Using Cooperative Learning to Enhance EFL Learners' Overall Achievement

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Abstract
This study was an attempt to investigate the effect of fostering cooperative learning on EFL learners' overall achievement. To fulfill the purpose of this study, 56 female students of Saba Language School in Tehran were selected from a total number of 90 based on their performance on the Preliminary English Test (PET) and randomly put into two experimental and control groups. The same content was taught to both groups throughout the 24-session treatment. The only difference was that the experimental group was taught through communicative language teaching with the use of cooperative learning activities, which consisted of the three-step-interview, think-pair-share, paired annotations, round robin, and learning together, while the students in the control group were taught through the communicative language teaching approach without the cooperative teaching procedure. An achievement posttest within the content taught was given to the students in both groups at the end of the instruction and the mean scores of both groups on the test were compared through an independent samples t-test. The result showed the rejection of the null hypothesis thus concluding that cooperative learning had a significant effect on the overall achievement of Iranian EFL learners.

Keywords: Cooperative learning (CL); Communicative language teaching approach; Language achievement; Iranian EFL learners

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Introduction

The quest for finding means and tools to enhance the learning of both the individual and the community is perhaps as old as the first endeavors at learning and teaching themselves. Amidst the many ideas proposed to this end is the notion of cooperative learning (CL) which, albeit not a novel concept historically, finds its roots of application in the classroom in modern times in the 1970s when the United States began to design and study CL models for classroom contexts (Kessler, 1992). Nowadays, CL is applied in almost all school content areas and, increasingly, in college and university contexts all over the world (Johnson & Johnson, 1989; Kessler, 1992), and is claimed to be an effective teaching method in foreign/second language education by many scholars (Johnson & Johnson, 1990; Kagan 1990).

It is generally asserted that CL is a highly appropriate option for all students because it emphasizes active interaction among individuals of diverse abilities and backgrounds (Tsai, 1998; Wei, 1997; Yu, 1995) and demonstrates more positive student outcomes in academic achievement, social behavior, and affective development.

Slavin (1992) states that CL refers to instructional methods involving small heterogeneous groups working together usually toward a common goal. He added that this approach to learning involves changes to both task structure and incentive structure. The task structure refers to the ways in which the teacher or students set up activities designed to result in student learning where a cooperative structure involves students working together to help one another. The incentive structure moves away from a competitive one in many classrooms to a cooperative one so that the success of one student is positively related to the success of others.

Johnson and Johnson (1994a) highlight the importance of how students interact, arguing that it can affect learning, liking of school and other students, as well as self-esteem. Abu and Flowers (1997) add to this stating that cooperative interactions provide students with the skills needed for working with others outside of the school setting.

As Johnson and Johnson (1994b) point out, however, it is not enough to just put students in groups and tell them to work together for CL to work. How such groupings are structured will largely determine whether or not they will be more

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effective than competitive or individualistic groupings. CL is important for creating inclusive classroom environments that meet the needs of all students because it takes their heterogeneity into account thus encouraging peer support and connection. And given that most classrooms are heterogeneous, it only makes sense to use an approach to teaching and learning which accounts for this heterogeneity.

Theories Underlying CL

CL is nothing new but, in modern times, at least four perspectives have been recognized in the literature to be associated with it: the Vygotskian perspective, the Piagetian perspective, Constructivism, and multiple intelligences and Kagan's structural approach.

Vygotskian Perspective

The Vygotskian perspective related to CL is the Zone of Proximal Development (ZPD) and the ensued effect on Krashen's Input Hypothesis. Vygotsky (1978) believes, "All good learning is that which is in advance of development and involves the acquisition of skills just beyond the student's grasp. Such learning occurs through interaction within the student's ZPD" (p. 29). To this end, Vygotsky argues that, when it comes to language learning, the authenticity of the environment and the affinity between its participants are crucial elements to make the learner feel part of this environment.

Piagetian Perspective

In contrast to the Vygotskian perspective, that is, learning which results from social interaction leads to cognitive development, Piaget's theory suggested that it is cognitive development which leads to learning. A central component of Piaget's developmental theory of learning and thinking is that both involve the participation of the learner. Knowledge is not merely transmitted verbally but must be constructed and reconstructed by the learner. Piaget further asserts that for a child to know and construct knowledge of the world, s/he must act on objects and it is this action that provides knowledge of those objects (Sigel & Cocking, 1977).

The theories of both Vygotsky and Piaget complement each other, the former advocating social interaction in learning while the latter promoting active learning of the learners; both are thence essential elements in the realization of CL in real life classroom.

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Constructivism

Like CL, constructivism is not a new concept; it has its roots in philosophy and has been applied to sociology and anthropology, as well as cognitive psychology and education (Bruner, 1973, 1986; Yager, 1991). Perhaps the first constructivist philosopher, Giambatista Vico (Yager, 1991) comments in a treatise in 1710 that one only would know something if one could explain it (Yager, 1991).

Immanual Kant further elaborates this idea by asserting that human beings are not passive recipients of information (Yager, 1991). Learners actively construct knowledge, connect it to previously assimilated knowledge, and make it theirs by constructing their own interpretation (Brooks & Brooks, 1999; Cheek, 1992).

