with metacognitive strategies in cooperative groups.

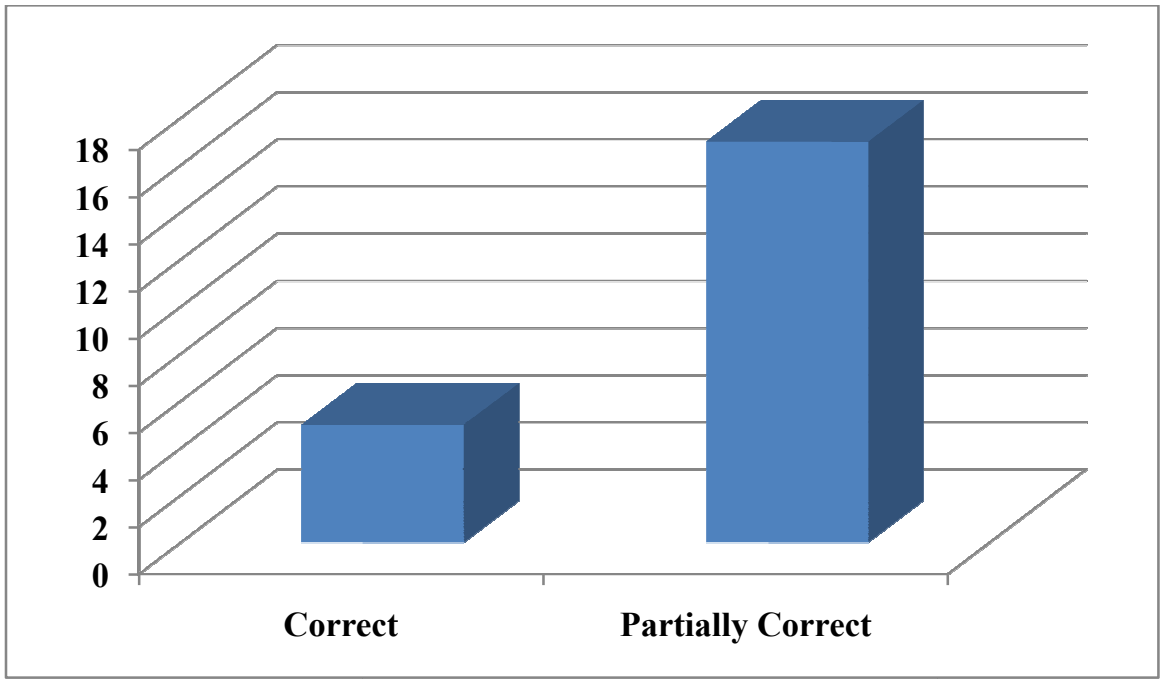
Starting with the first activity, students were asked to complete each paragraph with one of the given sets of verbs without forgetting to conjugate them first either in the present simple or the present continuous tense. This activity was chosen in order to examine the extent to which students are skillful in distinguishing between the main uses of the present simple and the present continuous tenses. Accordingly, the students' responses to this activity unveiled the fact that these students need a careful explanation of these differences during the training phase; since only seven of them

answered correctly all the items introduced in the activity. On the other hand, the rest of the students could partially answer the items. The following bar-graph better clarifies the results:



Bar-graph 3.1: Students' Responses to the First Activity of the Pre-test

Likewise, the second activity required students to choose one set of verbs to complete the given sentences, however, this time through conjugating the verbs either in the past simple or the past continuous. Although students have been introduced to the English tenses several times during the high school and also during their first year at University, and though the second activity pretty much resembles the first one, students demonstrated that they still face difficulties both in choosing the appropriate verb and the appropriate tense that better suits the meaning of each sentence. Only five students could answer the whole fourteen items correctly, however, the remaining students had at least four mistakes. The following bar-graph clarifies their responses to the second activity:



Bar-graph 3.2: Students' Responses to the Second Activity of the Pre-test

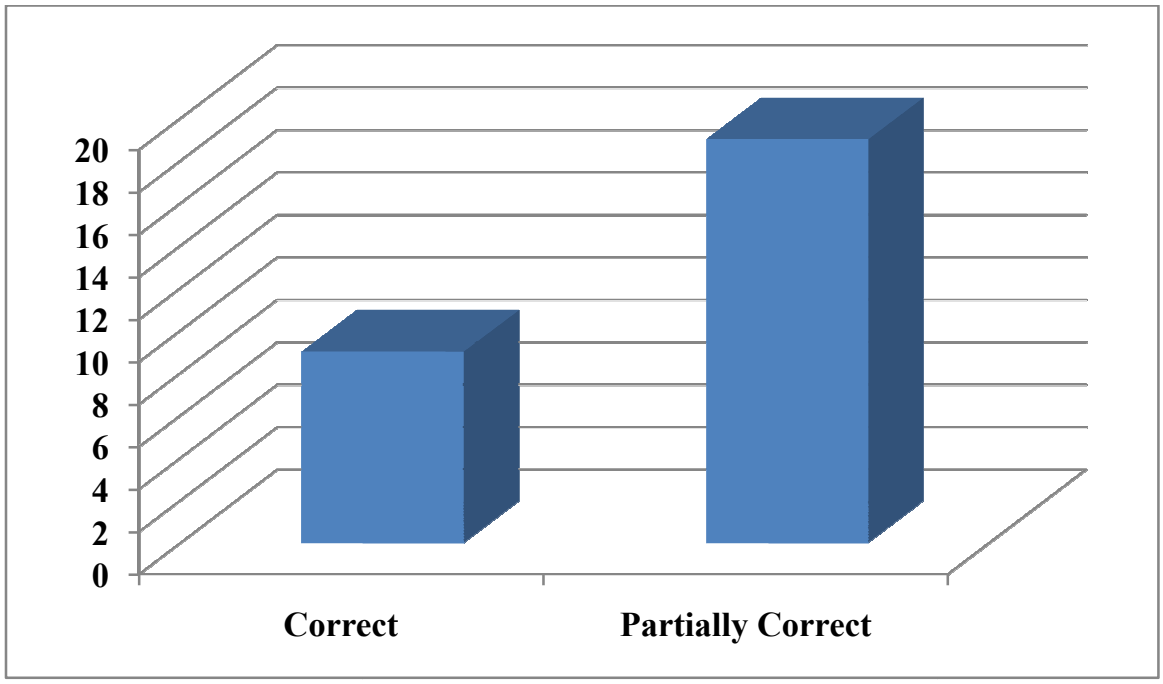
As far as the third activity is concerned, students were asked to match the sentences (1-4) with their appropriate endings (a-d), and to also fill in the gaps with *will*, *will be*, or *will have been*. Fortunately, all the students could choose the right sentence that better suits the meaning. However, not all of them could correctly choose the right future form to fill in the gaps. The table below demonstrated their achievement:

N° of Students	Mistaken Items
6	0
7	3
3	4
6	5
2	8

Table 3.1: Students' Mistaken Items of the Third Activity in the Pre-test

Regarding the last activity which was basically turning around the idea of differentiating between the use of the present perfect and the past simple, some sentences were given to students to fill in the gaps with one of the provided verbs, and then conjugate them choosing the right tense, i.e. the past simple or the present perfect.

The fully correct activity answer was provided by only 9 students; however, the rest of the students provided mistakes both at the level of choosing the verb and the tense. The following bar-graph clarifies the results obtained:



Bar-graph 3.3: Students' Responses to the Fourth Activity of the Pre-test

As it was highlighted before in sections 2.5.2.1 and 2.5.4, this learners' pre-test is composed of four activities. When correcting the learners' responses, the teacher assigned 0.25 point for each correct item; however, some answers like choosing the right set of verbs (activity 1 and 2) and matching the sentences (activity 3) were given half a point instead. Thus, the students' possible scores are supposed to range from 0 to 20 points. The following table, then, demonstrates the pre-test scores achieved by students of the experimental group:

Students	Pre-test Scores
S 1	03.5
S 2	07
S 3	07
S 4	12.5
S 5	06
S 6	09
S 7	10
S 8	08
S 9	11.25
S 10	12

S 11	16.5
S 12	08
S 13	11
S 14	14
S 15	13.25
S 16	16
S 17	15
S 18	12.25
S 19	10
S 20	09.5
S 21	09.75
S 22	11
S 23	14
S 24	17

Table 3.2: Learners' Pre-training Test Scores

In order to analyze the data which are summarized in the table above, and which were gathered from the learners' pre-training test, the researcher opted first for the use of the descriptive statistics. The table below shows the measures used:

- The Mean: It means the average of the scores.
- The Variance: It is the average of the squared differences from the mean.
- The Standard Deviation: It is the square root of the variance.

Measures of Central Tendency	**Measures of Variability**	
Mean	**Variance**	**S.D**
10.97	11.51	3.39

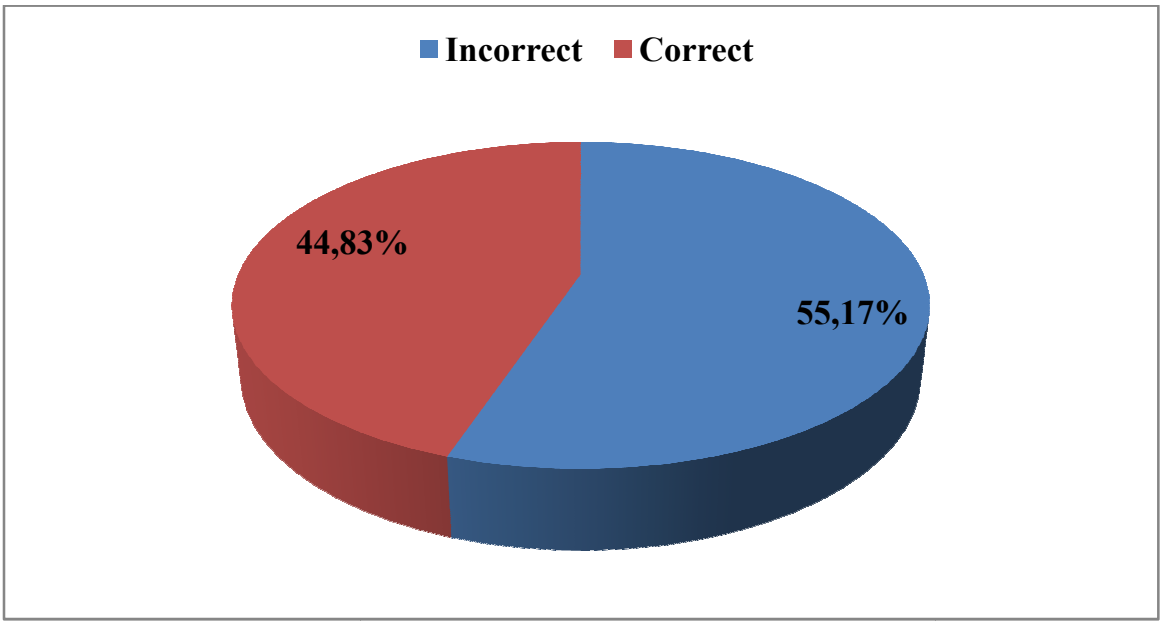
Table 3.3: Summary of the Learners' Pre-training Test Scores

The table above shows that the mean of the group scores was 10.97; which indicates that the students' achievement in the pre-test was low, considering the fact that the highest score should be 20.

3.3.2. The Control Group

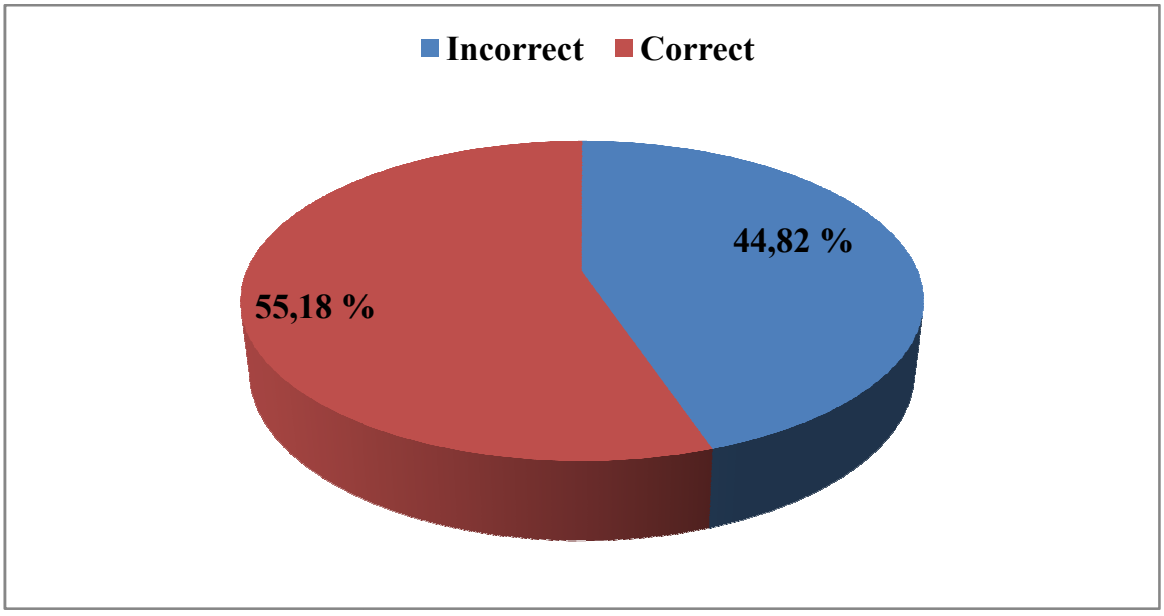
Similar to the case of the experimental group, students of the control group still face considerable difficulties when it comes to the selection of the appropriate tense. Most mistakes committed by students of the control group have a relation with the two last activities of the test. However, in this group only 55.17% have mistaken at least

once when choosing the appropriate tense to be used, i.e. 16 students out of 29. The following pie-chart shows the results:



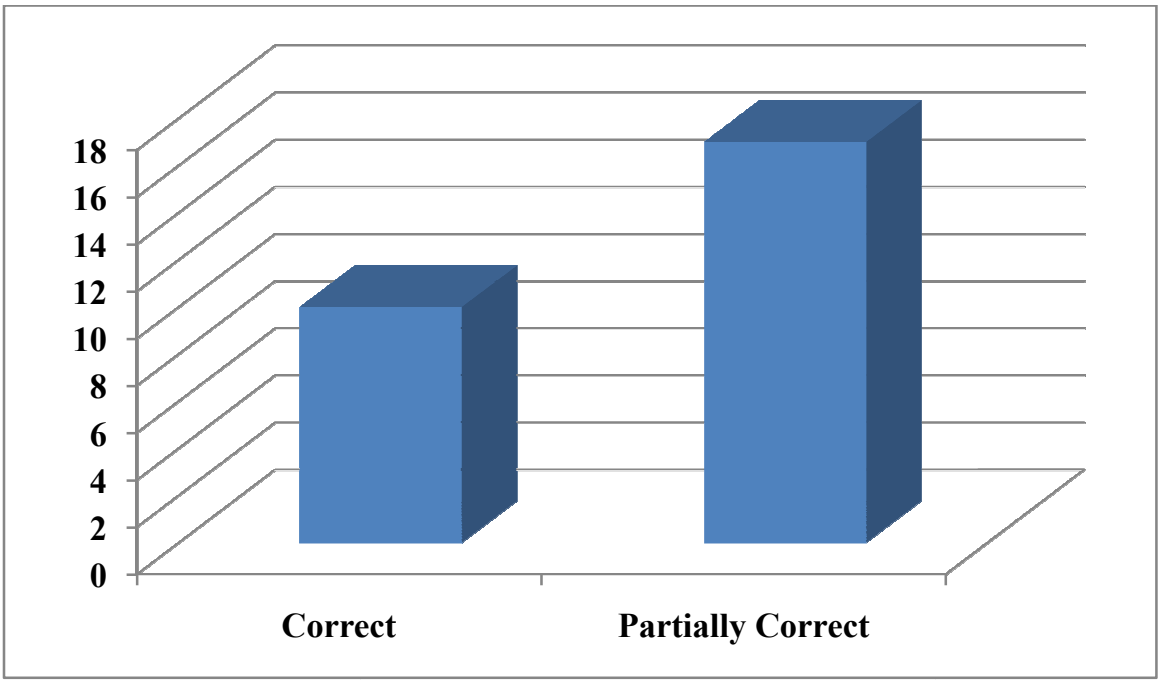
Pie-Chart 3.3: Students' Choice of the Correct Tense in the Pre-test

However, from the control group, the researcher counted thirteen members, representing 44.82 % of the students, who provided at least one mistake regarding the second criterion, i.e. the production of the right form of the verb. The results are clearly shown through the following pie-chart:



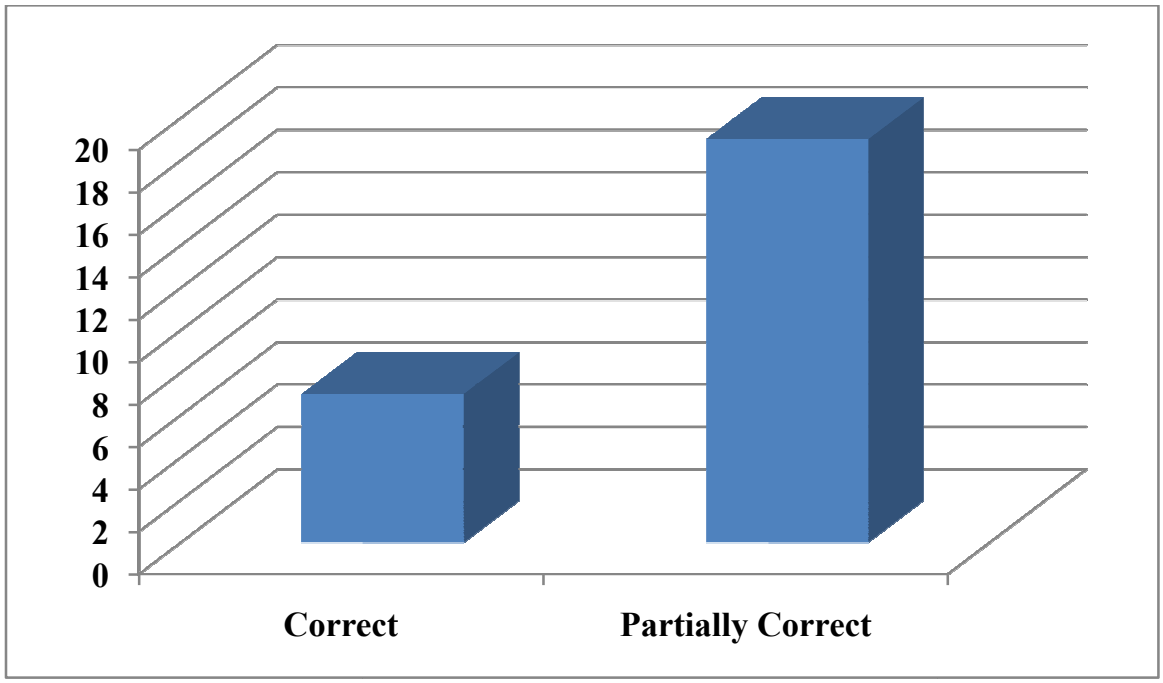
Pie-Chart 3.4: Students' Production of the Verbs' Forms in the Pre-test

In a similar vein, the researcher also analyzed each activity of the control group students' pre-test separately. This process aims basically at determining the control group students' current level and to compare the results later with the post-test. The students' performance in the first activity, which was namely about the present tenses, showed that most of the group students have difficulties in distinguishing the uses of the present simple and the present continuous. In fact only ten students, representing 34.48 % of the group, answered correctly all the items of the first activity. The bar-graph below better summarizes the results:



Bar-graph 3.4: Students' Responses to the First Activity of the Pre-test

As explained previously, the second activity is quite similar to the first one in terms of choosing one of the given sets of verbs to complete the sentences. The only difference is that this one tackled the uses of the past simple and the past continuous. Students of the control group demonstrated that they also have considerable difficulties both in choosing the appropriate verb and the appropriate tense that better suits the meaning of each sentence. Only seven of them provided fully correct answers, however, the remaining students' answers were partially correct. The following bar-graph demonstrates the obtained results:



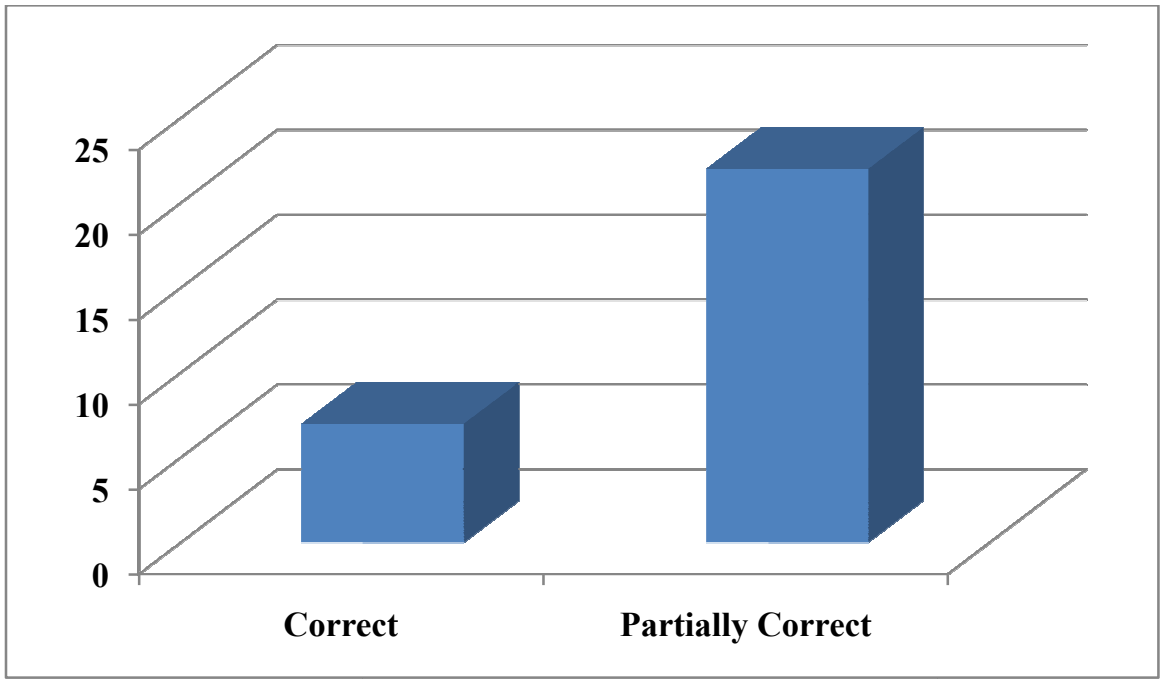
Bar-graph 3.5: Students' Responses to the Second Activity of the Pre-test

Regarding the third activity, and opposed to the experimental group, two students could not match all the sentences correctly, i.e. they could not choose the right sentence that better suits the meaning. Also, not all of the students could correctly fill in the gaps with the appropriate future form. The table below summarizes their mistaken items:

N° of Students	Mistaken Items
5	0
5	3
6	4
8	5
1	6
4	8

Table 3.4: Students' Mistaken Items of the Third Activity in the Pre-test

For the last activity, the researcher wanted to test the students' knowledge about the difference in use between the present perfect and the past simple. Only 7 students could provide a correct answer for the whole activity. The others, on the other hand, provided partially correct answers. The following bar-graph shows the results:



Bar-graph 3.6: Students' Responses to the Fourth Activity of the Pre-test

The researcher followed exactly the same way, as with the experimental group, in order to correct the activities for learners of the control group. The table below, then, demonstrates their pre-test scores:

Students	Pre-test Scores
S 1	06
S 2	07
S 3	04.5
S 4	12
S 5	07
S 6	09
S 7	08
S 8	10.5
S 9	11
S 10	10
S 11	14.5
S 12	09
S 13	09
S 14	11
S 15	15.25
S 16	10
S 17	12
S 18	14.25
S 19	09
S 20	11.75
S 21	11.75
S 22	13
S 23	10

S 24	16
S 25	11
S 26	09
S 27	12.5
S 28	08
S 29	10.5

Table 3.5: Learners' Pre-training Test Scores

In order analyze the data gathered from the control group students' pre-test; the researcher also used the descriptive statistics. The table below summarizes them:

Measures of Central Tendency	**Measures of Variability**	
Mean	**Variance**	**S.D**
10.43	7,12	2.66

Table 3.6: Summary of the Learners' Pre-training Test Scores

As the table above shows, the mean of the group scores was 10.43; which means that the students' performance in the pre-test was low, compared to the highest score possible, i.e. 20.

Data Interpretation

The researcher opted for an analysis of the pre-test results considering two main steps. First, an analysis of the two criteria was provided. Then, the researcher moved to a deeper analysis of each separate activity. The results obtained demonstrated how difficult it is, for students, to provide fully correct answers, though they have been exposed to English tenses deliberately during high school and their first year at University. The mistakes noticed concern basically mere issues such as forms of conjugated verbs, past simple and past participle of irregular verbs, as well as spelling.

The obtained scores from the students' pre-test significantly helped the researcher in building a full image about the level of the students. This, in turn, helped very much in:

- ✓ Constructing heterogeneous cooperative groups in the experimental group.
- ✓ Selecting appropriate content for the training phase depending on the students' needs analysis, and

✓ Using the data for later comparison with the post-test scores.

3.4. Results of the Learners' Post-test

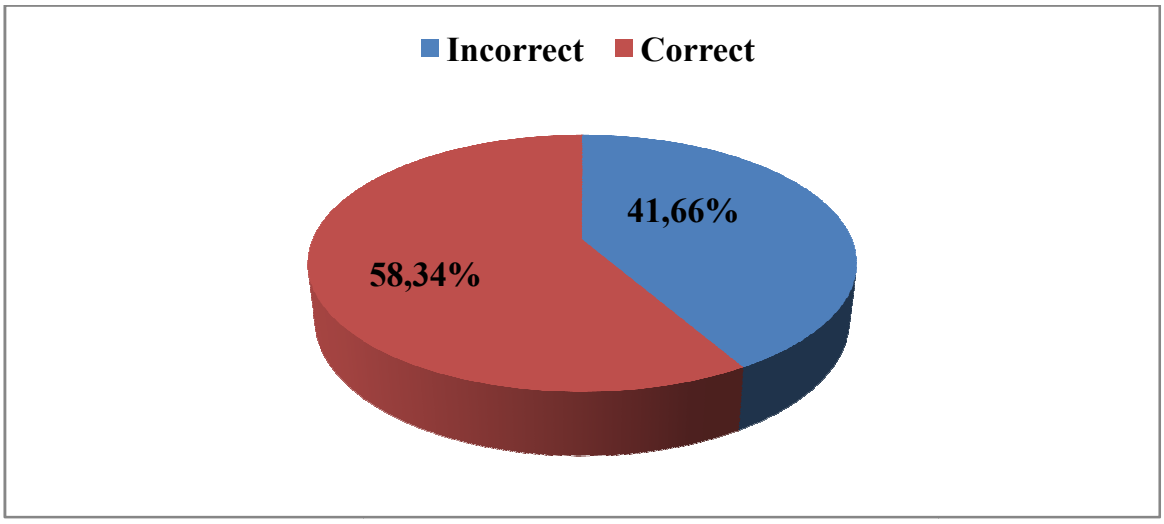
As mentioned earlier in sections 2.5.2.2 and 2.5.4, the post-training test was carried out for the sake of identifying the students' progress towards the understanding and the correct application of the English tenses. The aim behind such an operation is to be able to determine the effectiveness of the training phase, i.e. working in cooperative groups with metacognitive strategies for learners of the experimental group and working with metacognitive strategies individually for learners of the control group.

Similar to the pre-test, the researcher tried to respect the following points:

✓ To measure the same academic content as the pre-test.
✓ To include four grammar activities, and
✓ To be approximately at the same level of difficulty as the pre-test.

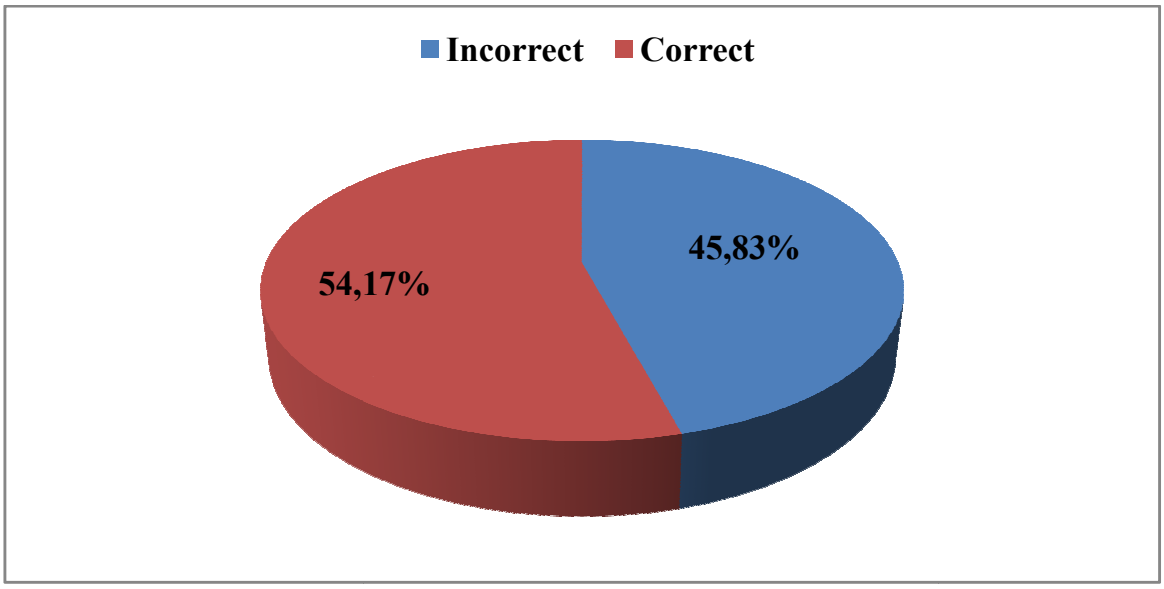
3.4.1. The Experimental Group

Since this test is also a criterion-referenced one, the researcher decided to follow the same way of analysis as with the pre-test. Thus, regarding the first criterion, ten students, representing 41.66 % of the group, have mistaken at least once when the selection of the correct tense is concerned. The pie-chart below clarifies the students' performance:



Pie-chart 3.5: Students' Choice of the Correct Tense in the Post-test

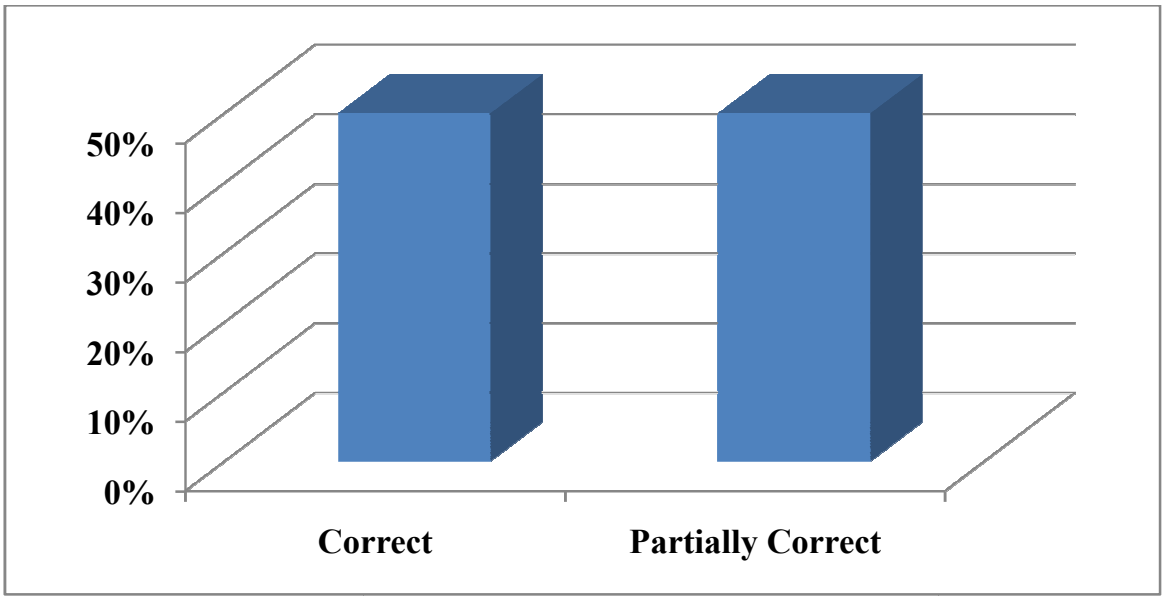
However, concerning the second criterion, i.e. providing the correct form of the verb, the investigator counted eleven students, representing 45.83 % of the group, who still do not provide fully correct forms of the verbs. Their mistakes have to do with the past simple and the past participle of irregular verbs as well as some mistakes of spelling. The following pie-chart shows the results obtained:



Pie-chart 3.6: Students' Production of the Verbs' Forms in the Post-test

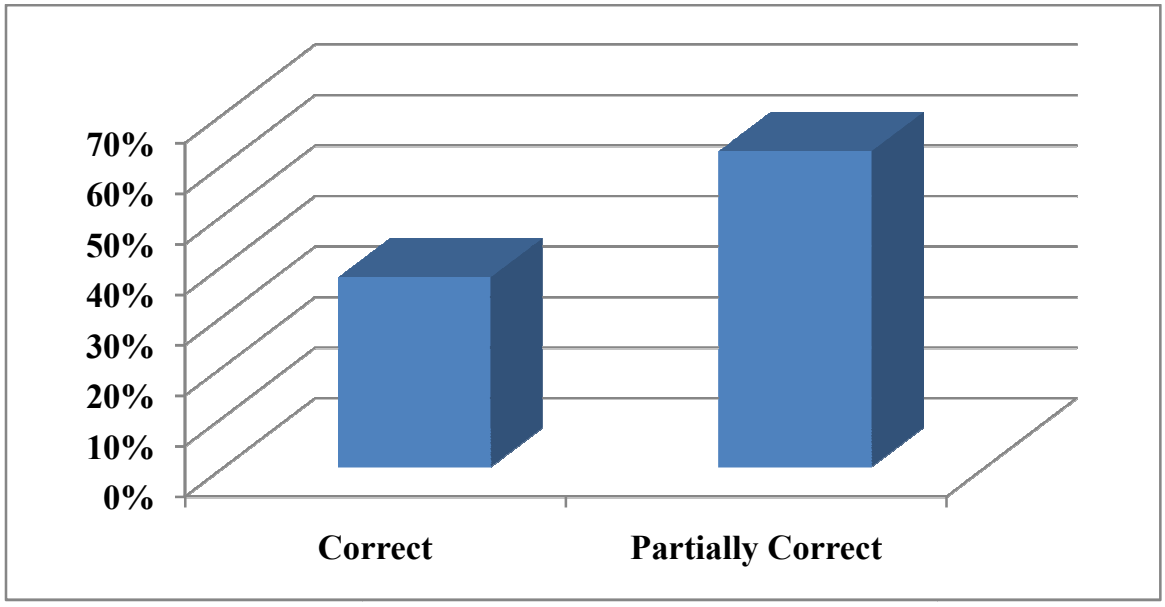
As done with the pre-test activities, the analysis of the post-test also includes the discussion of students' performance in each separate activity, which will be of a great significance to compare the results; in order to determine the effectiveness of the training phase.

The first activity of the post-test is about the use of the simple present and the present continuous. It includes 10 multiple choice questions. For each sentence, there are two verbs which are already conjugated, and the students were asked to choose the correct answer. Accordingly, the students' responses to this activity unveiled the fact that they developed to some extent an understanding of the main differences between the uses of both tenses, since twelve of them answered correctly all the items included in the activity. On the other hand, the other students partially answered the items. This bar-graph below better shows the results:



Bar-graph 3.7: Students' Responses to the First Activity of the Post-test

As far as the second activity of the post-test is concerned, it also turned around the idea of mastering the uses of both the past simple and the past continuous. It took the form of a paragraph in which verbs are not conjugated. Students, then, are required to choose either the past simple or the past continuous, depending on the meaning. Nine students, representing 37.5 % of the group, could successfully answer the whole activity; however, the remaining students had at least three mistakes. The following bar-graph clarifies their performance in the second activity:



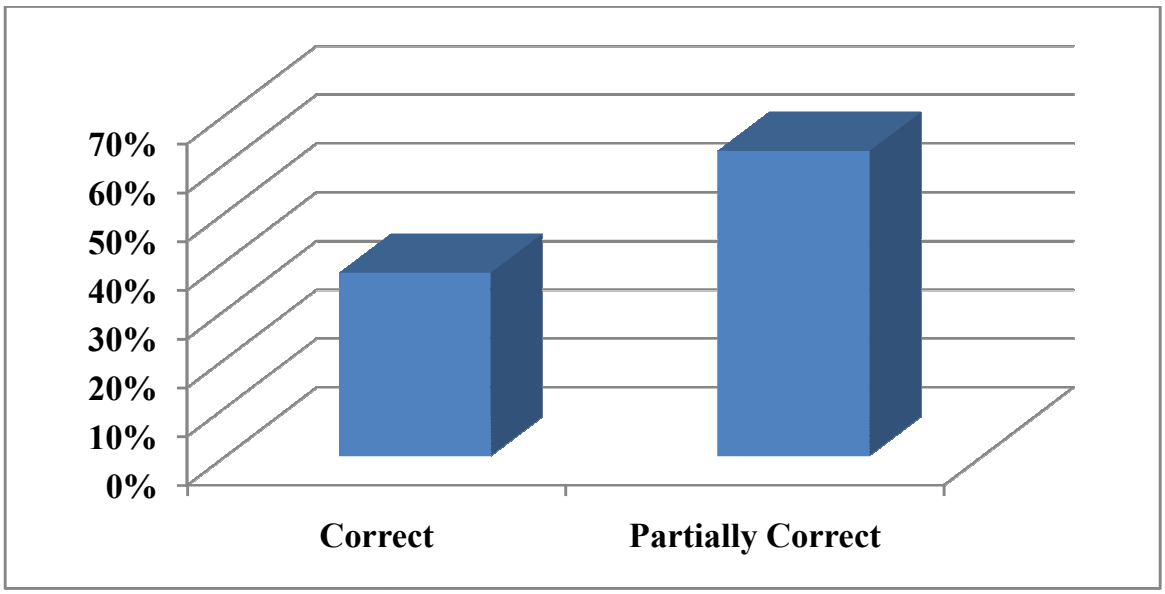
Bar-graph 3.8: Students' Responses to the Second Activity of the Post-test

To answer the third activity, students were required to rewrite the underlined verb forms, using either the future simple or the future continuous. The activity included eight sentences. Unlike the third activity of the pre-test, this time ten students completely answered the third activity. The following table summarizes the number of students' mistaken items:

N° of Students	Mistaken Items
10	0
3	2
4	4
4	5
3	8

Table 3.7: Students' Mistaken Items of the Third Activity in the Post-test

Regarding the last activity, students were required to complete the paragraphs with one set of verbs, using the present perfect or the past simple. Indeed, the researcher focused on including activities about the perfect tenses in the pre-test and the post-test, as well as the training phase, for important it is. Accordingly, 13 students could fully and correctly answer the activity. The rest of the students, however, still provided some mistakes. The following bar-graph illustrates the results obtained:



Bar-graph 3.9: Students' Responses to the Fourth Activity of the Post-test

Moving to the students' scores in the post-test, the possible obtained scores could range from 0 to 20 points, since the researcher assigned:

- ✓ 0.5 point for each item of the first activity; which makes it a total number of 5 points for the whole activity regarding the fact that it includes 10 items.
- ✓ 0.25 point for each item of the second activity; which makes it a total number of 5 points for the whole activity regarding the fact that it includes 20 items.
- ✓ 0.5 point for each item of the third activity; which makes it a total number of 4 points for the whole activity regarding the fact that it includes 8 items, and
- ✓ 0.5 point for each correct choice of the set of verbs that better suits the meaning of the paragraph, as well as 0.5 point for each verb; which makes a total number of 6 points regarding the fact that it includes 9 verbs to conjugate.

The table below, then, includes the experimental group students' post-test scores:

Students	Post-test Scores
S 1	10.25
S 2	13
S 3	08.75
S 4	14.50
S 5	10
S 6	13.25
S 7	14.25
S 8	10
S 9	13.75
S 10	13.25
S 11	15.75
S 12	09.25
S 13	07.75
S 14	12.75
S 15	15
S 16	15.25
S 17	14.75
S 18	12.75
S 19	12.75
S 20	13
S 21	11
S 22	12
S 23	12.5
S 24	17.5

Table 3.8: Learners' Post-training Test Scores.

Also, the post-training test results have been summarized in the table below, using the measures as with the pre-test scores:

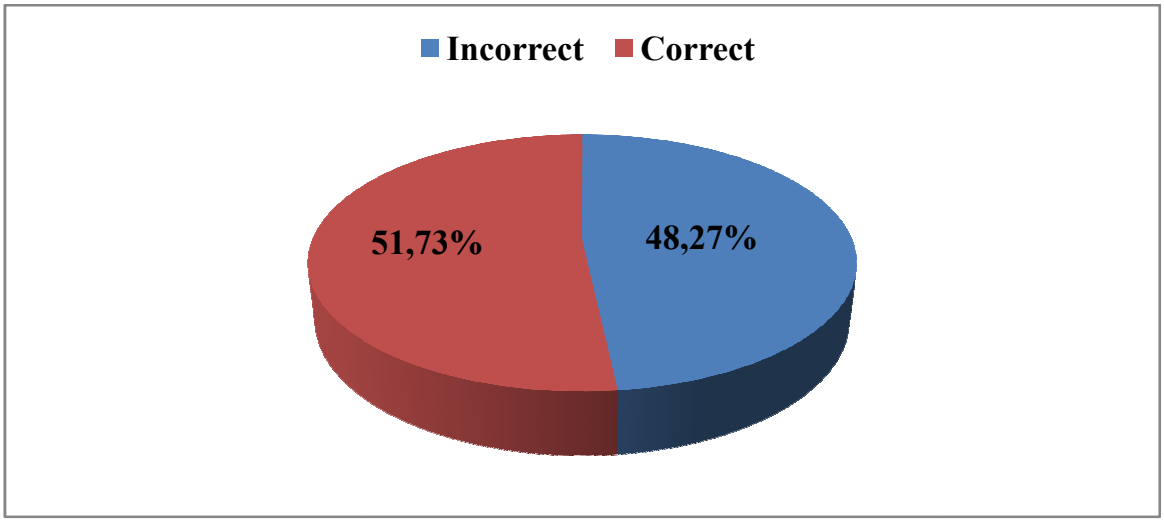
Measures of Central Tendency	**Measures of Variability**	
Mean	**Variance**	**S.D**
12.62	5.49	2.34

Table 3.9: Summary of the Learners' Post-training Test Scores.

From the table above, one can consider the mean of the group scores which is 12.62. Indeed, this is a considerable value of the mean; which indicates that the students' performance in the post-training test was not low compared to the highest score possible, i.e. 20. A later thorough comparison with the experimental group's pre-test scores will better show the differences and clearly interpret the results.

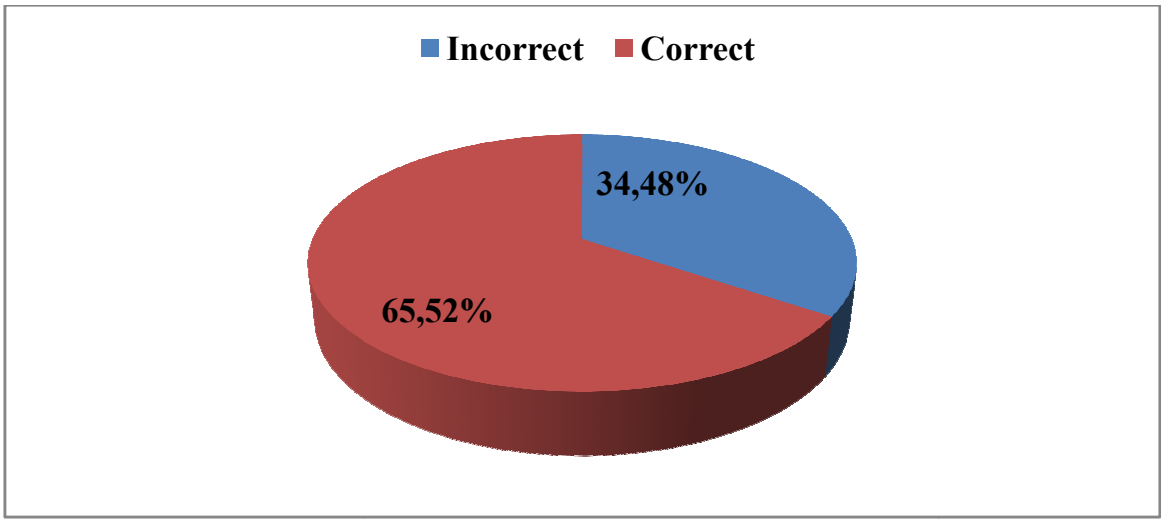
3.4.2. The Control Group

As far as the first criterion in the post-test is concerned, the researcher counted 14 students, representing 48.27 % of the group, who have mistaken at least once when selecting the appropriate tense to be used. The following pie-chart shows the students' performance:



Pie-Chart 3.7: Students' Choice of the Correct Tense in the Post-test

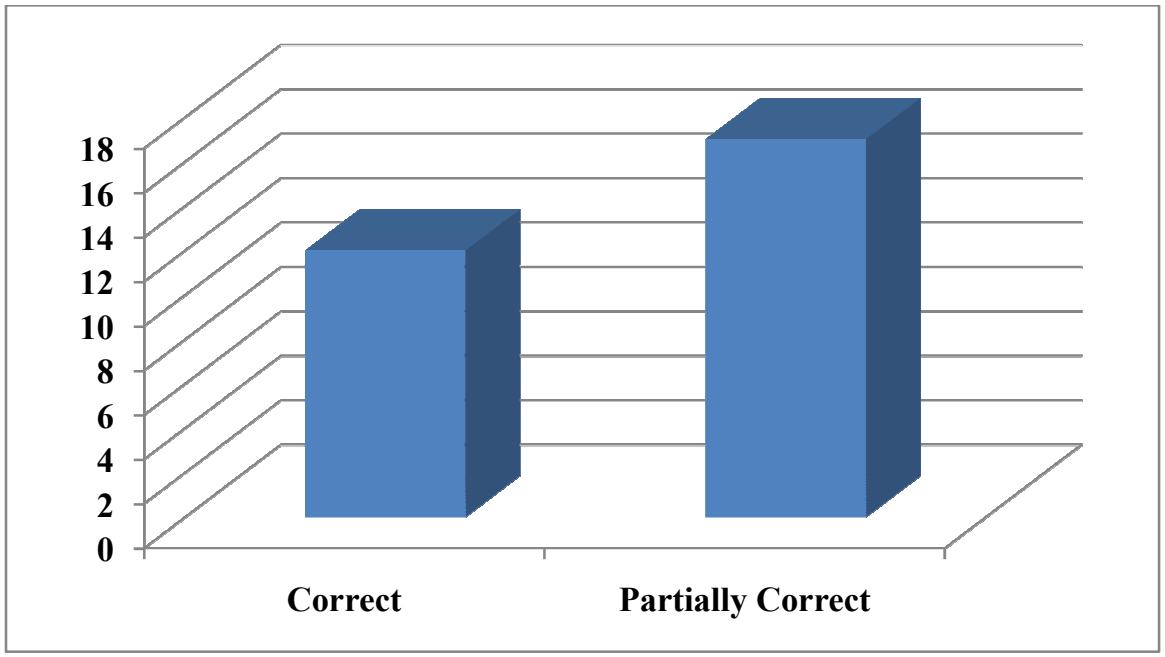
On the other hand, when providing the correct form of the verb, the investigator counted ten students, representing 34.48 % of the group, who still provide mistakes when writing down the forms of the verbs. Their mistakes, then, are better illustrated through the following pie-chart:



Pie-Chart 3.8: Students' Production of the Verbs' Forms in the Post-test

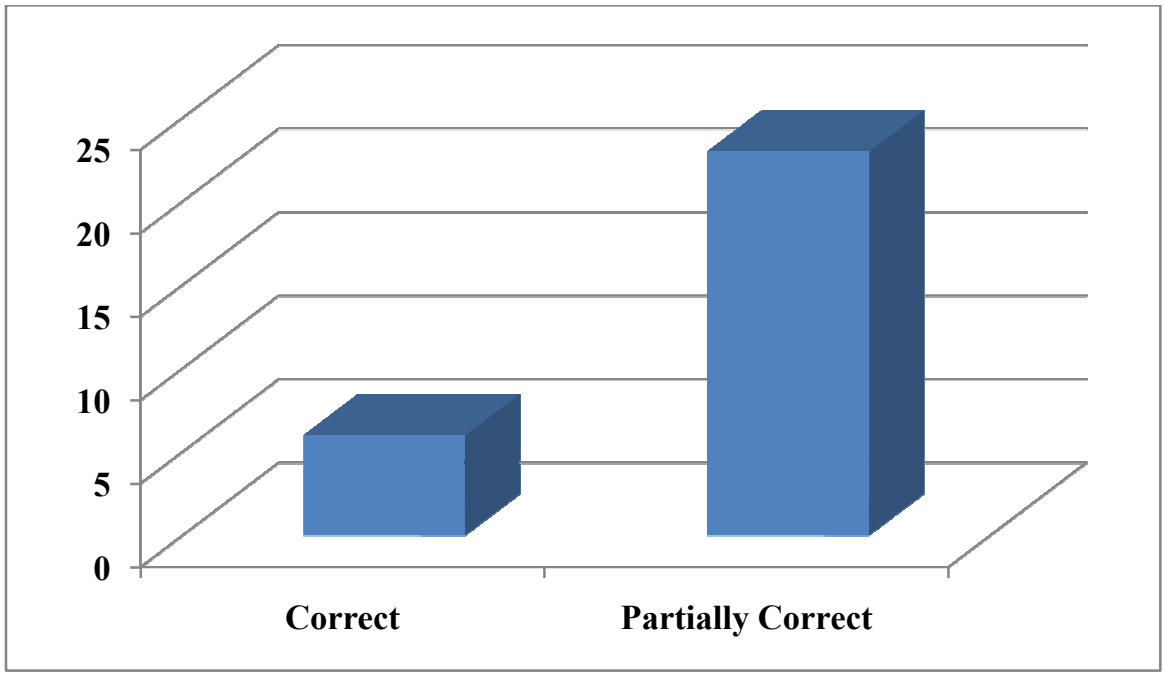
As it was previously mentioned, the analysis of the students' performance in each separate activity will be significantly used when comparing the achievement of both the experimental and the control group in the following section. This, in turn, is a key feature in determining the effectiveness of the methods applied to both groups during the training phase.

Similarly, students of the control group have been introduced to the same post-test as the experimental group. Hence, the first activity was about the use of the simple present Vs the present continuous. The students were required to choose one of the two given conjugated verbs. The students' performance in this activity revealed their progress towards the understanding of both tenses. Indeed, twelve of the students provided fully correct answers. However, the others partially answered the items. The bar-graph below better illustrates the results:



Bar-graph 3.10: Students' Responses to the First Activity of the Post-test

Regarding the second activity of the post-test which was about the past simple and the past continuous, the researcher found after the analysis of the students' performance that only six of them, representing 20.69 % of the group, could correctly answer the activity. The remaining students, however, provided partially correct answers. The bar-graph below demonstrates the obtained results:



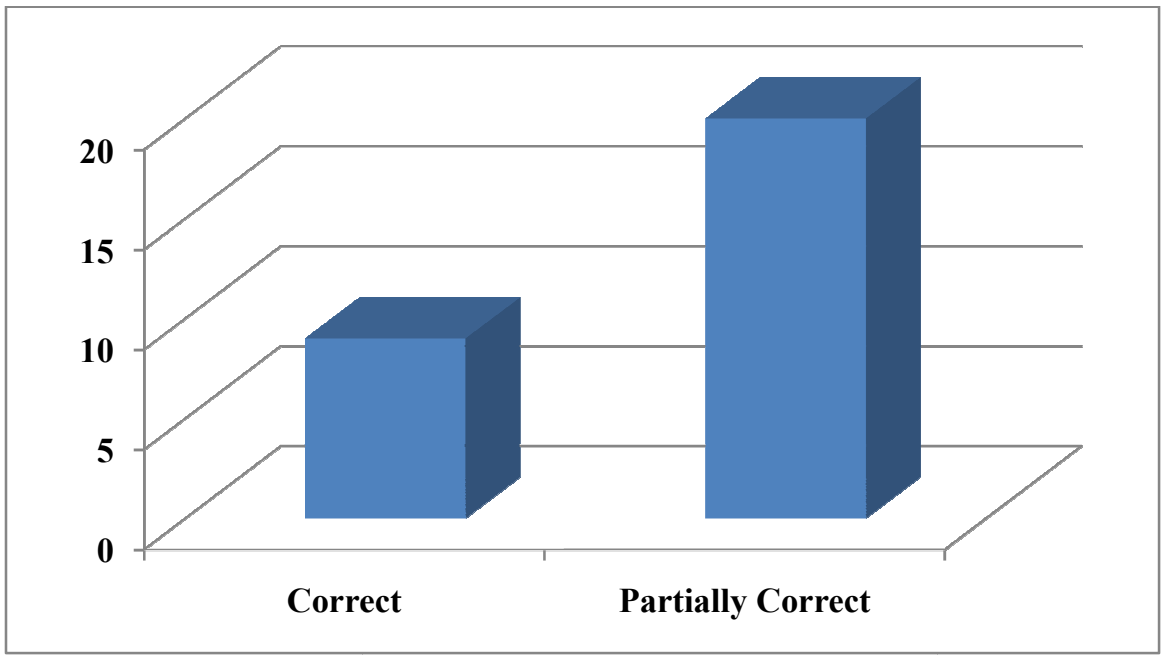
Bar-graph 3.11: Students' Responses to the Second Activity of the Post-test

The third activity was about the future tenses. The students' performance in the eight given sentences of the activity demonstrates that eight of them provided completely correct answers. The others, however, still had serious problems in distinguishing the appropriate tense to be used. The following table summarizes the students' results:

N° of Students	Mistaken Items
8	0
4	3
5	5
5	6
7	7

Table 3.10: Students' Mistaken Items of the Third Activity in the Post-test

As far as the last activity is concerned, the investigator wanted to test the students' progress towards the utilization of the present perfect or the past simple. Actually, 9 students could completely provide correct answers. The rest of the group, however, still showed some difficulties through their mistakes. The bar-graph below summarizes their performance:



Bar-graph 3.12: Students' Responses to the Fourth Activity of the Post-test

Following the same way of correcting the activities, as with the experimental group students' post-test, the following table summarizes the scores obtained by students of the control group when sitting for the post-test:

Students	Post-test Scores
S 1	09
S 2	09.5
S 3	10
S 4	10.75
S 5	08
S 6	05.75
S 7	10
S 8	12
S 9	09.5
S 10	12
S 11	14
S 12	12
S 13	10.5
S 14	13
S 15	15
S 16	12
S 17	13.25
S 18	12
S 19	11
S 20	11.5
S 21	13
S 22	09
S 23	11.75
S 24	15
S 25	12
S 26	12
S 27	10.5
S 28	09
S 29	11

Table 3.11: Learners' Post-training Test Scores

These scores have been summarized using the measures of central tendency and the measures of variability as shown in the table below:

Measures of Central Tendency	**Measures of Variability**	
Mean	**Variance**	**S.D**
11.17	4,02	2.004

Table 3.12: Summary of the Learners' Post-training Test Scores

As the table above indicates, the mean of the group scores this time is 11.17. Indeed, the researcher could notice a kind of progress among students of the control group. However, this is not enough to determine the effectiveness of the training phase. Hence, a later comprehensive comparison with the experimental group's progress is needed in order to confirm or disconfirm the research hypotheses and to fairly interpret the results.

Data Interpretation

Following the same way of analysis like the pre-test, the researcher considered two general steps. Starting with the first criterion, an analysis of the learners' choice of the right tense was provided. Then, the researcher moved to the second criterion which is the production of the right form of the verb. Indeed, both groups have demonstrated a better achievement. The researcher turned her attention, later, to a deeper analysis of each separate activity. The students' performance showed a considerable progress in both groups when the English tenses are concerned, though it is still not easy for all of them to provide fully correct answers. This would lead to the conclusion that the training phase was, to a great extent, successful for both groups, and that both methods applied to the experimental and the control groups were positively influential.

The analysis of the obtained scores from both the students' pre-test and post-test significantly helped the researcher in understanding the effectiveness of the training phase, however it is not enough to make any determinations at this level. The following section then is about using the data obtained from the pre-test for a thorough comparison with the post-test scores.

3.5. Comparing the Pre-test and the Post-test Results

As a first step towards the comparison of the experimental group and the control group, the researcher wanted to consider the achievement of both groups in the pre-test. Well, to do so, it is important to look deeply at their performance in each activity. Thus, the following table better explains the situation:

	The Learners' Pre-test	
	The Experimental Group	The Control Group
First Activity	7 fully correct answers	10 fully correct answers
Second Activity	5 fully correct answers	7 fully correct answers
Third Activity	6 fully correct answers	5 fully correct answers
Fourth Activity	9 fully correct answers	7 fully correct answers

Table 3.13: Summary of the Learners' Performance in the Pre-test Activities

Indeed, it is still not appropriate to determine who did best among the two groups. Thus the following table is provided to summarize all the values calculated via the learners' scores:

	The Experimental group	The Control Group
Mean	10.97	10.43
Variance	11.51	7.12
SD	3.39	2.66

Table 3.14: Summary of the Groups' Scores in the Pre-test

An important issue that should be discussed is the SD. It is worth pointing out that the S.D; if being low, interprets the proximity of the scores to the mean, however, it designates that scores are distributed far from the mean of the group if it is high. In other words, a low S.D means that the researcher is dealing with a more homogeneous group and a high SD reflects how heterogeneous the group is. First, comparing the S.D obtained from the scores of the experimental group and the control group in the pre-test ensures that the value of the S.D of the control group is lower. Thus, it is fair to determine that the control group students' scores are not distributed far from the mean; which in turn indicates that the group is a more homogeneous one. On the other hand, this shows that the experimental group is a more heterogeneous one. Indeed, this is a significant issue in the success of this research considering the fact that cooperative groups should be heterogeneous.

Additionally, it is quite clear at this level that the values of the mean for both groups are not far from each other; which leads to the idea that the groups are not

different from each other in terms of level. This is also a good thing to determine at this stage since one of the requirements of conducting the experimental research is having basically groups that are not different from each other.

Similar to the previous tables about the pre-test, the following tables are provided to be used as a basis for comparing the groups' scores of the post-test, i.e. their progress towards the understanding and the correct application of the English tenses:

	The Learners' Post-test	
	The Experimental Group	The Control Group
First Activity	12 fully correct answers	12 fully correct answers
Second Activity	9 fully correct answers	6 fully correct answers
Third Activity	10 fully correct answers	8 fully correct answers
Fourth Activity	13 fully correct answers	9 fully correct answers

Table 3.15: Summary of the Learners' Performance in the Post-test Activities

Then, the next table concerns the values calculated via the learners' scores:

	The Experimental group	The Control Group
Mean	12.62	11.17
Variance	5.49	4.02
SD	2.34	2.004

Table 3.16: Summary of the Groups' Scores in the Post-test

The values of the mean mentioned in the table above only clearly say that the mean of the experimental group is higher, and thus the members of the group had a better achievement than the members of the control group.

Before comparing the post-test results of the experimental group and the control group, the researcher needs to have a look at the achievement of each separate group, to determine whether working in cooperative groups with metacognitive strategies was beneficial for students of the experimental group or not, and whether working with metacognitive strategies individually was also beneficial for students of the control

group. Thus, as far as the mean of the scores is concerned, the experimental group mean in the post-test reached the value 12.62 while it was only 10.67 in the pre-test. For the control group, the mean reached the value 11.17 in the post-test while it was only 10.43 in the pre-test. This significantly refers to the effectiveness of both methods applied to both groups.

On the other hand, the SD calculated via the experimental group's post-test showed the value 2.34 while it was 3.39, and the one calculated via the control group's post-test is equal to 2.004 though it was 2.66 in the pre-test, i.e. lower values of the SD for both groups. This is, indeed, due to the fact that both methods applied to both groups helped in a clear way in reducing the differences between the students; leading to having at the end of the training more homogeneous groups.

In fact, it is not enough to stop at this level of analysis. Though it is quite clear that both groups demonstrated a considerable progress towards the understanding and the application of the rules of English tenses, the researcher still need to deeply compare the post-test results of both groups to determine whether working in cooperative groups with metacognitive strategies is actually better than working with the same strategies individually, and thus to be able to confirm the previously stated hypothesis. To do so, the researcher opted for an independent samples t-test using the formula below:

$$t = \frac{\overline{x}1 - \overline{x}2}{\sqrt{\frac{Var1}{N1} + \frac{Var2}{N2}}}$$

$\overline{x}1$ stands for the mean of the experimental group scores in the post-test.

$\overline{x}2$ stands for the mean of the control group scores in the post-test.

Var1 stands for the variance of the experimental group scores in the post-test.

Var2 stands for the variance of the control group scores in the post-test.

N 1 stands for the number of students of the experimental group.

N 2 stands for the number of students of the control group.

$$t = \frac{12.62 - 11.17}{\sqrt{\frac{5.49}{24}} + \sqrt{\frac{4.02}{29}}}$$

$$t = \frac{1.45}{\sqrt{0.29+0.14}} \qquad t = \frac{0.54}{\sqrt{0.43}} \qquad t = \frac{0.54}{0.65}$$

$$t = 0.83$$

To complete the overall procedure, the researcher needs to have actually two t-values:

- The calculate t-value, and
- The critical t-value.

If the calculated t-value is greater than the critical t-value, then the null hypothesis needs to be rejected. In fact, the null hypothesis states that the two groups are from the same population with respect to the dependent variable. Well, in this context, this would mean that students of the experimental group and students of the control group have both demonstrated a noticeable progress towards the exact utilization of English tenses, and that no single method among the ones applied is actually more beneficial and more influential than the other in terms of generalizing the results.

So, as shown before, the calculated t-value is equal to 0.83. However, the researcher needs to follow another procedure to get the second needed value which is the critical t-value. First, degrees of freedom need to be calculated (*df*) and then the alpha level (α) should be specified. Accordingly, with degrees of freedom and alpha level, the critical t-value can be easily identified.

A. For the independent samples t-test, the degrees of freedom formula is:
   df = n 1 + n 2 – 2
   df = 24 + 29 - 2
   df = 51
B. Alpha level (α) = 0.05 (see section 3.2)
C. The critical t-value then, according to the t-table, is: 2.000

According to the explanation above, the calculated t-value is not greater than the critical t-value, and therefore the null hypothesis of equal mews cannot be rejected. Thus, though the researcher could identify through the analysis of the scores that both groups demonstrated a progress towards the understanding and the use of English tenses, and that both methods applied to both groups were influential, the researcher still cannot make a final decision about generalizing the results, i.e. that cooperative learning always leads to a better achievement if accompanied with the use of metacognitive strategies. This is due to the fact that these results may be obtained with some samples, simply by chance, as researchers say about rejecting the null hypothesis.

One last step towards the completion of analysis is the consideration of eta-squared which refers to the effect size indicator for independent samples t-test. Thus, the following formula is used:

$$\textit{Eta Squared} \quad = \frac{t^2}{t^2+(N1+N\,2-2)} \quad = \frac{(0.83)^2}{(0.83)^2+(24+29-2)} \quad = \frac{0.6889}{51.6889}$$

Eta Squared = 0.01, i.e. small effect.

Data interpretation

As mentioned earlier, a low SD means that the scores are not distributed far from the mean and that the group is a more homogeneous one. However, if being high, it reflects how far the scores are from the mean, and how heterogeneous the group is. Based on this explanation, one can say that the pre-test results show that the experimental group is a more heterogeneous one. Indeed, it is good to know this at the beginning of this research since cooperative learning requires heterogeneity among the groups in order to be truly successful. Regarding the fact that the values of the mean are not far from each other, one can say that the experimental group and the control group are not different from each other in terms of level; which is also one of the basics of conducting a healthy experimental research.

Having summarized the learners' performance in the post-test activities (see page 140) clearly demonstrates the progress achieved by both the experimental and the

control groups. This means that both methods were beneficial in helping students to reach a better understanding and a better application of the English tenses as well as reducing the differences between students, i.e. working with metacognitive strategies individually. However, the higher value of the mean of the experimental group in the post-test illustrates that students of the experimental group had a better achievement.

To better determine the extent to which the methods were influential, an independent samples t-test was needed. Actually, after identifying the calculated t-value and the critical t-value, results have shown that the calculated t-value is not greater than the critical t-value. Hence, though a better achievement was demonstrated through the results of the experimental group, the researcher is still unable to completely and strongly confirm the hypothesis which states that the use of metacognitive strategies when working cooperatively with peers can lead to a better achievement. Accordingly, the researcher cannot make any generalizations regarding this fact. The value of the Eta squared, i.e. 0.01 also confirm the results discussed (see page 114).

3.6. Results of the Reflective Questionnaire

It is interesting to mention again that this reflective questionnaire is adapted from Stephen and Singh (2010), and that it was administered in situ to students of both the experimental and the control groups. Students had to fill in this reflective questionnaire twice; once at the beginning of the training phase right after completing the first task, and once at the end of the training phase right after completing the fourth task.

This questionnaire is composed of 16 reflective questions in addition to 3 factual questions about the students' name, age, and sex. The aim behind using this research tool is to test the hypothesis which states that cooperative learning, if applied appropriately, might lead to a better utilization of the metacognitive strategies. Thus, based on the nature of the questionnaire and the nature of the students' responses, the analysis of this research instrument will be to a great extent a qualitative one.

Accordingly, the following is an account of all the included questions as well as their aims.

The first part:

- The planning part

1. What is the given task?

This question aims at helping students to think about and identify the nature of the task, i.e. the type of activities; the tenses selected, the length of the task, and so on.

2. Do I already know anything about this particular task?

Students here are supposed to know whether they are familiar with the content and the form of the task or not. This is particularly about the 'identifying the state of knowledge' strategy.

3. What is my learning goal here?

Any given activity would be accompanied by clear instructions to explain to the reader what he/she is specifically supposed to do. This reflective question, then, makes students aware of the importance of instructions as well as helping them to deduce the general aim of the task and to consider what they have already seen in the lecture. The answer to this question leads them to consider the 'setting goal' strategy.

4. How much time do I need to complete the task?

The answer to this question means that students have a clear idea about the length and the complexity of the task, and thus the time needed to accomplish the task.

5. What are my plans in accomplishing this task?

This question leads the students to think deeply about the way they should proceed to solve the task given including, but not limited to, retaining information which they dealt with during the lecture, discussing them with classmates in case they are working in groups, and using metacognitive strategies. The basic strategy addressed through this question is the 'planning' strategy.

- The monitoring part

(1) Do I know this already?

This question is similar to question 2 from the planning part in that it seeks to know whether students are familiar with that type of task or not. The answer to this question leads basically to consider the 'identifying the state of knowledge' as well as the 'thinking aloud' strategies.

(2) Have I understood?

Students are required here to infer, based on the nature of the task, the extent to which they can correctly solve the task. It is, indeed, about the strategy of 'identifying the difficulty'.

(3) If not, what am I going to do?

Students, if feeling that the task is far beyond their level of understanding, should think of alternative solutions. This question addresses important strategies such as 'thinking aloud', 'conscious decisions', 'planning', and 'problem solving'.

(4) Should I revise my plan?

Similarly, this question is about revising their last decisions; considering at this level the 'evaluation strategy'.

(5) Should I ask for help?

If the answer to this question is 'yes', this means that students here are considering indirectly the 'modeling' strategy. This is due to the fact that asking for the help of the teacher or the other peers would lead to observational and conscious learning.

The second part:

(1) Have I understood everything completely?

This question is similar to question 2 from the monitoring part in the point that it seeks to make students evaluate their state of understanding the task. The difference however lies in the fact that 'identifying the difficulty' comes after trying to solve the task as indicated in the reflective questionnaire (see appendix 6). Also, the 'evaluation' strategy is clearly addressed here.

(2) If not, what do I need to do?

This question is similar to question 3 from the monitoring part since it leads students to think of alternative solutions after self-evaluating their accomplishment of the given task. Thus, the strategies to think about through this question are again 'thinking aloud', 'conscious decisions', 'planning', and 'problem solving'.

(3) Have I achieved my goal?

Related to the idea of task accomplishment, this question is about the 'evaluation' strategy.

(4) Did my plan work?

The answer to this question touches mainly the 'evaluation' and the 'thinking aloud' strategies.

(5) What are the strategies I worked out here?

The answer to this question is in fact a summary for all what has been thought about by the student before. It seeks to push students towards the conscious consideration of the metacognitive strategies used in order to solve the assigned task including 'identifying the state of knowledge', 'planning', 'conscious decisions', 'setting goals', 'identifying the difficulty', 'evaluation', 'problem solving', 'thinking aloud', and 'modeling'.

(6) Do I need to go back to the task to fill in any blanks in my understanding?

The answer to the previous question would definitely help students to decide through this question about whether they need to go back to the task, to complete any missing parts, or correct any mistaken items.

Well, in order to analyze the present research instrument, the researcher decided to talk first about the first reflective questionnaire and then moving to compare it with the second one given at the end of the training phase; dealing specifically with the students' answers to each question separately.

- ✓ The first reflective questionnaire

❖ The planning part:

1. As far as the first question of the reflective questionnaire is concerned, most of the students of the experimental group, being mainly twelve students representing half of the group, answered saying that the task is about putting verbs in their right forms; which is indeed an incomplete, not to say, a wrong answer. Three other students said that the task is about tenses and surprisingly one student said that the task is about answering the first part of the reflective questionnaire. This student seems that he/she does not know even which task the teacher is talking about. The full answer to this question was given by eight students who could successfully talk more about the details saying that the task is about the present tenses and that it includes two activities; one about choosing the correct verb and one about conjugating the verbs in the right tense.

For students of the control group, almost half of them, being mainly fourteen students, answered the first question saying that the task is about grammar activities without giving any further details. Six students said that the task is about tenses; however, seven students said that the task is about giving the right form of the verb. Surprisingly, only two students provided a fully correct answer regarding the nature of instructions and the tenses addressed in the given task.

2. When being asked about whether students already know anything about the given task, students of the experimental group provided three different answers. One student stated that he/she does not know anything about the given task, one student said that he/she knows just a little, and 21 students answered 'yes'. Only one student left the space blank without providing any answer to this question. On the other hand, eight students from the control group said that they do not know anything about this task, and the others' answers were all positive. They even used some words that express certainty like 'surely' and 'of course'.

3. Regarding the third question, students of the experimental group used various words to answer. It is quite difficult to state every single answer, so, the researcher tried to summarize them by checking the ones that are approximately similar to each

other in meaning. The result shows three different answers. 5 students said that their learning goal is to improve their grammar level, 3 students said that their goal is to improve their language. However, the remaining 16 students said that their learning goal here is to know how to conjugate the verbs using the correct tense. For the control group, four students stated that their learning goal is to improve their grammar. Seven students said that they need to answer as much as they can. The remaining 18 students are the ones who stated that their learning goal here is to conjugate the verbs correctly using the appropriate tense.

4. Asking students about how much time they have to complete the task led almost all of them, of both the experimental and the control groups, to mention 'approximately half an hour' as an answer. This is due to the fact that the teacher informed them at the beginning of the session that they have the task to complete, to correct it afterwards, and the reflective questionnaire to fill in. Considering the general time of the session which is one hour and a half is the reason behind inferring such an information about time.

5. Concerning the plans that students need to have to accomplish the task, four students from the experimental group stated that they need to recall their background knowledge and use it in order to fill in the answers. Four other students stated that they need to discuss the task with their peers in the group first before moving to the answering stage. The 16 students provided more detailed answers including the fact that they need to read first the task, understand what it specifically requires, and then provide the answers. On the other hand, 9 students of the control group provided a similar answer to the one of the experimental group. Indeed, they said that they need to read carefully the task and try to provide correct answers. 16 students stated that they need to take into consideration the rules of the present tenses in order to answer the activities and the other four students left the space blank without providing any answer.

- The monitoring part:

All the experimental group students' answers to the first question of the monitoring part were positive and they all agreed that they already know the tense on which the

task is made to test. However, only 21 of them stated that they have completely understood the task. The remaining three students' answers were 'No'. Since questions three, four, and five of the monitoring part are related to the 'no' answer of the second question, the researcher then will be analyzing the answers of only three students. Thus, for the third question they stated that they need to ask the teacher or their friends for help. For the fourth question, they all agreed that they need to revise their plan, and they all provided a 'yes' answer to the fifth question about whether they truly need help.

Students of the control group were a bit different from students of the experimental group since 25 of them provided positive answers, 3 students provided a 'no' answer and one student left the space blank. For the second question, 19 students stated that they have completely understood what the task is about. Accordingly, the following table is provided for the sake of summarizing the remaining ten students' answers to questions two, three, four and five of the monitoring part.

Question 2	No (1 student)	Somehow (9 students)
Question 3	Check the rules	- Read again - Think otherwise - Ask for help
Question 4	Yes	Yes
Question 5	Yes	Yes

Table 3.17: Students' Answers to the Monitoring Part of the Reflective Questionnaire

❖ The evaluation part:

1. After the completion of the task, students were asked to answer the third and the final part. Indeed, ten of the students of the experimental group stated that they have completely understood the task. However, the other 14 students said that they have somehow understood. From the control group, 13 of the students reported that they have understood completely the task; however the rest mentioned 'not everything' as an answer.

2. The second question of the evaluation part is directed to students who did not understand completely the task. Thus, for the experimental group, the researcher was supposed to get 14 answers. However, she found that four students left the space blank and the others agreed that they should check with their friends and ask for their help. Only one student said that he/she needs to revise the lesson again. From the control group, one student left the space blank and six students suggested that they need to revise their lesson again. The remaining nine students stated that they would ask for help.

3. Most of the experimental group students' answers to the third and fourth questions were positive since only seven of them stated that they did not achieve their goal and that their plan did not work. On the other hand, nine students of the control group reported that they did not achieve their goal and that their plan did not work.

4. As far as the fifth question is concerned, 14 students from the experimental group mentioned different strategies, which are not metacognitive strategies, among which using the dictionary and using the right tense. However, the remaining 10 students provided interesting answers that reflect metacognitive awareness. Their answers were various but the most important ones were:

- Group discussions.
- Planning.
- Conscious decisions.
- Evaluation, and
- Thinking aloud.

For the control group, only three students referred to the use of metacognitive strategies, namely identifying the state of knowledge. The other 17 students mentioned other strategies rather than metacognitive ones, like choosing the right tense. Surprisingly, the remaining 9 students left the space blank without providing any answer.

5. When being asked whether they need to go back to the task to fill in any blanks, seven students said that they need to and 16 students said that they do not need to. However, one student left the space blank. As far as students of the control group are

concerned, the majority, representing 18 students stated that they absolutely need to do so. However, the remaining 11 students said that they understood and completed the task.

- ✓ The second reflective questionnaire

❖ The planning part:

1. Regarding the first question, the students' answers were better this time. Indeed, fifteen students of the experimental group could provide fully detailed answers about the task highlighting the fact that the task is composed of two activities and that both of them are about the perfect tenses. However, the other students provided various answers, most of which are general answers. Even students of the control group showed more understanding of the question this time since seven of them provided a full description of the assigned task.
2. For the second question, 23 students of the experimental group said that they are familiar with the nature of the task and only one student stated that he/she does not know anything about it. However, students of the control group seemed to know this time what the task is about since only three of them provided negative answers.
3. For the second reflective questionnaire, students of the experimental group answered the third question highlighting basically two ideas. 6 students said that their learning goal is to master the use of English tenses, and the remaining 14 students said that their learning goal here is to know how to conjugate the verbs using the perfect tenses correctly. For the control group, two students stated that their learning goal is to improve their grammar. Four students said that they need to learn about the English tenses. However, the remaining 23 students stated that their learning goal here is to know how to conjugate the verbs appropriately using the correct tense.
4. Similar to the fourth question of the first reflective questionnaire, almost all the students answered that they have 'approximately half an hour' to complete the task.
5. This time, concerning the experimental group, twelve students representing half of the group stated that they need to discuss the task with their peers in the group first before moving to the answering stage. The other twelve students provided similar answers regarding the fact of reading first the task, understanding it, and then filling in the answers. Concerning the control group, 13 students said that they need to read

carefully the task before providing the answers. 15 students stated that they need to consider the perfect tenses rules to conjugate the verbs in the activities and one student in fact left the space blank without providing any answer.

❖ The monitoring part:

Similarly, all the experimental group students' answers to the first and second questions of the monitoring part were positive and they all stated that they already know the idea that the task is turning around. However, only one of them stated that he/she has not completely understood the task. The researcher, then, is taking only his/her answers to questions three, four, and five into consideration, since they are related only to the 'no' answer of the second question. Accordingly, this student left the space blank and did not provide any answer to the third question. On the other hand, as far as the fourth and the fifth questions are concerned, he/she said that he/she needs to revise the plan and ask for help.

Most of the students of the control group, representing 27 of them, said that they already do know what the task is about, and the two others provided a 'no' answer. For the second question, 23 positive answers were provided. Accordingly, the analysis of six answers to questions three, four, and five of the monitoring part is provided as follows:

- Two students, among the six, stated that they are intending to revise their lecture again, and four others said that they need to ask for help
- Concerning questions four and five, all of them agreed that, they should revise their plan and should ask for help.

❖ The evaluation part:

1. Asking students whether they have understood everything completely after the completion of the task or not led fifteen students of the experimental group to provide positive answers, and nine others to state that they have somehow understood. From the control group, 16 of the students reported that they have understood completely the task.

2. Students who did not understand completely the task were asked to provide answers to the second question of the evaluation part. Accordingly, for the

experimental group, 9 answers were expected. Students, then, agreed that they should check with their peers in the group and ask for their help. From the control group, two students left the space blank and the remaining eleven students reported that they would check their lesson again and ask for the help of the teacher or a classmate.

3. Most of the experimental group students' answers to the third and fourth questions were better than their answers in the first reflective questionnaire. Indeed, only four of them stated that they did not achieve their goal and that their plan did not work. On the other hand, seven students of the control group provided negative answers.

4. Regarding the fifth question this time, most of the students of the experimental group, representing 15 ones, provided answers that reflect metacognitive awareness. Their answers were also various, however the most highlighted ones were:

- Group discussions.
- Identifying the state of knowledge.
- Identifying the difficulty.
- Planning.
- Conscious decisions.
- Evaluation, and
- Thinking aloud.

For the control group, eight students referred to the use of metacognitive strategies like identifying the state of knowledge and conscious decisions. The remaining students mentioned other strategies that are not metacognitive ones, like choosing the right tense or using the dictionary.

5. Asking students whether they need to go back to the task to fill in any blanks led only five of them to say that they need to. Regarding students of the control group, a considerable number of them, representing 13 students stated that they need to do so. However, the others stated that the task was clear for them.

Data Interpretation

After working with metacognitive strategies for almost a semester, students could show a better understanding of the meaning and use of these strategies. However, this is not enough to confirm the already stated hypothesis. Thus, a deeper comparison between the students' answers to the first and the second reflective questionnaire was done. Indeed, it demonstrated that, concerning the planning part, students of the experimental group provided more positive and detailed answers for questions 1, 2, 3 and 5 than did students of the control group; except for question 4 for which they provided approximately similar answers about the time allocated for the task.

Regarding the monitoring part, more students from the experimental group confirmed their understanding of the task and its general aim. On the contrary, six students from the control group reported the difficulty they encountered to understand the whole task as well as some of the alternative strategies that they may consider to use instead. For the final part, i.e. the evaluation part, students of the experimental group showed that they have better understood the task and better achieved their goal this time, compared to students of the control group. As far as the strategies that students may opt for, only few students from the control group listed limited examples of metacognitive strategies, while the answers of the students from the experimental group were more generous and more selective.

To say it differently, the answers provided by students of the control group to both the first and the second reflective questionnaires demonstrated for sure a considerable understanding of the metacognitive strategies and better achievement in tasks. However, this cannot deny the fact that students of the experimental group showed better results in terms of:

- The identification of the task as well as its general aim.
- The plans thought about to accomplish the task.
- Understanding the questions.
- Successful plans and achieving goals, and

- A better consideration and utilization of metacognitive strategies.

Thus, the researcher may justify the results saying that working in groups raises the students' awareness to recall, consider, and use the metacognitive strategies. Accordingly, the first hypothesis stated at the beginning of this research may be considered confirmed.

3.7. Results of the Interview

As explained in section 2.5.1, the present interview was designed to be a semi-structured one; because the researcher wanted to feel free to intervene with more explanations whenever the respondent claims the ambiguity of any of the eight included questions. The following, then, is a detailed analysis for all the questions included in the interview.

1. Students were asked about whether they had worked in cooperative groups before or not. Indeed, only 7 students, representing 29.16 %, provided a yes answer. Accordingly, they added that their teachers during high school used to ask them from time to time to work on a certain task with their peers in pairs or groups.
2. Surprisingly, the whole group stated that they did not have any idea about what do metacognitive strategies mean before this year. Thus, nobody could provide more information about the context or the time.
3. The third question of the interview was about the way students used to get exposed to grammar lectures during the first year; more precisely lectures about English tenses. In fact, their answers were various, but in order to report them the researcher tried to look for the common point between them. Most of the students' answers turned around the idea that their teachers used to opt for one of the two types of sessions each week, i.e. either a normal lecture, or a practical session. In almost all normal lectures, it is the duty of the teacher to present the academic content to students by explaining on the board or via handouts. They said that their teachers used to focus on the main points; moving from the general form of the selected tense to the main cases in which the tense is used. However, if dealing with a practical session, most of the work is designated to students. They used to be asked to answer activities about

tenses or conjugating verbs, and then they propose their answers on the board or just verbally.

4. When being asked about their opinion about their grammar level after working in cooperative groups, 3 students used the word 'normal' to describe their level, 6 students said 'good', and the remaining 15 provided longer explanations. They stated that working with peers, though tiring and difficult sometimes, was to a certain extent helpful to raise their level in grammar, since their peers' explanations were better and simpler than the ones of their teacher.

5. The fifth item was basically about specifying the skills that students could learn when working in groups. They were given the opportunity to tick more than one skill if necessary. The following table clearly summarizes their answers:

	The Sense of Leadership and Responsibility	Caring about Others' Learning	Accepting Different Viewpoints	Trusting Others	Solving Group Conflicts	Discussing the Other Members' Current Knowledge	Planning the Process of your own Activities	Setting the Group's Common Goal	Discussing the Group's Difficulties as well as its Progress	Others
S 1	✓	✓			✓	✓				
S 2	✓				✓				✓	
S 3				✓			✓			
S 4						✓				
S 5								✓		
S 6							✓			
S 7	✓				✓		✓			
S 8				✓						
S 9			✓					✓	✓	
S 10	✓				✓	✓				
S 11							✓			
S 12				✓						
S 13				✓						
S 14						✓				
S 15								✓		
S 16	✓				✓	✓			✓	
S 17			✓							
S 18							✓			
S 19	✓				✓					
S 20								✓		
S 21							✓			
S 22				✓						
S 23						✓				
S 24	✓				✓			✓	✓	

Table 3.18: Students' Responses to the Fifth Question of the Interview

6. Through the following question, the researcher aimed at knowing which explanation students do prefer more. Indeed, 17 of them stated that they prefer their classmates' explanations.

7. As far as the seventh question is concerned, most of the students of the experimental group described their experience of working cooperatively as exciting and enjoyable. However, only two students stated that the process was less exciting.

8. The last question of the interview was about the main difficulties encountered by students when they worked in cooperative groups. Among the interesting answers collected by the researcher are the following:

- Sometimes our colleagues do not accept our answers.
- We waste more time discussing the possible answers and the time given by the teacher cannot be enough to finish the task.
- I feel shy to ask my friends in the group for more explanations, and
- Some of our colleagues in the group become noisy sometimes.

Data Interpretation

The present learners' interview was selected for this study as a research instrument for the sake of unveiling the experimental group students' attitudes towards their cooperative experience. Since only few of them stated that their teachers during high school asked them to turn to work with their friends in pairs or groups occasionally, the researcher could infer that, even if considering this a cooperative work, it represents only the informal type of the cooperative approach. Students, then, were experiencing formal cooperative learning for the first time in their entire learning process and not just in grammar lectures. Also, their answers to question two revealed that they had been experiencing working with metacognitive strategies for the first time. It is, indeed, astonishing to confirm that the importance of cooperative learning and also metacognitive strategies is still neglected after the great amount of research done on their significance to the process of education.

Students reported the fact that listening to and benefiting from their peers' simple explanations was an important and enjoyable aspect of working in groups with classmates. Additionally, they listed the cooperative skills and the metacognitive skills

that they could learn through working cooperatively with peers. In fact, the most cited ones are:

- The sense of leadership and responsibility.
- Solving group conflicts.
- Discussing the other members' current knowledge, and
- Planning the process of your own activities.

Critically thinking about these skills makes one think of how important they are in the development of autonomous students and future responsible citizens. Due to these achievements, 22 students, representing 91.66 % of the group, described the process of working cooperatively as enjoyable and exciting, though some difficulties encountered when working in cooperative groups have been cited at the end of the interview. From all these explanations above, the researcher is confident enough to report at the end of this chapter that most of the students demonstrated positive attitudes towards being assigned to work in groups with their peers. Thus, the third hypothesis proposed at the beginning of this research is confirmed.

3.8. Conclusion

This chapter is considered as the heart of this research work since it covers the analysis of the data gathered through the selected research instruments, i.e., learners' both pre and post-tests, the reflective questionnaire, and the students' interview. The data were analyzed both qualitatively and quantitatively, and in addition to that, the students' performance in each activity of the pre-training and post-training tests was described in a detailed manner.

As far as the first research instrument is concerned, the aim behind using the pre-training and post-training tests was to determine whether working with metacognitive strategies in cooperative groups is helpful enough to enhance the experimental group students' understanding and use of English tenses, compared to students of the control group who have been assigned to work individually with metacognitive strategies. Indeed, the results were positive and students of the experimental group have shown better outcomes. The reflective questionnaire helped

in a different manner to validate the data; since the students' responses to the parts of the questionnaire unveiled a better understanding and utilization of the metacognitive strategies after working cooperatively with peers. Accordingly, the second hypothesis is confirmed. The fact of sharing knowledge and responsibility with group mates was the reason behind developing positive attitudes towards the cooperative approach. Students showed their satisfaction, motivation and willingness to work again with such a method in other contexts.

CHAPTER FOUR

Suggested Recommendations and Final Thoughts

4.1. Introduction

It is highly acknowledged that research in the field of education, more precisely classroom research, is well meant to be the path towards the discovery and the description of educational phenomena as well as educational problems. This would, in turn, lead to the suggestion of various solutions and remedies; which results in at the end healthy classrooms, high level students, and more developed nations. In a similar vein, the present research was conducted for the sake of investigating the role of cooperative groups in raising the students' awareness about working with metacognitive strategies, and in enhancing the students' grammar level when English tenses are concerned.

The present chapter then, being the final one, was made for the sake of highlighting the basic limitations encountered by the researcher when conducting this research. But before that, a set of important guidelines, pieces of advice, and practical recommendations were presented to educators and teachers willing to improve the quality of their education, and the achievement of their students. Thus, developing autonomous learners and training qualified teachers are among the necessary concepts discussed in the following sections of the chapter.

4.2. Considering Students: *Learners' Autonomy*

Learners' autonomy is among the highly acknowledged and debatable concepts in the field of education as mentioned by Murray, Gao and Lamb **"Motivation, identity, and autonomy have been subjects of intensive research in recent years"** (2011, p. 1). Thus, there has been a call towards a more understanding and consideration of the role that autonomy plays in the process of learning languages. Indeed, the concept of autonomy centers around the idea that **"…the learner is a fully rounded person, with a social identity, situated in a particular context"** (Murray et al, 2011, p. 13). Hence, considering the educational context, it is fair to say that teachers who seek to develop autonomous learners are in fact giving a huge chance to

these learners to actively express their own personalities, thoughts, and preferences in language learning contexts.

Benson (2001, p. 47) defined autonomy as **"the capacity to take control of one's own learning"** (as cited in Murray et al, 2011, p. 229). He further suggested that a well developed autonomous learner may in fact have control over three different issues of learning: control over learning management, control over cognitive processes, and control over learning content (Murray et al, 2011). Discussing the concept of autonomy in language classrooms led some researchers like Paiva (2006) to describe it as **"…an essential element in SLA because it triggers the learning process through learners' agency and leads the system beyond the classroom"** (as cited in Murray, 2011, p. 249). On the other hand, for Benson and Voller (1997, p.1-2), the term might be freely used:

1. For situations in which learners study entirely on their own.
2. For a set of skills which can be learned and applied in self-directed learning.
3. For an inborn capacity which is suppressed by institutional education.
4. For the exercise of learners' responsibility for their own learning.
5. For the right of learners to determine the direction of their own learning (as cited in Nunan, 2003, p 193 – 194).

Studies done by Huang (2011) revealed that students may feel uncertain about their learning process as they are still first year students at University. However, they develop a great deal of their autonomy with the help of their teachers as they grow up and progress in their studies (Murray et al, 2011). This was also emphasized once more by Nunan since he argued that it is the duty of teachers to embrace this notion of learners' autonomy and help students become active participants in their learning process. This can be done through adopting several ways besides their teaching methods. The following are indeed some suggested tips by Nunan (2003).

Step 1: Make instruction goals clear to learners:

Through this step, Nunan introduces the idea that teachers should present clearly and explicitly the pedagogical agenda to the learners. The following is an extract from the start of one of the lessons of a teacher who does the same thing. Nunan illustrates his suggested first step using her example:

> **Teacher: Today we're going to practice talking about likes and dislikes, and we're going to talk about music and movies and stuff. OK? OK Kenji? Now, I want you to open your books at page 22, that's where the unit starts, and [inaudible comment from student] ... What's that? ..... Yeah, that's right. Now, I want you to look quickly through the unit and find one example, one example of someone saying they like something, and one example of someone saying they don't like something? OK? One example of each. And I'm going to put them here on the board. (**as cited in Nunan, 2003, p. 196)

Related to the previous idea, Nunan also presents his own example of making instruction goals clear to learners.

UNIT GOALS

In this unit you will:

• Make comparisons:

"Which do you prefer, the bus or the subway?"

"I guess I like the subway better."

• Make plans:

"I'm going to fly to Spain for my vacation"

Source: Nunan, 2003, p. 196

He further suggested what he called 'a self checking exercise' in which students could answer few questions related to completing the already mentioned first step.

Review the language skills you practiced in this unit. Check [√] your answers.

CAN YOU?

Make comparisons? [ ] yes [ ] a little [ ] not yet

Find or give an example: .....

Make plans? [ ] yes [ ] a little [ ] not yet

Find or give an example: .....

Give advice? [ ] yes [ ] a little [ ] not yet

Find or give an example: .....

Source: Nunan, 2003, p. 197

These steps, as stated by Nunan, can make even young learners capable of making decisions about their own learning.

Step 2: Allow learners to create their own goals:

Nunan, through this step, interestingly reports the idea of Parkinson and O'Sullivan (1990) regarding engaging students in 'action meetings' in which they are allowed to give their opinion and express their needs, in order to modify the educational content. Under this view, they added:

> **Action meetings … would provide an opportunity for individuals to participate (interpersonally and interculturally) in an English-medium meeting, negotiating meaning and authentic content. They would also be a means of facilitating group cohesion and motivation and would be a primary mechanism for ongoing program evaluation by the participants.** (as cited in Nunan, 2003, p. 198).

Step 3: Encourage learners to use their second language outside the classroom:

Similar to step 1, Nunan also introduced this time an extract from a lesson in which a teacher encourages his/her students to use the language they are learning even outside the classroom. Having said the above, this extract may be of an inspiring value to teachers.

[The students are sitting in small groups of two to four as the teacher addresses them.]

Teacher: Well students, as you know, this morning we're going to be looking at ways that we can help learners improve their English – without a teacher, without, um, a class to come to. What've we got all around us that can help us? Well the first thing that we're going to be looking at are these things.[She bends down and picks up a plastic shopping bag.] Now in the bag - I've got a bag full of mystery objects in here - different things, but they all have one thing in common. We can use them to help improve our language. Now this is going to be lucky dip type activity. Have you ever done a lucky dip?

Students: Yes, yes.

Teacher: Yes. Where you put your hand in and you take one thing out. I'll do it the first time. Put my hand in and I'll just bring ..... something out.

[She pulls out a mirror.]

Oh, a mirror. Now how can this help us improve our language – you got any ideas? Irene?

Student: We can help, er, our voc ... vocabulary.

Teacher: Vocabulary's one thing, yes. How?

Student: We can look, er, how we pronounce the words (Mmm). We can look in the mirror and see how our mouth moves.

Teacher: Good. Yes, we can see how our mouth moves - by looking at our reflection in the mirror. For example, the sound 'th'. Can you all say 'th'?

Students: No. [Laughter]

[The teacher distributes the rest of the objects in the bag and the students, working in groups, spend ten minutes discussing the ways in which the different objects they have chosen can be used for practicing English outside the class. The teacher then calls the activity to a halt.] (as cited in Nunan, 2003, p. 198-199).

Step 4: Raise awareness of learning processes:

Concerning this step, Nunan added **"So far, I have talked about giving learners a voice in deciding *what* to learn. However, it's also important to give them a voice in *how* they learn"** (2003, p. 199). Thus, it is also required for teachers to discuss the methods adopted and the strategies used with their students. The following is an illustrative extract:

Teacher: One of the things, er, we practice in this course ... is ... or some of the things we practice are learning strategies. And one of the learning strategies that will help you learn new words is the learning strategy of 'classifying'. Do you know what 'classifying' means?

Students: No no.

Teacher: Have you heard this word before?

Students: No.

Teacher: Classifying means putting things that are similar together in groups. OK? So if I said, er, I want all of the girls to go down to that corner of the room, and all the boys to go into this corner of the room, I would be classifying the class according to their sex or their gender. What I'd like you to do now in Task 5 is to classify some of the words from the list in Task 4. OK? [In the preceding task, students had read a postcard and circled the words that describe people. They were then given a three column table with the headings:'color', 'age', and 'size'.]

(as cited in Nunan, 2003, p. 199)

Step 5: Help learners identify their own preferred styles and strategies

As the title indicates, the teacher also may consider helping students to identify their own preferred styles and strategies. This can be done through presenting to them various choices and let them select what they prefer. Based on the results of a study conducted by Widdows and Voller (1991), they stated that:

Students do not like classes in which they sit passively, reading or translating. They do not like classes where the teacher controls everything. They do not like reading English literature much, even when they are literature majors. Thus it is clear that the great majority of university English classes are failing to satisfy learner needs in any way. Radical changes in the content of courses, and especially in the types of courses that are offered, and the systematic retraining of EFL teachers in learner-centered classroom procedures are steps that must

be taken, if teachers and administrators are seriously interested in addressing their students' needs. (as cited in Nunan, 2003, p. 200)

Step 6: Encourage learner choice

Teachers, here, are advised to start considering some learners' basic and simple decisions. This would for example take the form of assigning two activities about the past tenses to students and ask them to choose only one. Though the activities might be about the same tenses, but the form and the instructions might be different. After familiarizing students with the idea of making choices, the teacher may move to a more developed step. The following work sheet is an example:

YOU CHOOSE

a) Look quickly at the next three tasks and decide whether these are listening, speaking, reading, or writing tasks. (b) Now decide the order in which you wish to do them. Circle your choices.

	I'll do this task		
Task 1: A .....task	1st	2nd	3rd
Task 2: A .....task	1st	2nd	3rd
Task 3: A .....task	1st	2nd	3rd

Source: Nunan, 2003, p. 201

Step 7: Allow learners to generate their own tasks:

Now that students are more familiar with the idea of making choices, they can interfere now in their learning process in a more deliberate way through creating their own tasks. This does not, in any manner, contradicts the role of the teacher, however it just involves the learners more in their learning process. Well, by creating their own tasks, researchers mean that students may for example prepare a grammar activity and then exchange the activities with each other so that each student, or each group of students, solves the other's activity, and vice versa (Nunan, 2003)

Step 8: Encourage learners to become teachers:

This new challenge for teachers involves the idea of allowing students to select or develop some sort of material in order to teach it to other students. In a similar vein, Assinder (1991, p. 228) added:

> **I believe that the goal of 'teaching each other' was a factor of paramount importance. Being asked to present something to another group gave a clear reason for the work, called for greater responsibility to one's own group, and led to increased motivation and greatly improved accuracy. The success of each group's presentation was measured by the response and feedback of the other group; thus there was a measure of in-built evaluation and a test of how much had been learned. Being an 'expert' on a topic noticeably increased self-esteem, and getting more confident week by week gave [the learners] a feeling of genuine progress.** (as cited in Nunan, 2003, p. 202)

Step 9: Encourage learners to become researchers:

As a final step towards the development of autonomous classrooms, teachers may consider the idea of developing students into researchers. In fact, there is a wealth of evidence that highlights precedent attempts by some teachers, who were involved in some sort of research, and who asked their students to collect data for them or even interpret the data for their teachers (Nunan, 2003).

After deliberately explaining to teachers these nine steps towards the creation of a more autonomous learning atmosphere, it is the duty of the investigator now to explain to the reader the reason behind this. In fact, the concept of learner autonomy is tightly related to the notions of cooperative learning and metacognitive strategies. First, students in cooperative groups take charge of their own learning if they truly want to celebrate the success of the whole group. They need to commit to the roles

assigned by the teacher, i.e. they need to be skillful enough to respect the time allocated, the length and the quality of the final report, and take the first step towards solving group conflicts when they occur. They also have to feel responsible for their own as well as their peers' learning. Thus, training learners in advance to be autonomous learners would facilitate the process of implementing cooperative learning; for both teachers and learners.

On the other hand, when discussing the relationship between metacognition and learners' autonomy, it is important to mention that **"Metacognition helps learners become active participants in their own performance, rather than passive recipients of instruction and imposed experiences"** (Paris and Winograd, 1990, p. 8). Thus, Paris and Winograd (1990) continued that raising the students' consciousness about these metacognitive strategies enables them to monitor their own learning by themselves, as well as it helps in developing some positive affective variables such as motivation, self-esteem, and autonomy. Indeed, **"It is believed that metacognition includes *strategies* for planning, monitoring, and evaluating of language use and language learning which are considered as key elements in developing autonomy"** (Mahdavi, 2014, p. 533).

4.3. Considering Teachers

Rethinking education in this increasingly changing world is a basic requirement for nowadays teachers, if they want to keep up-dated, and if they want to be successful teachers in different contexts. As boundaries between nations and cultures fade, diversity keeps characterizing instructional situations. Thus, one of the undisputed proposed solutions is to prepare ready and skillful teachers; to deal with different types of learners and various learning situations. One of the debatable issues in this changing world is the notion of individualization Vs cooperation. On this, Brody, Cohen, & Sapon-shevin (2004, p. 3) contended that **"The realization that complete individualization is not a practical or even desirable solution to meeting the diverse needs of children within a single classroom has led many inclusion advocates to promote cooperative learning as the pedagogy of choice".** Thus, it

seems to be necessary that teachers should be exposed to this method of teaching before and after being hired. This, in fact, has a seamless relationship with the quality of education and training that teachers receive before getting started in the teaching profession. Thus, it is of a great value to put a serious focus on preparing teachers; as they are one of the significant resources in educational settings.

4.3.1. Teachers' Education and Training

The importance of education is the one reason behind the fact that **"We criticize the existing educational system in the countries we live in, comment on the new systems around the world or suggest new ways of teaching and learning"** (Doyran, 2012, p. 1). However, it is not enough to speak only about education as far as teachers hold also a huge responsibility towards a powerful and an effective teaching. The question that rises here is how should effective teachers be educated and trained? As a first step, it is important to know that there is no clear-cut answer to this question. Whatever program is adopted to educate and train future teachers, there is still always an area that is in need for, or capable of change and development. The idea behind the tremendous amount of literature about teachers' education and training, then, is not to find an end to the debate, but rather to keep satisfying the demanding nature of this world.

Teacher education and training is considered to be decisive to students' achievement; as it guarantees that teachers are competent and motivated to do their job. On this issue, Karpati stated that **"…teacher quality is the most important factor in an education system, and the second most important factor (only preceded by family background) among the variety of influences affecting student achievement"** (2009, p. 203). However, knowledge of the subject matter is not the only issue that makes an effective and a well educated and trained teacher. There are numerous issues that should be also present. However, it is difficult to identify them all since **"…different strategies call for different teacher skills"** (Karpati, 2009, p. 204).

A research done by the European training experts has led the national delegates of the EU working group to specify a list that includes the basic characteristics of a competent teacher; which should in turn be considered when dealing with teacher education and training. They are, indeed, summarized as follows:

Key Competences Identified by the EU Working Group
Competences related to the learning process
To help students to become citizens of their countries
To develop skills and competences that are needed in a knowledge-based society
To connect new competence development with subject knowledge acquisition
Competences related to the teaching process
To attend to the needs of pupils or students of different social, cultural or ethnic backgrounds
To create an effective learning environment which supports the learning process
To incorporate information technology in various learning situations and all teacher activities
To collaborate with other teachers/instructors and other professionals involved in the education of the same groups of pupils or students
To participate in the development and evaluation of school or teacher training curricula and organization.
To build a partnership with parents and other social partners
Competences related to the civic role of teachers
An interest in highlighting and solving problems
To organize and advance one's own professional development as part of lifelong learning. [Teachers must equip their students with competences needed in a knowledge-based society. (…) Teachers must be prepared to take initiative in their careers.]

Table 4.1: Teacher Competences as Set out in EU Documents

Source: Karpati, 2009, p. 205

One of the related significant issues that the researcher wants to deal with in this chapter is how teachers can be exposed to cooperative learning along their education and training. However, a summary of the main stages that individuals go through to be well trained teachers is first provided. In fact, considering these stages; means that the following sections will importantly highlight the fact that teacher education is

basically composed of initial teacher education, induction, and continuous professional development.

Initial Teacher Education

Musset, when defining initial teacher education stated that **"Initial teacher education represents the entry point into the profession, and the way it is organised plays a key role in determining both the quality and the quantity of teachers"** (2010, p.4). This step is, importantly, the most focused on among the three phases of teacher education and training. Being the first step towards the formation and the preparation of teachers, initial teacher education is considered really valuable. It is well meant to provide future teachers with knowledge of the subject area, as well as with the basic skills they need to get involved in the teaching profession.

Precisely, research on initial teacher education highly advocates its impact on the achievement of students in any subject matter. Thus, to have successful initial teacher education, future teachers should not only be exposed to courses about the subject-matter; rather, also courses about how to teach this subject-matter to other students. Additionally, they should be trained to work effectively with various types of students. The following points are examples of the areas that future teachers should be exposed to:

- Solid knowledge about the subject matter.
- Teaching skills.
- The ability to work in different contexts with students and colleagues who have different backgrounds, cultures, and personalities.
- The ability to continuously and professionally develop themselves (Musset, 2010).

Indeed, initial teacher education can be one of two models; concurrent and consecutive. In the concurrent model, future teachers are exposed to knowledge about the subject matter as well as the pedagogical path towards teaching that subject matter. This is really a disturbing and an unpleasant matter for students who do not seek to

teach, and prefer different labour markets. The second option, on the other hand, concerns dealing with pedagogical issues, including teaching methods and approaches, after getting a diploma in the subject-matter. The point behind this division is to give the chance to graduates to think and to decide whether to enter the teaching profession or another workplace (Musset, 2010).

As far as the concurrent model is concerned, the researchers' advice is to consider giving a chance to future teachers to practice teaching during their initial teacher education; even if it is for a limited period of time. **"The goal of these practical field experiences is to familiarize students to classrooms, and to avoid them having a 'reality-shock' at the beginning of their teaching career" (**Musset, 2010, p. 16).

Induction

There is not much to insist on when talking about induction, except the point that the notion of induction either means including a new teacher to the teaching profession, or including a teacher in a new school. Well, discussing the issue of teacher education and training leads to the adoption of the first meaning; as it seems more appropriate to the context. More precisely, by teacher induction researcher mean the first year, or the first years of teaching where the teacher still can be seen as novice, i.e., before getting some experience of teaching. This phase is the hardest one for most of new teachers in the field, as it represents their first step towards the real practical world. At this stage, teachers start developing their professional identity, and thus they need a certain help and assistance from administrators and colleagues.

Continuous Professional Development

Regarding the last and the longest phase of teacher education and training, Villegas-Reimers defined the professional development of teachers as **"…a lifelong process which begins with the initial preparation that teachers receive and continues until retirement"** (as cited in Musset, 2010, p. 12). It is common knowledge that **"Even if they receive a quality initial teacher education, teachers need to be trained their whole life…Continuing training is a great tool to develop**

the skills needed to reach higher student outcomes" (Musset, 2010, p. 7). Hence, updating their knowledge and skills is of paramount importance for teachers in order to cope with the new arriving and challenging issues in the field of education. To do so, Musset proposes several ways that can be used for continuing training. These include:

- Dissemination conferences.
- Workshops (preparation to new subject-matter content).
- School-based activities (study groups, courses).
- Personal teacher development (individual activities outside of schools) (Musset, 2010, p. 7).

Researchers in the field of teacher education and training claimed that there is, unfortunately, no coherence between the previously mentioned phases. Thus, there is a call towards articulating these three components in a conjoined manner. Teachers should be, then, provided with an exact image about what truly occur in classrooms.

4.3.2. Familiarizing Cooperative Learning

As it was deliberately discussed in the previous section, teacher education and training is the period through which the teacher acquires the basic knowledge and skills to face the challenges of nowadays education. Cooperative learning, then, seems to be among the topics that should be treated within teacher education and training phases; if policy makers are truly wishing to embrace this significant method of teaching. This is, in fact, based on the idea of Johnson and Johnson when describing the effective teacher. They contended that an effective and well trained teacher would know when and how to deal with different goal structures including the cooperative one. They continued **"This may not be easy, as teacher training has by and large neglected preparation in the appropriate utilization of student-student interaction"** (1987, p. 1).

Turning the attention to the Algerian context would probably lead to notice that initial teacher education follows the concurrent model, i.e. students acquire knowledge

about the subject matter and then may be found in a real teaching context with limited, not to say any, awareness about the way that subject matter should be taught. They may only get some introductory lessons in the module of TEFL (Teaching English as a Foreign Language) such as The Grammar Translation Method, The Direct Method, The Audio-Lingual Method, and Communicative Language Teaching. In relation to the explanation above, the researcher decided to propose the inclusion of a detailed lesson about the cooperative method in the TEFL module to students of English; who are a project of future teachers, as Lyman and Davidson said **"…colleges of education should make a special commitment to teaching both the rationale and technique of cooperative learning to undergraduate and graduate students"** (as cited in Brody et al, 2004, p. 83).

4.4. Practical Suggestions for EFL Teachers

As mentioned earlier, it is not frequent to find a journal, a book, or even a conference where the success and the positive outcomes of cooperative learning are not discussed. This fact may encourage teachers to attempt implementing this method in their classrooms. However, it is necessary to highlight the point that the process is not easy as it seems. Teachers may feel, at the beginning, uncomfortable. This is due to the fact that they actually started implementing this method **"…without a firm understanding of the underlying principles…"** (Brody et al, 2004, p. 3).

On the other hand, seeking to promote metacognition in the classroom needs first a basic knowledge of the strategies and a careful selection of the way of introducing those strategies to beginner learners. Thus, the present section presents some valuable pieces of advice including how to start implementing a simple form of cooperative learning besides teaching the critical thinking, social, and metacognitive strategies.

4.4.1. Marginal Implementation of Cooperative Learning

Cooper et al (1994) provided an interesting article entitled *Cooperative Learning in the Classroom,* in which they suggested some tips to teachers who intend to implement the cooperative approach in their classrooms. These are namely:

- Starting the implementation of cooperative learning in classes that do not include a very large number of students. This would give a sense of comfort to teachers and facilitate the process of classroom management.
- Structuring small groups, groups that include no more than four students, as they are easy to manage in terms of noise and group conflicts.
- Opting for criteria-referenced tests when dealing with students' achievement evaluation, and
- Considering rewarding students who show positive behaviour in cooperative groups including, but not limited to, assisting their group mates to accomplish the task and taking the initial step to solve group conflicts.

In fact, the above mentioned steps seem to be of a simple nature; however, this does not deny the fact that a lot of details concerning the process have to be seriously taken into consideration. Neglecting some serious aspects of the cooperative approach may result in a failure in implementing this significant method. The first thing to consider at this level is that splitting students to work in groups with other peers without a serious consideration of the five elements of cooperative learning does not in any way mean that cooperation is being structured in the classroom. Indeed,

> **It is only under certain conditions that cooperative efforts can be expected to be more productive than competitive and individualistic efforts:**
>
> 1. **Clearly perceived positive interdependence;**
> 2. **Considerable promotive (face-to-face) interaction;**
> 3. **Clearly perceived individual accountability and personal responsibility to achieve the group's goals;**
> 4. **Frequent use of the relevant interpersonal and small group skills;**
> 5. **Frequent and regular group processing of current functioning to improve the group's future effectiveness."** (Johnson et al, 1991, p. 16)

✓ Option One:

In a similar vein, and for the sake of facilitating the process of implementing cooperative groups in the classroom, Johnson et al further suggested a checklist that would be very helpful in reminding the teacher with his/her main roles as well as his/her students' roles. This first suggested checklist summarizes the most important steps that the teacher may consider going through, as moving in the process of implementation, and it may take the following form:

I. Before the group begins:
   A. Expect them to learn, to enjoy, and to discover.
   B. Team up with people you don't know.
   C. Make your group heterogeneous.

II. As the group begins:
   A. Make a good first impression.
   B. Build the team.
      - Do something that requires self-disclosure.
      - Take interpersonal risks that build trust.
      - Establish team goals.

III. While the group is in existence:
   A. Work at increasing self-disclosure.
   B. Work at giving good feedback.
   C. Get the silent members involved.
   D. Confront the problems immediately.
      - Work on issues in the group even if they appear to be just between two members.
      - Do not assume you cannot work with someone just because you do not like or respect them.
      - If the group cannot solve a problem, consult the instructor as a group.
   E. Vary the leadership style needed.

IV. Wrapping up the group:

A. Summarize and review your learning from the group experiences.
   - Analyze the data to discover why the group was more effective or less so.
   - Provide final feedback to members on their behavior or contribution.

B. Celebrate the group's accomplishments.
   - Hold a final feedback meeting.

Figure 4.1: Checklist for Better Learning Groups

Source: Johnson et al, 1991, p. 59

✓ Option Two:

Teachers, when seeking to implement the process of cooperation in the classroom may guide themselves with the table proposed by Jolliffe (2007), in which she included five important key steps for a better implementation of the process.

Step	Title	Activities
Step 1	Class Cohesion	• Understanding class friendships • Getting to know your activities • Class-building activities • Learning how to be a friend • Class meetings
Step 2	Team-building	A. Getting to know each other B. Beginning to work together C. Working together

		D. Reflecting and Reviewing
Step 3	Being able to resolve conflict	• Procedures for conflict resolution • Understanding body language • Peace path
Step 4	Teaching the skills	• Teamwork skills/ Skills builder exercises • Levels of cooperative learning skills (four-stage rocket) • Stages in teaching the skills
Step 5	Incorporating cooperative learning into lessons	• Partner work • Choosing appropriate lessons • Lesson planning • Selecting cooperative learning structures • Assessing cooperative group work

Table 4.2: Five Key Steps to Implement Cooperative Learning

Source: Jolliffe, 2007, p. 131

✓ Option Three:

As explained in section 1.4.4.2, informal cooperative groups are not permanent groups. They are basically created to serve the objective of one class or one discussion. The teacher can opt for this simple form of cooperative learning at any time during the semester, and nothing obliges him/her to keep students working in the same way for a longer time. In fact, adopting the informal type of cooperative learning is a clever way

towards familiarizing students with such a method of teaching. Besides, novice teachers get the chance to start practicing the implementation of cooperative learning in their classrooms as well as some experience with that.

To encourage teachers to start implementing informal cooperative learning, knowing that they are on the right path, Johnson et al unveiled some important steps towards structuring informal cooperative groups. The following represents an example of an informal cooperative learning lecture:

- For the sake of activating their background knowledge and predicting what the lesson is about, teachers may require students to work on a certain task in pairs, for an *introductory focused discussion.*
- The following step is a *lecture segment* step which takes approximately 10 to 15 minutes; in which the teacher introduces to the students the first part of the lecture.
- The third step involves asking students to work in the same pairs, for the sake of discussing another task about the previously introduced first part of the lecture. Students feel the need to accomplish the task and care about each others' understanding because the teacher informs them at the beginning that some of them will be randomly selected to present their performance in front of the other classroom members.
- In a similar way, the teacher would deal with the second segment of the lecture and assign students to work again in the same pairs for another task about the segment concerned. This procedure should be repeatedly done till the whole lecture is over.
- The last step towards the completion of the informal cooperative lecture is asking students to sit in pairs again for a *closure-focused discussion.* This **"…should result in students' integrating what they have just learned into conceptual frameworks"** (Johnson et al, 1991, p. 92).

To be a bit at a practical level, the researcher tried to apply this model on a grammar lecture, to teach for instance the past time to students. The result is described as follows:

- The *introductory focused discussion* would take the form of the teacher giving an example to students, and asking them to discuss in pairs the tenses used and the form of the conjugated verbs.

e.g. He was walking when it started to rain.

- After completing the initial step, the teacher may move to explain the main uses of the past simple.
- Students, then, may be required to work in pairs again to accomplish such a task about the first segment, i.e. the past simple.

e.g. Provide the past forms of these verbs:

Do, Drink, Knock, Spend, Smile, Provide, Understand, Cry, Establish, Sit, Beat, Inform, And Know.

After the completion of the task, some students may be randomly chosen to present their answers in front of their peers.

- The teacher then would apply the same way on other segments of the past tenses lecture, like the past continuous or the past perfect.
- As far as the last step is concerned, the teacher may recommend students to provide an answer for an activity that merges all forms of the past tenses; for the sake of engaging them in a closure-focused discussion

e.g. Complete the questions to get more details

- ✓ I had an accident on Monday. –What ……? (Happen/ to you).
- ✓ When I met him, he was talking on the telephone. – What …….. about? (He / talk).
- ✓ The company wanted to finish this house last week. – And when……? (They / finish it).

- ✓ I saw your wife last night. She was driving a car. – What car…….? (She / drive).

Adapted from (http://www.e-grammar.org/past-simple-continuous/test3-exercise3/)

Engaging students in such an example of informal cooperative lectures would be interestingly helpful in achieving different objectives, namely:

- Helping students use their background knowledge.
- Developing students who are active participants in their learning process.
- Increasing the sense of caring about each others' learning.
- Enhancing students' achievement, and most significantly
- Strengthening the idea of working cooperatively in the minds of students, as it smoothly prepares them for a later implementation of formal cooperative learning.

Besides the consideration of the previously mentioned pieces of advice of Cooper et al (1994) and the five basic elements of cooperative learning, and after the adoption of one of the above mentioned options, teachers may also be advised to assign different roles to members of the cooperative groups created; as this may lead to a better organization of the group itself, and the entire classroom. Jolliffe (2007, p. 130) proposed a photocopiable guiding sheet which includes various roles of the cooperative group members, with illustrative pictures and explanations. The teacher may simply distribute these sheets to the groups after they are created, to give the chance to every student in the group to choose his/her role and deal with it in a motivating way. The following page, then, is only a photocopy of the sheet, without any changes or modifications.

Appendix 5 Roles in Groups

Recorder  Function: Keeps an accurate record Checks everyone's understanding	**Participation Checker**  Function: Helps others to join in Ensures everyone gets a turn	**Questioner**  Function: Asks group members to explain and say more Asks for paraphrasing	**Noise controller**  Function: Checks on use of quiet voices One speaker at a time
Materials manager (gofer) Function: Collects materials returns them Keeps things tidy 	**Organiser** Function: Keeps everyone on task Watches the time 	**Checker** Function: Makes sure everyone has learned or completed the task checks for understanding and agreement 	**Praiser** Function: Praises individuals' contributions Helps celebrate achievements 

After implementing cooperative learning, and for the sake of always revising the process, critically thinking about it, and making it better, the teacher may use the following questionnaire to check the students' views about and attitudes towards the new implemented approach. After analyzing the students' answers to the eight questions composing the questionnaire, the teacher may know exactly which aspects of working in groups are trouble spots for the students. Consequently, treating these problems would lead to a better satisfaction from the part of the students and, thus, better positive effects of cooperative learning on them. The questionnaire is formulated as follows:

Please put a ring round the letter of answer that you think is most suitable for each question.

1. How interesting did you find your work in the group?

a) Very interesting b) Fairly interesting

c) Quite interesting d) Not interesting at all

2. How difficult did you find your work in the group?

a) Extremely difficult b) Fairly difficult

c) Just about right d) Very easy

3. Did you understand exactly what the group was supposed to do?

a) I knew exactly what to do b) At first I didn't understand

c) It was never clear

4. How many times approximately did you have the chance to talk during group work today?

a) None b) Once or twice

c) Several times d) A lot

5. If you talked less than you wanted to, what were the main reasons?

a) I felt afraid to give my opinion b) Somebody kept interrupting me

c) I was not given the chance d) Nobody listened to me

6. Did you get on with everyone in your group?

a) With a few b) With about half of them

c) With all of them d) With none of them

7. Did you help each other with the task?

a) All the time b) Most of the time

c) Sometimes d) Not at all

8. Would you like to work with this group again? a) Yes b) No

Figure 4.2: Pupil Questionnaire

Source: Jolliffe, 2007, 137

4.4.2. Teaching Critical Thinking Skills

In instructional situations where only traditional ways of teaching are implied, students may not well grasp the idea of working with others in groups that require sharing thoughts, materials and endeavours. Thus, to introduce such a new method, students should be exposed to knowledge about the difference between learners, ways of establishing positive social relationships, the sense of leadership, feeling responsible of the group, solving conflicts, well treating the given academic content and many other aspects. In fact, these are all categorized under the name 'critical thinking' and 'social skills'.

Critical thinking skills are seen as prerequisites since they contribute in the development of successful citizens. At a narrow level, the implementation of the cooperative approach requires the existence of critical thinking skills. Well, **"The purpose of specifically teaching critical thinking…is to improve the thinking skills of students and thus better prepare them to succeed in the world"** (Schafersman, 1991, p.1). However, what teachers generally do is teaching students the content of the subject matter without referring to the way students should think about it; in other words without referring to critical thinking.

The amount of information that students keep being exposed to makes it hard for them to understand and acquire every introduced fact. Researchers, thus, argue that there should be a shift from teaching facts to teaching useful ways to intelligently and successfully deal with these facts. Accordingly, Raymond S. Nickerson (1987) added that the use of evidence, the organization of thoughts, detecting similarities,

independent learning and being able to solve problems are among the characteristics of a good critical thinker (as cited in Schafersman, 1991, p.4).

Seriously considering the development of such characteristics with students leads to the conclusion that **"critical thinking is a learned ability that must be taught"** (Schafersman, 1991, p.3). Though teachers may opt for the teaching of critical thinking principles directly and explicitly during lectures, researchers still do not really favour that. Alternative ways might be assigning homeworks and quantitative exercises to students as well as written production tasks. Also, teachers may rely on what researchers call 'questioning techniques'. In their book, *Asking the Right Questions: A Guide to Critical Thinking,* Brown and Kelly presented some questions that teachers might use. Selected examples of these questions include:

- What do you think about this?
- Why do you think that?
- How are you viewing it?
- Should it be viewed differently? (as cited in Snyder and Snyder, 2008, p. 95).

By introducing the notion of critical thinking in classrooms, the implementation of cooperative learning may seem easier, as far as students would be ready to a great extent to face the basic aspects of cooperation.

4.4.3. Teaching Social Skills

The previous section spoke about the importance of teaching critical thinking skills to students in order to make the implementation of cooperative learning a smooth and a successful process. Likewise, the teaching of social skills plays a significant role in the success of the cooperative approach. Johnson and Johnson strongly emphasized this fact saying that **"Obviously, placing socially unskilled students in a learning group and telling them to cooperate will not be successful. Students must be taught the social skills needed for collaboration, and they must be motivated to use them"** (1987, p. 13). In fact, accepting others' views, helping others, flexibility, tolerance, respect, public speaking, and solving conflicts are all

examples of social skills; that turn the instructional situation to a place where both joy and academic success meet each other.

It is known that during the process of socialization, individuals acquire a considerable amount of social skills. However, it is also important not to forget that the process of socialization does not stop once individuals join school. Rather, it is a long and a continuous process. Thus, schools, more precisely classroom settings, are a primary source of teaching, fostering, and developing the social skills of students. Parallel to this, classroom settings are the essential places where students continuously make use of their social skills; in order to deal appropriately with teachers and peers. Moreover, working in cooperative groups demands socially skilled members, and helps the others who are not skillful enough to develop their skills as well. Thus, to create interesting, motivated, and successful cooperative groups, and for the sake of facilitating the process for both teachers and students, the following sections are provided. Indeed,

> **We are not born knowing instinctively how to interact effectively with others. Interpersonal and small group skills do not magically appear when they are needed. Students must be taught the social skills required for high-quality collaboration and be motivated to use them if cooperative groups are to be productive.** (Johnson et al, 1991, p. 21)

Researchers in the field argue that the teacher can deliberately teach the social skills to his/her students. The investigator, then, is proposing in the following sections some skills and classroom activities that teachers need to consider; to go hand in hand with the cooperative teaching method.

- ✓ Problem Solving

This concept can be defined as **"…the process of making something into what you want it to be"** (VanGundy, 2005, p. 23). Generally speaking, it is easy to identify

the current situation, i.e. the problem, and also the desired situation. However, the tricky part of the story of problem solving is to know how one should do that. Related to this idea, the notion of problem solving is tightly related to the notion of creativity; which means that each one of us may respond to a certain existing problem in a different way than others may do (VanGundy, 2005).

Cooperative groups are, clearly, a source of conflicts since group mates may not agree on the roles proposed to them, may not consider helping each other to learn the assigned academic content, or may simply not agree on a common answer to the given task. Thus, preparing students with such situations, by teaching them the needed problem solving skill, seems to be a requirement.

In order to teach this skill to students, Polette (2005) suggested a good way, especially to language learners. It is actually through fairy tales. Language learners already get exposed to a great deal of stories and fairy tales along their learning process, and which are considered rich both in terms of language and moral lessons. Thus, the idea of Polette (2005) is to benefit from fairy tales in another additional way. Accordingly, teachers may provide students with a fairy tale, followed by a worksheet that includes these elements, as shown in the problem solving model below:

A Problem Solving Model

Every story has a problem that must be solved. Read the story to the point where the problem arises. Before finishing the story to see how the author solves the problem, try solving the problem yourself by using the steps listed below.

Title: …….

Author: ……

1. What important facts can you state about the situation?

……
……
……

2. State the major problem
3. List as many ways to deal with the problem as you can. These are your alternatives.
4. Select the three best ideas and enter them on the decision grid below.
5. Two criteria for judging ideas are provided in the grid. The criteria can be changed depending on the problem and the solutions provided.
6. Evaluate each idea on a scale of one to five. A rating of one is poor; a rating of five is excellent.

Scale 1-5 Best Ideas	Is it fast	Is it low-cost

Figure 4.3: A Problem Solving Model

Source: Polette, 2005, p. 117.

This worksheet provides students with the chance to think about and propose solutions and alternative solutions to the same single problem, in addition to how to better choose the most appropriate one; depending on the situation and the circumstances.

- ✓ Flexibility:

In an attempt to define flexibility, Mannix said that **"Being flexible involves being able to make changes to existing plans, …accommodating things that you weren't expecting, …or making something work that wasn't originally in the plans"** (2009, p. 14).

1. Teachers may start teaching the concept of flexibility by writing, for example, the word on the board and let students discuss its meaning. Also, students may share with the group their personal stories with flexibility, i.e. situations in which they had to be flexible (Mannix, 2009).
2. Other types of exercises may be, for instance, engaging students in a written production task, where they are mainly required to write something about "How could you show flexibility if you had planned to go out for a family picnic and then it just started raining?"
3. The following worksheet is also proposed by Mannix (2009) as an inspiring source for teachers to engage students in activities that turn around the idea of teaching them flexibility.

Name…….. **Date…….**

Flexibility

Directions:
How could each of these people show the quality of flexibility? Write your answer on each line.

1. Jacob was expecting his friend Michael to show up at 6 o'clock so they could walk to the movie theater.
Michael called and said that his family had unexpected company, so he wouldn't get to Jacob's house in time to walk with him to the movie. Jacob was counting on seeing the movie that night.

……..

2. Emily and her sister Emma were working on a family photo project. Emily decided to change all of the photos of herself because she didn't like the way she looked in them. Emma had a plan made up for how the photos should go in the book, and now that Emily wanted to change them, it wouldn't be the way she wanted.

……

3. Joshua had his heart set on being the quarterback for the team he played with, but the coach told him he thought Joshua would be a better running back, at least for this season.

……

4. Madison finished her homework and had it all set next to the door so she wouldn't forget it. When she got to school, she noticed that her dog had walked across her paper — the one that was supposed to be turned in today. There were brown footprints across the first three pages.

……

5. Andrew hated to get his hair cut because he liked the way it looked. His mother said that he had to at least get a trim before the family went to his cousin's wedding. In fact, his cousin had specifically asked whether Andrew would take the pink dye out of his hair before they did the wedding pictures.

……

6. Hannah ordered a blue - and - white - striped sweater online. She ordered it in plenty of time to wear it to a big party that weekend. When the box arrived the day before the party, she opened it to find a lovely pink - and - white - striped sweater.

……

Figure 4.4: A Model for Teaching Flexibility

Source: Mannix, 2009, p. 16.

4.5. Valuing Grammar: *Suggested Lessons*

As highlighted previously, this research is an experimental one in which the researcher aimed at investigating the effectiveness of cooperative learning on the understanding and use of both metacognitive strategies and English tenses by second

year LMD students of English at the University Center Ahmed Salhi, Naama. Accordingly, this present section seeks to suggest to teachers some grammar tasks that may be assigned to students; in case teachers intend to implement the cooperative approach in their grammar classes. The researcher opted for the following order of tenses, i.e. the same like in the training phase explained in the second chapter of this research work:

- The present tenses.
- The past tenses.
- The future tenses, and
- The perfect tenses.

More details can be organized as follows:

First Session: The Present Time

Activity One: **Choose the correct verb form.**

1. I *write/ am writting/ am writing* a new letter.
2. Susan *is diging/ digs/ is digging* the garden at the moment.
3. Jane *is going/ goes/ go* to bed at 10 o'clock on weekdays.
4. I am in London this summer. I *learn/ am learning/ learning* English.
5. We *are meeting/ meet/ met* our friends next week.
6. My brothers *writes/ are writing/ write* letters every week.
7. The bus sometimes *is arriving/ arrive/ arrives* in the morning.
8. James is a student. But he *work/ works/is working* this week.
9. Lions *are living/live/ is living* in Africa.
10. Our train *leaves/ leave/ is leaving* at 9.25.
11. She *is going/ goes/ gos* to the cinema tonight.
12. My parents *are watching/ watch/ watching* TV now.

Activity Two: **Complete the sentences with the verbs in brackets**

1. Look. He ……. To us. (listen)
2. We …… at the hotel this week. (stay)
3. I …… to bed early on Sundays. (go)
4. My mother is at the shop. She …….. a new dress. (buy)
5. Jill …… a lot of money. (have)
6. The bus ……. On Sunday night. (leave)
7. Please, stop! You …….. so fast! (drive)
8. We …… in Berlin each year. (meet)
9. We …… to the disco on Friday. (go)
10. He usually ……. On time. (come)

Adopted from (http://www.e-grammar.org/present-simple-continuous/)

Second Session: The Past Time

Activity One: **Conjugate the verbs between brackets in the past simple or the past continuous.**

1. When the post man (arrive), my father (have) a shower.
2. While my brother (study), my grandmother (make) some muffins.
3. I (go) to the doctor two days ago because I (have) a terrible headache.
4. When I (be) ten, I (eat) a sandwich every evening.
5. He (miss) the train because he (talk) with some friends.
6. The thieves (come) into the house while the man (sleep).
7. I (drink) a glass of water at eleven. I'm not thirsty now.
8. You (write) the composition last week?
9. My mother (not be) at home when she (fall) down the stairs.
10. The children (plant) a tree when their mother (call) them.

Activity Two: **Write the most suitable words in each gap. (ago, yesterday, last, while, when, as, on, in, at)**

1. Tommy's father worked in that office two years …….
2. The plane was flying …… 8p.m …….

3. My best friend went to London …… month.
4. …… I was having dinner, my sister was having a shower.
5. ……. did the supermarket close?
6. Your aunt studied German …… 2001.
7. Rose played in an orchestra …….. she was 12 years old.
8. Jason was swimming …….. his girlfriend was drinking a coke.
9. The TV broke …….. 26th October.
10. …….. did he deliver the shopping?
11. My father's friend had a baby ……
12. The suspect can't have committed the crime. He was having dinner in the restaurant that time …….
13. My cousin bought the PSP ……. he was in London.

Adopted from (http://www.englishexercises.org/makeagame/viewgame.asp?id=734)

Third Session: The Future Time

Activity One: **Complete the sentences with the verbs in brackets and use future simple or continuous.**

1. I can buy it for you. I (shop) in the afternoon anyway.
2. Is bill at school? – No, he isn't. I suppose he (come).
3. I hope Simon (be) there.
4. Did you remember to invite Mrs. Oates? – Ow, no! I forgot. But I (call) her now.
5. I'll have a holiday next week. I (not get up) at 6 o'clock as usual.
6. You are so late! Everybody (work) when you arrive at the office.
7. Be careful or the cars (knock) you down.
8. We (move) our house this time tomorrow.
9. He (play) tennis at 7.30. He usually starts at 7 o'clock. Could you come before that?
10. Your suitcase is so big. I (take) it for you.

Activity Two: **Make questions with the expressions in brackets. Use future simple or continuous.**

1. I am not sure if I can offer this room. …….? (our guest/ like/ it)
2. Can I borrow your laptop tonight? …….? (you/ use/ it/ at about 9 o'clock)
3. We arrive in Aberdeen at 1 o'clock. ……..? (we/ have/ time/ for/ lunch)
4. The show starts at 8. Please, …….? (you/ drive/ me/ there)
5. Your journey will be so long. How ……. while you are on the train? (you/ spend/ your time)
6. I've just missed the train. How ……..? (i/ get/ to school)
7. I'd like to see your project. If I come at 4.30, ……(you/ work/ on it)

Adapted from (http://www.e-grammar.org/future-simple-continuous/)

Fourth Session: Perfect Tenses

Activity One: **Use the verbs in brackets in present prefect simple or continuous.**

1. We can go home. We (mend) three cars today.
2. We (mend) cars since 1 o'clock and we aren't finished.
3. Fortunately, I (find) my credit card. Here it is.
4. I (look for) my keys since we came home. Where are they?
5. She (make) puddings all day.
6. What you (do)? You are so dirty!
7. Why are you crying? – I (watch) a film.
8. Joy (send) you a letter. Look!
9. I (clean) windows since lunch time. It's so exhausting.
10. I can see that you (clean) the windows in the hall and in the kitchen
11. You (work) in the garden so long. You should take a rest now.
12. How many years he (have) this car?

Activity Two: **Which one is the right answer (a or b)?**

1. Why didn't he do his homework?
    a) He has forgotten about it
    b) He had forgotten about it
2. Why were they so tired when they arrived?
    a) Because they were walking all the way.
    b) Because they had been walking all the way.
3. When did you make your reservation?
    a) After I had checked the information
    b) After I checked the information
4. How did she recognize you?
    a) I had sent her my photo
    b) I sent her my photo
5. Where have you been?
    a) I had worked in England
    b) I have worked in England.
6. Was the exam over when you were leaving?
    a) Yes. We had answered all the questions
    b) Yes. We answered all the questions
7. Why were you late?
    a) I had been travelling in a traffic jam
    b) I have been travelling in a traffic jam
8. Why didn't he hear the telephone?
    a) He was watching TV
    b) He had watched TV

Activity Three: **Choose the correct tense.**

1. In twenty years' time most people *will be using/ will have been using* the internet.
2. By this time next year we *will be moving/ will have moved* into our new house.

3. When he retires, he *will have been working/ will work* for fifty years.
4. By 2050 holidaymakers *will have been travelling/ will be travelling* to the moon.
5. As soon as we reach the coast, we *will have sailed/ will have been sailing* for a week.
6. They *will have built/ will build* the station by November.
7. I *will get/ will have got* a job as soon as I leave school.
8. He will come back in summer. By then he *will be staying/ will have been staying* in Cork for two years.
9. At midnight, the speakers *will have been presenting/ will have presented* their projects for ten hours.
10. When we go to see our kids, they *will be/ will have been* at the camp for a fortnight.

Adopted from (http://www.e-grammar.org/future-perfect-simple-continuous/test1-exercise1/, http://www.e-grammar.org/present-perfect-simple-continuous/test1-exercise5/ , and http://www.e-grammar.org/past-perfect-simple-continuous/test2-exercise2/)

4.6. Cooperation at a Wider Level

Besides experiencing working cooperatively with peers in the classroom, researchers argue that students develop a cooperative way of thinking and become more successful citizens through noticing that cooperation exist also among the school or the faculty stuff. This new vision of cooperative learning moves teachers from a context governed by the idea of 'who can teach best' to a new motivating atmosphere where they all feel secure and assisted. Letting the idea of cooperation among teachers and school members take place in the real world means that a huge chance is being presented to teachers in order to share their teaching experience, innovations, and ideas with each other; which in turn opens the door for more enjoyment of the teaching profession and more positive outcomes of the whole school or college. In this sense, Johnson and Johnson added that **"The faculty's effectiveness depends on**

interpersonal interactions that are oriented towards cooperative achievement of the college's goals" (1987, p. 115).

In order to establish such an idea of cooperation at a wider level, teachers and faculty stuff may opt for the following, simple but useful, ways:

- The organization of formal meetings where teachers can share their success stories and challenges with their colleagues.
- Organizing conferences through which teachers develop the feeling of readiness to try new issues presented by others.
- Writing articles that introduce concise and useful content about the benefits and implementation of cooperative learning to other teachers, and
- Reciprocal observation of each other while teaching with the cooperative approach (Johnson et al, 1991).

4.7. Final Thoughts: *Limitations of the Study*

As noted before, this study was conducted for the sake of investigating the role of cooperative learning on the understanding and the application of metacognitive strategies in grammar classes; which would in turn lead to the enhancement of the students' achievement when English tenses are concerned. Though this research could, to a considerable extent, unveil some important facts about the effectiveness of cooperative learning, the development of the students' learning process as well as the students' positive attitudes, it still encompasses some limitations. The present section, then, highlights the basic ones.

First of all, the sample population included only one experimental and one control group with somehow a restricted number of students. This fact led to disabling the researcher to make generalizations. To solve this issue, it is better to opt for a larger sample in future researches about the effectiveness of cooperative learning. The second important aspect is related to the fact that the collection of data was based only on what the students provide as answers to the assigned grammar tasks.

Due to time constraints, the researcher was not able to collect more data about the students' use of English tenses in other contexts, i.e. their oral communicative competence or written production. Accordingly, this topic can be extended, in future

researches, to touch other areas; rather than only the students' understanding and use of English tenses in grammar classes. Also, though mentioned at the beginning of this research that cooperative learning is still a neglected approach in our EFL classrooms in Algerian Universities, this research did not provide any further investigation on the reasons behind that. Thus, further research may include this factor for a better understanding of the situation.

4.8. Conclusion

The researcher, when providing this chapter, attempted to suggest some valuable concepts related to the previously provided chapters. Basically, cooperative learning is being recommended as a solution to numerous pedagogical problems. Thus, first, the teachers' attention should be directed towards preparing students to the implementation of this method; through trying to develop autonomous learners. A detailed process of nine steps was provided to complete this mission. Additionally, examples of activities regarding teaching critical thinking and social skills were highlighted. On the other hand, one should consider the value that teachers hold, if cooperative learning is to be adopted as an influential approach. Hence, the chapter incorporated also an account of the basic stages that teachers generally go through to be included in the teaching profession, in addition to their role in spreading the charm of cooperative learning among their colleagues in schools or colleges.

General Conclusion

GENERAL CONCLUSION

There is no doubt that education is an extremely important matter for the development of societies and nations. It is also clear that everyone has his/her own goals in this life. Parents seek to raise their children, students seek to achieve their learning objective, and people in the government seek to do all what is possible to develop their nations. The central common point between all these, and others, is education. Thus, they must in all probabilities consider its real value. Though it has been divided into various sections, they still all share the same significance to people's lives. Thus, it is the duty of policy makers and educators to try their best in order to bring innovations to the field.

Having said the above, one shall mention the idea of highlighting some examples of innovations that keep being introduced in the classroom. Among these, there are audio-visual equipped classrooms, the use of games, widening the perspective of students even beyond the classroom walls, and most importantly introducing the notions of peer teaching and collaborative learning to students. Through this, students become active participants in their learning process and take responsibility of their own as well as their classmates' learning.

As explained through the chapters of this work, the notion of cooperative learning has been introduced to the field of education decades ago, and researches done on its effectiveness demonstrated how beneficial it is to students of all ages and in all subject matters; as it enhances their academic achievement, their psychological health and their social relationships with peers. The problem that rises, whenever cooperative learning is discussed, is that most teachers still do not have a clear idea about how to structure this approach in their classrooms, and thus it is still an unappreciated teaching method for them.

On the other hand, the notion of metacognitive strategies has also taken a huge place in this research work, since the researcher decided to bring together the cooperative approach and the use of metacognitive strategies to the EFL classroom; to

see to which extent this might be beneficial to the enhancement of students' level in grammar classes, more specifically the understanding and use of English tenses. Accordingly, the present thesis summarizes the process of a quasi-experimental research in which the researcher opted for the use of both the pre-training and the post-training tests, as well as both the control and the experimental groups. The groups selected for this study are in fact two groups of second year LMD students at the department of English, at the University Center Ahmed Salhi, Naama. The general process of this study started first by splitting students of the experimental group into cooperative small groups and let them work with metacognitive strategies. On the other hand, students of the control group were asked to work individually with metacognitive strategies. The aim behind that was to examine to what extent cooperative learning can enhance the learners' understanding and use of metacognitive strategies, and in turn their grammar outcomes when English tenses are concerned.

It is interesting to note that the researcher organized this research work to include four distinctive chapters in order to describe all the aspects tackled through the research process. After citing the main objectives as well as the basic research questions and hypotheses on which this research is built, the researcher moved to cover and define all the related concepts, i.e. cooperative learning including its types, theoretical rationales, basic elements, and positive outcomes, as well as metacognitive strategies. The second chapter sought to describe the research journey and the third chapter was specified for the analysis of the gathered data through the selected research instruments. Finally, the fourth chapter has a suggesting nature in which the researcher presented some important concepts and activities that teachers may consider as solutions to some educational problems.

For the sake of meeting the previously mentioned objective of the study, the researcher selected the pre-training and post-training tests to be used as research instruments, in addition to the learners' reflective questionnaire. Moreover, a semi-structured interview has been also used at the end of the training phase to reflect the students' opinions about and attitudes towards their cooperative experience.

Regarding the analysis of the collected data, the researcher followed both paths of data analysis including qualitative and quantitative ones. The analysis of the students' tests demonstrated that the students' performance showed a considerable progress in the use of English tenses, though not all of them are able to provide fully correct answers. The training phase, then, was, to a great extent, successful for both the experimental and the control groups, and both methods applied were positively influential. Besides, through the comparison of the values of the standard deviation obtained from the pre-training and the post-training scores of students, both groups demonstrated the movement towards a more heterogeneous level of students. However, the higher value of the mean of the experimental group in the post-test illustrates that students of the experimental group had a better achievement.

Thus, through conducting an independent samples t-test, the researcher wanted to test the extent to which the methods were influential. The analysis has shown that, though better results have been achieved by the experimental group, the researcher is still unable to determine the confirmation of the hypothesis which states that the use of metacognitive strategies when working in cooperative groups with classmates can lead to a better achievement than in working individually. Accordingly, the generalization issue regarding this fact is absent at this level.

Later, as far as the analysis of the reflective questionnaire is concerned, students of the experimental group showed better understanding and use of the metacognitive strategies, than did students of the control group. Thus, it is fair to say that working in cooperative groups with peers raises the students' awareness to recall, consider, and use the metacognitive strategies. Accordingly, the researcher was able to confirm the first hypothesis stated at the beginning of this research work. Finally, the analysis of the last research instrument, i.e. the learners' interview, unveiled astonishing positive attitudes towards the cooperative experience, though it seems through their answers that they have not been exposed to such a method of teaching before. Indeed, working cooperatively could to a great extent change the learners' views about the competitive and the individualized approaches as being the only ones that could exist in classrooms.

Basically, it is hard, not to say impossible, to produce a comprehensive work that covers every single detail about the implementation of cooperative learning and metacognitive strategies in EFL classes. Thus, the end of this research work might be a good start for other researchers in the field; as it opens many doors for them to conduct further investigation and to consider other additional variables. Under this view, researchers may arrive to other areas which may better develop students' academic, social and psychological status.

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- http://www.e-grammar.org
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Accompanying Appendices

Appendix 1

Activity 1: **Complete each paragraph with one set of verbs, using the present simple or present continuous.**

Know/ Look/ Not be/ repair/ use be/ be/ have/ say/ tell

be/ live/ look/ move/ resemble

A. My computer (1)…… very irritating right now. Every time I (2) ……. it to save something, it (3) …… it (4) …… no space in its memory, which (5) ……. Ridiculous.

B. Whales and dolphins (6) ……. like fish, but they (7) …… mammals that (8) ……. In the ocean and (9) ……. through water in ways that (10) ……. the movements of a dog rather than those of a shark.

C. Man: Excuse me. I (11) …… for Mrs. Adamson, but she (12) …….. in her usual classroom. (13) …… you …….. where she is?

Woman: Oh, they (14) …….. her classroom ceiling this week so she (15) …….. the library as her classroom.

Activity 2: **Complete each paragraph with one set of verbs, using the past simple or past continuous.**

Miss / not get / wonder break / see / steal / teach

Come / listen / make / say explain / talk / understand

a) We (1)…….to music when one of the neighbours (2)…….. to the door and (3)……she couldn't sleep because we (4)……..…….too much noise.

b) Someone (5)……into Barbara's office and (6)……. Her computer yesterday afternoon while she (7)…….her history class. No one (8)…….the thief.

c) Because he never (9)……anything very clearly, none of us (10)……..what the science teacher (11)……about most of the time.

d) I'm sorry. I (12) …….. here on time and I (13) …….. the beginning of your presentation, but I (14) …….. if you might have an extra handout left.

Activity 3: **Choose an ending (a-d) for each beginning (1-4) and add will, will be or will have been**

1. Next April 21st …….. my parent's silver anniversary.
2. I'm sure everyone ……..….. want to get an early start.
3. Mr. Russell …… teaching his last English classes during May.
4. My life as a student …… over at the end of this term.

A. By then, he ……. working here for 40 years.
B. That means they ……married for 25 years.
C. Do you realize that I ……...in school for most of my life so far?
D. ……. You…… ready to leave at about 6 am?

Activity 4: **Complete this dialogue with these verbs in the present perfect or past simple.** ***Ask be (2) have make not call not eat not know not seem say tell***

It's Monday afternoon. Ron is at home, phoning Sue at the office where they both work.

Ron: Hi Sue, it's me.

Sue: Well hello! Where (1) **have** you **been** all day? The boss (2)……me this morning where you (3)…….., but he (4)……..to be looking for you or anything.

Ron: What (5)……you…….?

Sue: I (6)……..him that I (7)……. Are you okay?

Ron: I'm sorry I (8)……you this morning. I (9)…….the flu since Saturday. I (10)……anything for two days and it (11)…… me feel really weak. But I'll probably be there tomorrow.

(Adopted from Yule, 2006: p. 19, 21, 22, 25)

Appendix 2

Present Tenses

Activity 1: **Choose the correct verb form.**

1. My parents……..for the government.
    1) Works
    2) Is working
    3) Work
    4) Am working
2. ……..you school…….a swimming pool?
    1) Does/ have
    2) Do / have
    3) Does/ has
    4) Do/ has
3. My uncle…….a lot of travelling for his work.
    1) Do
    2) Doing
    3) To do
    4) Does
4. The bookshop ……open today.
    1) Aren't
    2) Not be
    3) Isn't
    4) Not to
5. My sister……Maths very much.
    1) Doesn't likes
    2) Doesn't like
    3) Isn't like
    4) Don't like
6. How……..dolphins ……air?
    1) Do/ breathe
    2) Does/ breathe
    3) Do/ breathes
    4) Does/ breathes
7. Can I speak to Andy, please?

I'm sorry, he…….his dinner at the moment.

1) Is having
2) Has
3) Are having
4) Have

8. Sh! I ……..my homework!
    1) Does
    2) Do
    3) Is doing
    4) Am doing
9. Dad, can you help me? My computer……properly.
    1) Doesn't work
    2) Not work
    3) Isn't working
    4) Not working
10. ……..you……to me, Jack?
    1) Do/ listen
    2) Are/ listening
    3) Are/ listen
    4) Does/ listen
11. What …….Sally……..on TV? It looks interesting.
    1) Are/ watching
    2) Does/ watch
    3) Is/ watching
    4) Is/ watch
12. It's midday. Their plane……..probably……..right now!
    1) Are/ arriving
    2) Does/ arrive
    3) Do/ arrive
    4) Is/ arriving

Activity 2: **Read what the following people have to say about learning English in Britain. Complete with the present progressive or the present simple of the verbs in brackets.**

As part of my job, I (1)…….. (travel) abroad a lot, so I (2) ……. (need) to improve my English. For this reason, I (3)…….. (attend) a course In business English at a language school in London. The course (4) …… (last) three weeks.

I (5)…….. (come) from Italy but I (6) ……. (study) in England at the moment. I (7)…….. (stay) with a British family. In this way, my English (8) …… (improve) faster because I (9) ……just…….. (not use) it in the classroom but in my everyday life as well.

I (10)…….. (visit) England every two or three years, so I (11) ……. (speak) some English but not much. At present I (12)…….. (do) a course at a language school in London and I (13) …… (learn) lots of new stuff! Apart from that, in the afternoons I (14) …….. (go) out with my classmates and we (15) ……(try) to practise our English as much as possible.

Adopted from (Philpot & Curnick, p. 70-71; Mitchell & Malkogianni, 2012: p. 5)

Appendix 3

Past Tenses

Activity 1: **Correct the mistakes in the use of tenses in this text**

A few years ago, when my friend and I were hi~~tchhike~~ (hitchhiking) through France, we sometimes stop for the night in a park or a field. If it wasn't rain, we just sleep outside in our sleeping bags under the stars. We really enjoying that. If it was rain, we put up our small tent and crawl inside for the night. One night, while we sleep in the tent, I think that the ground moving under me. I sit up and realize that the tent was try to move and only the weight of our bodies was hold it in place. When we get outside, we discover that we stand ankle-deep in a small stream and our tent slowly floats away. At first, we really surprised and worried, but then we think it is very funny.

Activity 2: **Choose the correct verb form**

1. They……carefully when the accident……..
    1) Were driving/happened
    2) Were driving/ was happening
    3) Drove/ was happening
    4) Drove/ Happened
2. He…….his leg while he……football.
    1) Broke/played
    2) Was breaking/ played
    3) Broke/ was playing
    4) Was breaking/ was playing
3. Lily and Sandy……when I ……them.
    1) Weren't working/ was seeing
    2) Worked/ was seeing
    3) Worked/ saw
    4) Weren't working/ saw
4. The electricity……..…off while he ……..dinner.
    1) Was going/ was cooking
    2) Went/ was cooking
    3) Went/ cooked
    4) Was going/ cooked
5. Ann ……still……when the test…….
    1) Was ….writing/ finished
    2) Was…. Writing/ was finishing
    3) Were….writing/ finished
    4) Were ….writing/ was finishing

6. They……..hard when suddenly the fire bell ……
    1) Were working/ was sounding
    2) Worked/ was sounding
    3) Worked/ sounded
    4) Were working/ sounded
7. What……you ……..when I …….last night.
    1) Did….do/ was phoning
    2) Were ….doing/ was phoning
    3) Were….doing/ phoned
    4) Did…do/ phoned
8. She……...her teeth when the water suddenly…….
    1) Was brushing/ stopped
    2) Brushed/ stopped
    3) Was brushing/ was stopping
    4) Brushed/ was stopping
9. I……..a strange noise while I …….in bed last night.
    1) Was hearing/ was reading
    2) Heard/ was reading
    3) Heard/ read
    4) Was hearing/ read
10. My dad……his back while he……furniture in the office.
    1) Was hurting/ moved
    2) Was hurting/ was moving
    3) Hurt/ was moving
    4) Hurt/ moved
11. What …….…….that you…….……..?
    1) Was/ were saying
    2) Was being/ were saying
    3) Was being/ was saying
    4) Was being/ said
12. Sorry, ……. you …….when I ……..last night.
    1) Were….sleeping/ was ringing
    2) Did….sleep/ rang
    3) Did….sleep/ was ringing
    4) Were….sleeping/ rang.

Adopted from (Yule, 2006: p. 21; Philpot & Curnick, p. 84-85)

Appendix 4

Future Tenses

Activity One: **Match the following sentences.**

1) I can take you to the airport — a) I'll be going that way

2) If you think it is shorter — b) I'll go that way

****

1) Shall I say hello to her — a) I'll write to her

2) She should know about it — b) I'll be writing to her

****

1) Will you go to sleep — a) When I return

2) Will you be sleeping — b) When you return

****

1) He won't be here tomorrow — a) He will be signing the new contract

2) He has no objections — b) He'll sign the new contract

****

1) You can rely on him — a) He will be delivering the letters

2) You can't wait for him — b) He will deliver the letters

****

1) I'll be in the forest — a) I'll cut the tree

2) I must go to the forest — b) I'll be jogging

Activity Two: **Fill in the gaps with the correct form of *be going to* + the verb in brackets to show future actions.**

Everything is going to Change!

Next year, things (1) ……. (change) in our house. My father has got a new job. He (2) ……. (work) in a big office in the capital city. My mother (3) ……. (not go) with him immediately because she has to organize things at home. She (4) ……. (rent) our house out for a year and

she (5) …… (find) a school for me and my sister. I (6) …… (attend) a school near my father's office, and my older sister (7) ……. (study) at a college. My mother (8) ……. (not look for) a job yet because she thinks she will be too busy looking after us. Sometimes I think that living in a big city (9)……..(be) a bit frightening, but my dad says that it (10)…… (be) a big adventure).

Adopted from (http://www.e-grammar.org/future-simple-continuous-worksheets/ ; Philot & Curnick: p. 102)

Appendix 5

Perfect Tenses

Activity 1: **Choose an answer (a-d) for each question (1-4) and add these verbs in the present perfect or the present perfect continuous.**

Be complete do know read show swim

1. How long ……. She and Mark …….. each other?
2. Why is your hair all wet?
3. …… you …….. an application form?
4. …….. you …… Keith the report yet?

A. Yes, he ……... it for the past hour.
B. I …… just ……..
C. They……. Friends since school.
D. Yes, I …….. already ……. That.

Activity 2: **Complete this text with these verbs in the past perfect or the past perfect continuous.**

Be Catch Live Plan Take Break Have Make Remove Worry

The telephone call from the police was a shock, but not a complete surprise. Molly (1) …… constantly about the old house lying empty during the two months since her mother went into hospital. She (2) ……. To go round and check the empty place, but she (3) …….. extra busy at work recently. According to the police, a homeless man (4) …… into the house. They (5) …….. him one morning as he was leaving the building with one of her mother's large paintings. When Molly walked into the house, it was obvious that the man (6) …… there for quite a while. He (7) …… food from the cupboards and throwing empty tins and packages all over the floor. He (8) …….quite a mess. He (9) …….. also ……. Several paintings from the walls. Molly decided not to tell her mother because she (10) …… already …….. enough pain in recent weeks and really didn't need any more bad news.

Adopted from (Yule, 2006: p.19, 21)

Appendix 6

Dear student,

The present reflective questionnaire is adapted from Stephen and Singh (2010), and aims at checking your understanding as well as your use of metacognitive strategies when solving your tasks of grammar. Thus, you are first kindly requested to answer the first part of this reflective questionnaire after the distribution of the task and, then, after the completion of the task you answer the second part. This would better contribute to the success of the present study.

****

First Part:

Planning:

(1) What is the given task?

……...

(2) Do I already know anything about this particular task?

.....

(3) What is my learning goal here?

……

……

(4) How much time do I need to complete the task?

……

(5) What are my plans in accomplishing this task?

……

……

……

II Monitoring:

(1) Do I know this already?

……...

(2) Have I understood?

……...

(3) If not, what am I going to do?

……

……

(4) Should I revise my plan?

……

(5) Should I ask for help?

……

Second Part:

III Evaluation:

(1) Have I understood everything completely?

……

(2) If not, what do I need to do?

……

……

(3) Have I achieved my goal?

……

(4) Did my plan work?

……

(5) What are the strategies I worked out here?

……

……

(6) Do I need to go back to the task to fill in any blanks in my understanding?

……

****

Name:

Age:

Sex:

Thank you for your collaboration!

Appendix 7

Activity 1: **Choose the correct answer**

1. Oh, no! Look what (is he doing/ does he do).
2. She (wears/ is wearing) a new jumper this week.
3. (does/ do) your father and mother speak Japanese?
4. Don't give him this book. I (read/ am reading).
5. Who (wants/ does want) this ticket?
6. (Is your girlfriend having/ has your girlfriend) a party tomorrow?
7. We (are spending/ spend) a month at the seaside each year.
8. Excuse me. What times (do the morning trains leave/ are the morning trains leaving) on Fridays?
9. I can see Jane over there. She (talks/ is talking) to bill.
10. I moved to Canada last year. I (am living/ live) in a flat.

Activity Two: **Complete the sentences with the verbs in brackets.**

Every day James Lullaby travels to London. Yesterday he …….. (drive) his car, when he …….(see) a dong in the middle of the road. The dog …….. (watch) the car. James …… (stop) and …….. (get) out of his car. As he ……. (get) out, the dog …….. (run) away. James ……. (go) back to his car. While he ……. (get) in the car, the dog ……(appear) again and …… (sit) down in the middle of the road. James ……. (start) the engine, but the dog …….. (not move). James ……(jump) out of the car and …….. (shout) at the dog. The dog …… (bark) at him and …….. (start) to run. James…… (follow) the dog. Suddenly, he …….. (see) two girls lying on the grass. They …….. (bleed).

Activity Three: **Rewrite the underlined verb forms and use future simple or continuous**

- Don't call me at 10 o'clock. <u>I am going to fly</u> to Spain.
- I suppose we <u>are going to stay</u> at a hotel next summer.
- Come to see me in the afternoon, I <u>work</u> in the garden.
- Do you think it <u>is snowing</u> at the weekend?

- Is the coat O.K? –Yes, I am taking it.
- This time on Sunday we are going to ski in France.
- I don't know if I will stay here. Perhaps I move to a big city one day.
- Every student is using a computer in the future.

Activity 4: **Complete each paragraph with one set of verbs, using the present perfect or past simple**

Have/ Not come/ Tell Become/ Have/ Hear Know/ Meet/ Start

A. I (1) …….. Laura Palmer since we both (2) …… work on the same day at Thomas College about five years ago. She is one of the smartest people I (3) …… ever……. .
B. (4) ……... you …… the good news yet? Jenny and Michael (5) …….. just …….. parents! Jenny (6) …….a baby girl last night.
C. The plumber (7) ……. Me this morning, "I'll be back to finish the work as soon as I (8) …… some lunch". But now it's past three o'clock and he still (9) ……. Back.

Adopted from (Yule, 2006: p. 22; http://www.e-grammar.org/future-simple-continuous-worksheets/)

Appendix 8

Dear student,

The present interview aims at evaluating your grammar competence after working with cooperative learning and metacognitive strategies; as well as checking your attitudes towards working in groups with your peers. Thus, you are kindly requested to answer the following questions and which may better contribute to the success of the present research.

****

1. Have you ever worked in cooperative groups before this year?
   ☐ Yes ☐ No

If yes, in what context and when?

2. Have you ever heard of metacognitive strategies before this year?
   ☐ Yes ☐ No

If yes, in what context and when?

3. Would you please describe how your lectures of grammar used to go during the past years?
4. How do you consider your grammar level after you worked with cooperative learning?
5. What did you learn after working with other classmates in cooperative groups? (you can choose more than one element)
   - ☐ The sense of leadership and responsibility
   - ☐ Caring about others' learning
   - ☐ Accepting different view points
   - ☐ Trusting others
   - ☐ Solving group conflicts
   - ☐ Discussing the other members' current knowledge
   - ☐ Planning the process of your own activities
   - ☐ Setting the group's common goal

☐ Discussing the group's difficulties as well as its progress towards the learning goal.

☐ Others (Specify the other skills please)

6. After experiencing working cooperatively, what kind of explanation do you prefer?

☐ Teacher's Explanation ☐ Classmates' Explanation

7. What description would you choose for your cooperative learning experience?

☐ Disturbing

☐ Less exciting

☐ Exciting

☐ Enjoyable

8. Would you cite some of the difficulties that you have encountered when working in cooperative groups?

Thank you for your help with our study!

Summary in English:

The present research aims at answering the question of whether or not working with metacognitive strategies in cooperative groups would lead to the enhancement of EFL learners' grammar competence. Hence, an experimental research was conducted with second year LMD students of English at the University Center Ahmed SALHI, Naama. The idea was to make students of the experimental group work with formal cooperative learning, and let the ones of the control group work individually.

Key-words: Metacognitive strategies, grammar competence, experimental research, formal cooperative learning.

Résumé en Français:

Cette recherche vise à répondre à la question de savoir si le fait de travailler avec des stratégies métacognitives dans des groupes coopératifs permettrait d'améliorer la compétence grammaticale des apprenants d'Anglais. Par conséquent, une recherche expérimentale a été menée avec des étudiants de deuxième année en LMD au Centre Universitaire Ahmed SALHI, Naama. L'idée était de faire travailler les étudiants du groupe expérimental avec un apprentissage coopératif formel, et de laisser les membres du groupe de contrôle travailler individuellement.

Mots Clés : stratégies métacognitives, compétence grammaticale, recherche expérimentale, apprentissage coopératif formel.

الملخص باللغة العربية:

يهدف هذا البحث إلى الإجابة على التساؤل في ما إذا كان الاعتماد على استراتيجيات ما وراء المعرفية في العمل الجماعي سيؤدي إلى تحسين الكفاءة اللغوية لمتعلمي اللغة الانجليزية. قمنا بدراسة تطبيقية مع طلبة السنة الثانية جامعي (ل.م.د) بالمركز الجامعي أحمد صالحي بالنعامة. كان الهدف من الدراسة جعل الطلبة يعملون رسميا اعتمادا على العمل الجماعي فيما كان الآخرون يعملون بشكل فردي.

الكلمات المفتاحية: ما وراء المعرفية, استراتيجيات, الكفاءة اللغوية, دراسة تطبيقية, التعلم الجماعي.

Summary

It is common knowledge that the field of teaching English as a foreign language increasingly witnesses important contributions of researchers including policy makers, applied linguists as well as educators; which in turn leads to a tremendous amount of progress in the field. These contributions basically serve two main areas; enhancing the quality of teaching English and providing solutions to the already existing trouble spots in the process of education. Indeed, these problems that face EFL learners may arise from the fact that the process of teaching English is conceived to be a dynamic one.

Under this view, it is important to mention the feeling of being obliged to deal with various and sometimes confusing aspects of the language, missing the needed skills to deal appropriately with written production or oral production courses, feeling bored and unsatisfied in English classes, or simply lacking the communicative competence that truly reflects a good learner of English. In fact, these are not the only difficult factors that negatively interfere within the process of learning English. Students may still encounter serious difficulties in grammar, as it embraces too many details about English prepositions, articles and mainly tenses.

Evidence has accumulated on the issue that mastering the English grammar is of keen interest to students if they are truly willing to develop the four skills of language. Consequently, students tend to develop their communicative competence as well. These examples, besides others, are the basic reasons behind the significant consideration of grammar rules and lectures in educational settings where English is taught. Though being really important, English grammar is seen as a source of difficulties in the eyes of learners. This is the reason why the field of educational psychology carefully includes learning grammar among its debated topics in order to provide EFL learners with practical solutions to the main problems they may face.

One of the valuable suggestions of educational psychology concerns the idea of putting students together in cooperative groups, to help and assist each other along

their learning process. Before speaking deliberately about this method of teaching, it is important not to forget that cooperative learning is not the only pattern of interaction that may exist in classrooms. Students may also work competitively based on the idea that they need to show the best achievement among the classroom members, or can simply work individualistically without any consideration of the others' achievement. Accordingly, the pattern of interaction is the one that decides the way students should interact with each other, with the teacher, and with educational materials.

Back to cooperative learning, that is considered as an alternative solution to the student-centered approach, one should consider the sense of teamwork that is naturally developed among the cooperative group members. They all strive to help each other in order to achieve a one common learning goal and celebrate a one common success of the entire cooperative group. This method of teaching has been favoured among researchers and educators for that it led to positive results whenever applied in any educational setting, in any subject, and with any type of students. Almost any journal, book, or instructional material discusses cooperative learning and highlights its academic, psychological, and social effects.

Besides its usefulness in classrooms, cooperative learning is a wise way to raise good citizens, since graduate students will neither work nor live alone in this increasingly changing world. Throughout all life stages, including marriage, families, workplaces, and even daily activities, individuals encounter an abundant amount of interaction with others. Thus, introducing such a way of life at an early stage would probably do more good, as it prepares individuals to be skillful enough to develop positive relationships with classmates, colleagues at work, and family members.

Actually, the teaching approaches that are derived from the human development, teaching, and learning theories are the ones that demonstrated better positive influence on the learners' social and academic outcomes. Cooperative learning, then, is regarded as a fruitful approach for it has considerable theoretical foundations. Additionally, almost all studies done on the application of the cooperative method in various contexts showed better results in terms of academic achievement, social relationships and psychological adjustment to the school.

In addition to cooperative learning, this research work also embraces the idea of how beneficial it is to work with metacognitive strategies. Well, the notion of metacognition has been defined by several researchers from various standpoints. However, John Flavell who is considered to be 'the father of the field' speaks about metacognition as being our own knowledge about our own cognitive processes. Well, a significant proportion of research done on the impact of working with metacognitive strategies in instructional situations demonstrated that students can develop their thinking abilities and become more responsible towards their own learning process. Similarly, these strategies can be introduced in any subject with different age students.

Related to the idea of introducing metacognitive strategies in classrooms, students then may be directed towards identifying first their state of knowledge whenever any new content or task is assigned to them. Then, identifying the difficulty of the task is the one that leads to thinking aloud, careful planning to deal with the task, and conscious decisions about how they should proceed towards the accomplishment of the task. Finally, evaluating their own performance is a successful way towards reconsidering and critically thinking about their previous decisions.

The basic premise of this research work turns around the idea that in spite of the fact of being introduced in the field of education years ago, and despite all the positive results shown through studies about cooperative learning, it is till neglected in Algerian Universities. Teachers still cannot embrace the idea of splitting students into groups and let them work on the same task to achieve the same learning goal. Thus, the researcher aims through this work at changing the teachers' opinions about this method of teaching and direct their attention towards implementing the cooperative approach as an attempt to solve the educational problems encountered by students of English. More precisely, this research work proposes the idea that cooperative learning, if applied appropriately, may lead to a better understanding and utilization of metacognitive strategies, which in turn may be a useful way towards a better achievement whenever English tenses are concerned, i.e. working with metacognitive strategies in cooperative groups may help in enhancing the students' grammar competence, the understanding and correct use of English tenses.

This research is an experimental one, in which the sample is divided into two groups; the experimental and the control one. Students of the experimental group were split to work in cooperative groups with the metacognitive strategies. However, students of the control group worked with metacognitive strategies individually. Accordingly, the aim of this research can be summarized in the following points:

- To provide the reader with an account of the main aspects which characterize cooperative learning rather than other patterns of interaction.
- To highlight the necessary issues that teachers should consider when implementing cooperative learning in their classrooms.
- To examine the effectiveness of cooperative learning in making EFL students understand more and work better with metacognitive strategies.
- To examine the effectiveness of working with metacognitive strategies in cooperative groups on enhancing the grammar competence.
- To check the students' attitudes towards working cooperatively with their peers, and present those attitudes to their teachers in order to adopt this way of teaching.

To start this research, the investigator put forward this following general question: What might be the effects of working with metacognitive strategies in cooperative groups on the EFL students' understanding and use of English tenses? Considering the foregoing general question, the researcher set other sub-questions; the answers to which may cover the scope of this research:

- Would cooperative learning lead to a better understanding and utilization of metacognitive strategies?
- Would working with metacognitive strategies in cooperative groups lead to an enhancement of the EFL learners' understanding and correct use of English tenses?
- May EFL learners develop positive attitudes towards working in cooperative groups?

Related to the previously mentioned research questions, the following hypotheses have been proposed:

- Working cooperatively with peers may be useful in recalling and using the metacognitive strategies.
- Working with metacognitive strategies, when combined with the cooperative approach, may result in a better understanding and use of the English tenses.
- EFL learners may develop positive attitudes towards the cooperative learning experience.

Indeed, this research work is essentially composed of four chapters; each of which tackles a separate aspect. The first chapter represents the theoretical grounding of this research in that it introduces to the reader the basic concepts. Cooperative learning was highlighted including its definition, structure, characteristics, types, theoretical rationales, and basic elements. Then, metacognition was deliberately discussed in addition to all its related concepts.

Regarding the second chapter, it was devoted to describe the research setting, i.e., the Department of English at the University center Ahmed Salhi, Naama. Then, the type of research, the selection of participants, and the research instruments, including the test, the reflective questionnaire, and the interview have been all discussed.

The following chapter, with its analytical nature, dealt with both the qualitative and the quantitative analysis of the data gathered. The comparison of the pre-test and the post-test scores obtained from both the experimental and the control group, as well as the learners' answers to the reflective questionnaire and the interview are the ones through which the investigator was able to answer the research questions and draw conclusions.

Finally, the fourth chapter was provided in order to introduce to the reader valuable concepts that may be used as suggestions to considerable educational problems including, but not limited to, teachers' training, learners' autonomy, cooperative learning, and grammar teaching.

As far as data analysis is concerned, the researcher opted for an analysis of the pre-test results considering two main steps. First, an analysis of the two criteria was provided. Then, the researcher moved to a deeper analysis of each separate activity. The results obtained demonstrated how difficult it is, for students, to provide fully correct answers, though they have been exposed to English tenses deliberately during high school and their first year at University. The mistakes noticed concern basically mere issues such as forms of conjugated verbs, past simple and past participle of irregular verbs, as well as spelling.

The obtained scores from the students' pre-test significantly helped the researcher in building a full image about the level of the students. This, in turn, helped very much in:

- ✓ Constructing heterogeneous cooperative groups in the experimental group.
- ✓ Selecting appropriate content for the training phase depending on the students' needs analysis, and
- ✓ Using the data for later comparison with the post-test scores.

Following the same way of analysis like the pre-test, the researcher considered two general steps. Starting with the first criterion, an analysis of the learners' choice of the right tense was provided. Then, the researcher moved to the second criterion which is the production of the right form of the verb. Indeed, both groups have demonstrated a better achievement. The researcher turned her attention, later, to a deeper analysis of each separate activity. The students' performance showed a considerable progress in both groups when the English tenses are concerned, though it is still not easy for all of them to provide fully correct answers. This would lead to the conclusion that the training phase was, to a great extent, successful for both groups, and that both methods applied to the experimental and the control groups were positively influential.

The analysis of the obtained scores from both the students' pre-test and post-test significantly helped the researcher in understanding the effectiveness of the training phase, however it is not enough to make any determinations at this level. The

following, then, is about using the data obtained from the pre-test for a thorough comparison with the post-test scores.

A low SD means that the scores are not distributed far from the mean and that the group is a more homogeneous one. However, if being high, it reflects how far the scores are from the mean, and how heterogeneous the group is. Based on this explanation, one can say that the pre-test results show that the experimental group is a more heterogeneous one. Indeed, it is good to know this at the beginning of this research since cooperative learning requires heterogeneity among the groups in order to be truly successful. Regarding the fact that the values of the mean are not far from each other, one can say that the experimental group and the control group are not different from each other in terms of level; which is also one of the basics of conducting a healthy experimental research.

Having summarized the learners' performance in the post-test activities clearly demonstrates the progress achieved by both the experimental and the control groups. This means that both methods were beneficial in helping students to reach a better understanding and a better application of the English tenses as well as reducing the differences between students, i.e. working with metacognitive strategies individually. However, the higher value of the mean of the experimental group in the post-test illustrates that students of the experimental group had a better achievement.

To better determine the extent to which the methods were influential, an independent samples t-test was needed. Actually, after identifying the calculated t-value and the critical t-value, results have shown that the calculated t-value is not greater than the critical t-value. Hence, though a better achievement was demonstrated through the results of the experimental group, the researcher is still unable to completely and strongly confirm the hypothesis which states that the use of metacognitive strategies when working cooperatively with peers can lead to a better achievement. Accordingly, the researcher cannot make any generalizations regarding this fact. The value of the Eta squared, i.e. 0.01 also confirm the results discussed

After working with metacognitive strategies for almost a semester, students could show a better understanding of the meaning and use of these strategies. However, this is not enough to confirm the already stated hypothesis. Thus, a deeper comparison between the students' answers to the first and the second reflective questionnaire was done. Indeed, it demonstrated that, concerning the planning part, students of the experimental group provided more positive and detailed answers for questions 1, 2, 3 and 5 than did students of the control group; except for question 4 for which they provided approximately similar answers about the time allocated for the task.

Regarding the monitoring part, more students from the experimental group confirmed their understanding of the task and its general aim. On the contrary, six students from the control group reported the difficulty they encountered to understand the whole task as well as some of the alternative strategies that they may consider to use instead. For the final part, i.e. the evaluation part, students of the experimental group showed that they have better understood the task and better achieved their goal this time, compared to students of the control group. As far as the strategies that students may opt for, only few students from the control group listed limited examples of metacognitive strategies, while the answers of the students from the experimental group were more generous and more selective.

To say it differently, the answers provided by students of the control group to both the first and the second reflective questionnaires demonstrated for sure a considerable understanding of the metacognitive strategies and better achievement in tasks. However, this cannot deny the fact that students of the experimental group showed better results in terms of:

- The identification of the task as well as its general aim.
- The plans thought about to accomplish the task.
- Understanding the questions.
- Successful plans and achieving goals, and
- A better consideration and utilization of metacognitive strategies.

Thus, the researcher may justify the results saying that working in groups raises the students' awareness to recall, consider, and use the metacognitive strategies. Accordingly, the first hypothesis stated at the beginning of this research may be considered confirmed.

The learners' interview was selected for this study as a research instrument for the sake of unveiling the experimental group students' attitudes towards their cooperative experience. Since only few of them stated that their teachers during high school asked them to turn to work with their friends in pairs or groups occasionally, the researcher could infer that, even if considering this a cooperative work, it represents only the informal type of the cooperative approach. Students, then, were experiencing formal cooperative learning for the first time in their entire learning process and not just in grammar lectures. Also, their answers to question two revealed that they had been experiencing working with metacognitive strategies for the first time. It is, indeed, astonishing to confirm that the importance of cooperative learning and also metacognitive strategies is still neglected after the great amount of research done on their significance to the process of education.

Students reported the fact that listening to and benefiting from their peers' simple explanations was an important and enjoyable aspect of working in groups with classmates. Additionally, they listed the cooperative skills and the metacognitive skills that they could learn through working cooperatively with peers. In fact, the most cited ones are:

- The sense of leadership and responsibility.
- Solving group conflicts.
- Discussing the other members' current knowledge, and
- Planning the process of your own activities.

Critically thinking about these skills makes one think of how important they are in the development of autonomous students and future responsible citizens. Due to these achievements, 22 students, representing 91.66 % of the group, described the process of working cooperatively as enjoyable and exciting, though some difficulties encountered when working in cooperative groups have been cited at the end of the interview. From

all these explanations above, the researcher is confident enough to report at the end of this chapter that most of the students demonstrated positive attitudes towards being assigned to work in groups with their peers. Thus, the third hypothesis proposed at the beginning of this research is confirmed.

There is no doubt that education is an extremely important matter for the development of societies and nations. It is also clear that everyone has his/her own goals in this life. Parents seek to raise their children, students seek to achieve their learning objective, and people in the government seek to do all what is possible to develop their nations. The central common point between all these, and others, is education. Thus, they must in all probabilities consider its real value. Though it has been divided into various sections, they still all share the same significance to people's lives. Thus, it is the duty of policy makers and educators to try their best in order to bring innovations to the field.

Having said the above, one shall mention the idea of highlighting some examples of innovations that keep being introduced in the classroom. Among these, there are audio-visual equipped classrooms, the use of games, widening the perspective of students even beyond the classroom walls, and most importantly introducing the notions of peer teaching and collaborative learning to students. Through this, students become active participants in their learning process and take responsibility of their own as well as their classmates' learning.

As explained through the chapters of this work, the notion of cooperative learning has been introduced to the field of education decades ago, and researches done on its effectiveness demonstrated how beneficial it is to students of all ages and in all subject matters; as it enhances their academic achievement, their psychological health and their social relationships with peers. The problem that rises, whenever cooperative learning is discussed, is that most teachers still do not have a clear idea about how to structure this approach in their classrooms, and thus it is still an unappreciated teaching method for them.

On the other hand, the notion of metacognitive strategies has also taken a huge place in this research work, since the researcher decided to bring together the cooperative approach and the use of metacognitive strategies to the EFL classroom; to see to which extent this might be beneficial to the enhancement of students' level in grammar classes, more specifically the understanding and use of English tenses. Accordingly, the present thesis summarizes the process of a quasi-experimental research in which the researcher opted for the use of both the pre-training and the post-training tests, as well as both the control and the experimental groups. The groups selected for this study are in fact two groups of second year LMD students at the department of English, at the University Center Ahmed Salhi, Naama. The general process of this study started first by splitting students of the experimental group into cooperative small groups and let them work with metacognitive strategies. On the other hand, students of the control group were asked to work individually with metacognitive strategies. The aim behind that was to examine to what extent cooperative learning can enhance the learners' understanding and use of metacognitive strategies, and in turn their grammar outcomes when English tenses are concerned.

It is interesting to note that the researcher organized this research work to include four distinctive chapters in order to describe all the aspects tackled through the research process. After citing the main objectives as well as the basic research questions and hypotheses on which this research is built, the researcher moved to cover and define all the related concepts, i.e. cooperative learning including its types, theoretical rationales, basic elements, and positive outcomes, as well as metacognitive strategies. The second chapter sought to describe the research journey and the third chapter was specified for the analysis of the gathered data through the selected research instruments. Finally, the fourth chapter has a suggesting nature in which the researcher presented some important concepts and activities that teachers may consider as solutions to some educational problems.

For the sake of meeting the previously mentioned objective of the study, the researcher selected the pre-training and post-training tests to be used as research instruments, in addition to the learners' reflective questionnaire. Moreover, a semi-

structured interview has been also used at the end of the training phase to reflect the students' opinions about and attitudes towards their cooperative experience.

Regarding the analysis of the collected data, the researcher followed both paths of data analysis including qualitative and quantitative ones. The analysis of the students' tests demonstrated that the students' performance showed a considerable progress in the use of English tenses, though not all of them are able to provide fully correct answers. The training phase, then, was, to a great extent, successful for both the experimental and the control groups, and both methods applied were positively influential. Besides, through the comparison of the values of the standard deviation obtained from the pre-training and the post-training scores of students, both groups demonstrated the movement towards a more heterogeneous level of students. However, the higher value of the mean of the experimental group in the post-test illustrates that students of the experimental group had a better achievement.

Thus, through conducting an independent samples t-test, the researcher wanted to test the extent to which the methods were influential. The analysis has shown that, though better results have been achieved by the experimental group, the researcher is still unable to determine the confirmation of the hypothesis which states that the use of metacognitive strategies when working in cooperative groups with classmates can lead to a better achievement than in working individually. Accordingly, the generalization issue regarding this fact is absent at this level.

Later, as far as the analysis of the reflective questionnaire is concerned, students of the experimental group showed better understanding and use of the metacognitive strategies, than did students of the control group. Thus, it is fair to say that working in cooperative groups with peers raises the students' awareness to recall, consider, and use the metacognitive strategies. Accordingly, the researcher was able to confirm the first hypothesis stated at the beginning of this research work. Finally, the analysis of the last research instrument, i.e. the learners' interview, unveiled astonishing positive attitudes towards the cooperative experience, though it seems through their answers that they have not been exposed to such a method of teaching before. Indeed, working cooperatively could to a great extent change the learners' views about the competitive

and the individualized approaches as being the only ones that could exist in classrooms.

Basically, it is hard, not to say impossible, to produce a comprehensive work that covers every single detail about the implementation of cooperative learning and metacognitive strategies in EFL classes. Thus, the end of this research work might be a good start for other researchers in the field; as it opens many doors for them to conduct further investigation and to consider other additional variables. Under this view, researchers may arrive to other areas which may better develop students' academic, social and psychological status.

European Journal of Research and Reflection in Educational Sciences

Volume 2 Number 3, 2014
ISSN 2056-5852

Progressive Academic Publishing, UK
www.idpublications.org

European Journal of Research and Reflection in Educational Sciences

Volume 2 Number 3, 2014
ISSN 2056-5852

Articles in this issue

Progressive Academic Publishing, UK
www.idpublications.org

COOPERATIVE LEARNING IN EFL CLASSES: A STUDENTS' GRAMMAR COMPETENCE ENHANCEMENT PROCESS

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ABSTRACT

As teachers decide what learning goals students should achieve, what content should be taught to students, and what prior knowledge students have already acquired; parallel decisions should be made regarding how to operate within the whole teaching/learning process, and what teaching methods and techniques teachers should adopt. Presently, teaching is built on the premise that students are just as responsible as their teachers in the process of education. They are required to search, discuss, ask and answer, and participate in problems' solving situations; rather than only passively receiving the new assigned academic knowledge. One of the methods in which all the previous criteria are believed to merge and positively affect the process of education is cooperative learning. An Implementation of Cooperative Learning in EFL classes seems to be worth trying; for it is admitted that this method of teaching influences both social and academic outcomes of students, in a positive way. Accordingly, the present paper describes an action research process that has been conducted with second year LMD students of English at Tlemcen University; for the sake of enhancing their grammar competence through cooperative learning. The results have been analysed both qualitatively and quantitatively, and reflected in a significant manner how influential cooperation was.

Keywords: Cooperative learning, method of teaching, social and academic outcomes, action research.

INTRODUCTION

It is little wonder that the teaching of English is a satisfying and a worthwhile profession, and that students of English feel satisfied and motivated in some situations; including learning about the target culture, speaking English in oral production courses, or composing in written production courses. However, these learners may show some difficulties in some areas including grammar for instance. The issue is that learners of English feel confused with too much details about English prepositions, articles and mainly tenses.

Grammar has always been the topic of several debates and its significance has always been confirmed. It is considered to be a determinant factor in the mastery of any language being learnt (Kao, 1998). Accordingly, Algerian learners of English are exposed to a good deal of grammar instructions in their classrooms; so to ensure that their communicative competence is being enhanced. In spite of the fact that they receive a satisfactory amount of knowledge about the needed points of the English grammar, as well as some practice sessions in which they are required to solve tasks and exercises about the grammar content taught, they still cannot overcome the difficulties previously mentioned.

The field of educational psychology carefully attempts to analyse the different learning settings to understand the complexity of the educational process and, thus, tries to provide our EFL learners with some practical solutions to the main problems they may face. Accordingly,

cooperative learning has been suggested as a solution to so many educational problems, in a lot of works.

LITERATURE REVIEW

Cooperative Learning: Basics For Implementation

Patently, cooperative learning typifies an alternative method to the student-centered approach, which considers learners as active and responsible agents in the learning process. Cooperative learning is the topic of so much literature; it is relatively impossible to find a scientific journal or an instructional material that does not discuss cooperative learning as being a useful approach to teaching (Johnson & Johnson, 2008).

Traditional classes involve students who work competitively to determine who is best or individualistically without caring of others' performance. In such classes, students merely interact with printed materials, visual aids and their teachers (Hecox, 2010). At certain times, teachers seek to break the routine so they ask students to sit and work in groups. Basically, this is not enough to say that cooperation is being structured among students. "Traditionally, primary schools have often organised pupils to sit in groups of four or six, although interaction between them may be very limited" (Jolliffe, 2007: 4). In such groups, pupils keep complaining 'He is copying me', simply because they do not even know that working collaboratively and sharing knowledge and materials are the main aspects of cooperative groups.

In some tasks, only one student is asked by his/her group mates to do the work while they go for a free ride and only write their names on the report. These groups, in fact, are no more than putting students sit near each other while each participant does his individual work or only one student does a common work for the whole group.

Teachers who seek to structure cooperation in the classroom cannot do so unless they take into consideration some basic elements of cooperative learning. In fact, "To become cooperative, groups must work together to accomplish shared goals. They need to discuss work with each other and help each other to understand it" (ibid 4). Otherwise, teachers will be structuring only traditional groups instead of cooperative ones.

Teachers' Roles in Cooperative Classrooms

Cooperative and traditional classrooms are also different from each other in terms of teachers' roles, teaching activities, interaction and evaluation. Teachers when structuring cooperative groups, act as observers of how each group and each member is functioning. They offer support when needed and facilitate the process by explaining the task and intervening to solve the group conflicts. Cooperative groups promote a different way in which students interact with each other. This two-way communication involves discussion and working together to accomplish shared goals. Teachers, at the end, are supposed to evaluate each student's outcomes and also the development of the whole learning process.
The teachers' role in the process of cooperative learning can be summarised in the following five major strategies. Clearly specifying the objectives is the first step that the teacher must make. Before the lesson starts, the teacher should have already set what goals to be achieved by learners concerning both the assigned academic content and the collaborative skills. Secondly, the teacher is supposed to decide all about the size, the type, and the heterogeneity

of the cooperative groups depending on some factors including the class size and his/her experience in using cooperative learning.

Teachers who seek to structure cooperative learning in their classrooms also need to know how the assigned materials should be distributed and how the assigned task should be explained. If the learning groups are new, teachers should carefully make sure that all the group members are using the materials; however, his responsibility may be decreased if the groups are skillful enough in working collaboratively. Also, explaining the task can take the form of a usual traditional lecture where the teacher deliberately explains the lesson and the related concepts, relates the new lesson to the students' prior knowledge, and checks whether students are effectively grasping the point by engaging them in a two-way communication where the teacher asks and the students answer (Johnson & Johnson, 1987).

The teacher's role begins in earnest when students are already put in groups and have started to work together. Placing students in cooperative groups does not mean that teachers will have a break of some free time; instead, teachers engage in an observation process to check which groups are facing troubles in completing the task and intervene to offer help. The teacher may also intervene when noticing a conflict or an inappropriate behaviour within the group. Finally, the teacher should evaluate the students' learning usually by a criteria-refrenced system. Additionally, he/she may determine how well the groups are functioning in terms of social relationships and social skills (ibid).

On the other hand, traditional classes involve an emphasis on drills, practices and review of knowledge with authoritative teachers acting as controllers. They just transmit knowledge through a one-way communication; and they evaluate only the academic outcomes of learners (Wang, 2007).

In traditional learning situations, students may feel unmotivated, frustrated, and exhausted. However, cooperative groups promote enjoyment of the learning experience to students. In this respect, Johnson and Johnson (1987: 67) added:

> In the process of working together to achieve shared goals students can come to care about one another on more than just a professional level. Extraordinary accomplishments result from personal involvement with the task and each other.

Moreover, it increases their learning outcomes and strengthens their psychological health and their relationships with peers.

METHODOLOGY

Considering the vital effect that teaching methods have on our EFL learners' competence and development, the present study was conducted for the sake of examining to what extent is cooperative learning influential in enhancing the students' grammar competence. This research, in fact, is an action research that required the selection of participants, the design of the research instruments, data collection and finally data analysis.

In any research, not only the methodology and the instrumentation determine its quality; but rather, the sample population selected as well. In fact, a top-down process was followed; in which the total population is first identified, and then the sample is selected to better ensure

its representativeness and therefore its validity (Cohen et al, 2000). In this study, sampling included the selection of one second year class; which consisted of 38 EFL University students, and who were chosen for the study.

Collection of Data

Among the numerous available research tools, only a limited number of them were opted for the use in this research. This is, in actual fact, determined by the nature of the research topic, the research approach, the method selected and the time limitations. To better identify the students' current grammar competence including their strengths and weaknesses, and to determine what can be realistically achieved as well as the relevant academic content required, a learners' needs analysis was opted for. In fact, this was realised through making students sit for a pre-training test, which was considered as a first data collection instrument, and which ideally helped in structuring the lectures that best suit the participating students.
Students were previously informed that they would be tested on English tenses and they were given time to revise their prior knowledge. On the other hand, the test included four grammar exercises with clear written instructions. The assigned exercises were different from each other in the form and the content as well, and the use of different tenses was distributed over the four exercises.

The pre-training test is not the only test carried out in this research by the investigator. However, there was a post-training test which aimed at checking the students' progress and how well their grammar competence enhanced after a worth time of working in groups. The present post-training test was designed taking into account that both pre-training and post-training tests should be structured to measure the same academic content.

For the sake of obtaining rich data, and explaining the research situation from different perspectives, a questionnaire was also selected as an additional research tool in this study. Basically, it included three types of questions: close ended, open ended, and mixed questions. It aimed primarily at determining the student's attitudes towards working in groups, as well as how they consider their grammar competence after working in collaboration with peers

RESULTS

The process of data analysis aims at looking at and summarising the gathered data which will help later in validating the research hypotheses, drawing conclusions and providing recommendations. In point of fact, this research is a mixed methods research, in which the results obtained were analysed both qualitatively through narrative means, and quantitatively through both measures of central tendancy (the mean and mode) and measures of variability.
When analysed, the results obtained from both the pre-training test and the post-training test revealed the following:

The Pre-training Test Results	The Post-training Test Results
Measures of central tendancy displayed low scores of students.	Measures of central tendancy displayed positive influence of cooperation on learners' outcomes.
The standard deviation displayed that the group chosen was heterogeneous.	The standard deviation displayed that the group became more homogeneous.
8% of students correctly performed the perfect tenses task.	All the students' responses were partially correct.
10.5% of students correctly performed the present time task.	24% of students correctly performed the present time task.

None of the students correctly performed the future time task.	10.5% of students correctly performed the future time task.
15.78% of students correctly performed the past time task.	All the students' responses were partially correct.

Table 1: Tests' Results

However, the results obtained from the questionnaire displayed the following:

- 50% of students used to study grammar through lectures and then individual practice.
- 63.15% of them did not work in cooperative groups before.
- 80% of them participated in group discussions.
- 80% of them consider their level in grammar better.
- The most learnt skills: 'Accepting different view points' and 'Caring about others' learning'.
- 92.10% consider the process as 'Enjoyable' and 'Exciting'.
- 60% of them preferred the cooperative approach.

DISCUSSION

The learners' post-test results are just a detailed way to confirm that working in cooperative groups is influential. Students' grammar competence has been enhanced after working cooperatively with peers; as it is shown first by their scores in both tests as well as their performances in each activity of both the pre and post-test.

The results obtained from the questionnaire demonstrated that students have benefited, in a way or in another, from working in cooperative groups. This, in fact, includes students' engagement in group discussions. Simply, they are a positive sign that learning was taking place. This fact, actually, has been illustrated by students when almost 79% of them ensured that their grammar competence has been increased after working cooperatively. Besides, cooperative learning enabled students to learn some skills; basically, accepting the others' opinions no matter what their nationality, sex, or educational background is. In this respect, Johnson and Johnson said that "No skills are more important to a human being than the skills of cooperative interaction" (1987: 109).

CONCLUSION

Teaching foreign languages is increasingly becoming a needed issue in this gradually changing world. Considering every aspect of language as worth taking, language teachers seek to develop and innovate in all what concerns teaching methods; and a movement towards engaging students in the learning process is witnessed. Cooperative learning has its remarkable advantages; mainly improving both the learners' academic outcomes and socio-affective relationships with peers.

Training students to work in cooperative groups was a fruitful matter; since inspiring results were achieved in the post-training test. The findings of this study demonstrated that students benefited from working in cooperative groups; mainly, their grammar competence has been increased and some social skills have been learnt.

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