A major theme in constructivism is that the learner selects and transforms information, constructs hypotheses, and makes decisions, relying on a cognitive structure to do so. Cognitive structures (i.e. schema, mental models) provide meaning and organization to experiences and allow the individual to go beyond the information given to them (Bruner, 1973, 1986).

Multiple Intelligences and Kagan's Structural Approach

Kagan and Kagan (1998) present CL activities that promote the various multiple intelligences (MI) described by Gardner (1993), via peer collaborative tasks involving music or skills such as drawing, classifying, computing, moving the body, requiring students to collaborate in teams (interpersonal), or be introspective (intrapersonal), etc.

Use of interpersonal intelligence and CL structures enable the teacher to target interpersonal effectiveness as a skill for student development, which in turn helps foster peaceful classroom social environments. Meanwhile, intrapersonal intelligence is also linked to positive human relationships; research shows that persons who do not understand themselves are incapable of understanding others, and thus incapable of responding appropriately to others (Ciaramicoli & Ketcham, 2000; Goleman, 1995; Goodman, 2002; Kagan & Kagan, 1998; Meyers, 1994).

Elements of CL

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Active participation instead of passive listening in the class distinguishes CL from traditional lecturing. Sharan (1980) refers to this as decentralization of authority and classroom focus. However, this does not imply that teachers switch their roles with their students: the students as active participants and teachers passive recipients. It is very important for the teacher to plan and structure the strategy in the classroom. That is, besides mastering the content knowledge of the discipline they teach, teachers should also know and put into practice the main features that lead to the success of CL (Cosio, 1998).

Johnson, Johnson, and Holubec (1994a, 1994b) assert that, "There are five essential elements that must be structured in a cooperative learning lesson: (1) positive interdependence, (2) individual accountability, (3) quality of group interaction, (4) teaching of cooperative skills, and (5) teaching of social skills" (p. 8). The following section is an overview of the aforementioned quintuple classification.

Positive Interdependence

Positive interdependence refers to each group member realizing that they are part of a group and that, as a group, they must "sink or swim together" (Johnson, Johnson, & Holubec (1994a, p. 9). It is a sense of working together for a common goal and caring about each other's learning. Within CL situations, students have two responsibilities: 1) learn the assigned material, and 2) ensure that all members of the group learn the assigned material.

There are a number of ways of structuring positive interdependence within a learning group ranging from having a single group product and assigning roles for each student to providing a group reward which also fosters positive interdependence. Without positive interdependence, students fall sometimes into the trap of hitchhiking, where they let one student do all the work for them (Cohen, 1994).

Individual Accountability

Individual accountability is the element which provides for each student the belief and incentive that it is important for him/her to learn the material. Each team member feels in charge of their own and their teammates' learning and makes an active contribution to the group. Thus, again there is no hitchhiking or freeloading for anyone in a team – everyone contributes (Kagan, 1990).

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The teacher must have a way of determining what each individual has learned, as well as what the group has accomplished. There are a number of ways of accomplishing individual accountability: random selection of student papers if each student has been doing work within the group, random oral quizzes of students, or written quizzes or exams at the culmination of the work (Kagan, 1989).

Quality of Group Interaction

To provide abundant verbal, face-to-face interaction, where learners explain, argue, elaborate, and link current material with what they have learned previously is important in CL. As face-to-face verbal interaction requires specific physical setups of the group, students need to be clustered together in a tight group, facing each other, in order to have the kind of interchange necessary to accomplish the task.

As placing students in groups to work together, even under the label of cooperative learning or task structure, does not ensure that they would engage in the kinds of positive interactions that promote learning (Johnson & Johnson, 1990), the implementation of an appropriate interaction process constitutes a major component that helps improve the student outcome in many academic and behavioral problems, and establish a greater academic environment in the classroom (Aschettino, 1993).

Teaching Interpersonal and Small Group Skills

The teaching of cooperative skills is essential. As Johnson and Johnson (1994) report, "Placing socially unskilled students in groups and telling them to cooperate did not guarantee that they would have the ability to do so effectively" (p. 38). Students must learn the task and maintenance skills for the groups to run smoothly. They might not intuitively know those social skills; therefore, they must be taught explicitly how to cooperate with others.

The teacher's role in this regard is not that of someone who measures the capacities of students in terms of the final product but in terms of the process, that is, someone who acts as a friend, coordinator, and director who guides his/her actors on how to perform, and as an advisor in the academic tasks and in the psychosocial and cognitive development of the students (Cowei et al., 1994).

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Teaching Social Skills

It is paramount that learners need to have sufficient social skills, involving an explicit teaching of appropriate leadership, communication, trust, and conflict resolution skills so that they could cooperate effectively. Schultz (1999) maintains that, "Social skills should be explicitly taught to the students so that students could work among themselves, not only in terms of cooperation but also without hostility and without the teacher's authority" (p. 35).

Johnson and Johnson (1990) also state that, "Students must be taught these skills and be motivated to use them. If group members lack the interpersonal and small-group skills to cooperate effectively, cooperative learning would not be productive" (p. 32).

Different CL Methods

According to Johnson, Johnson, and Stanne (2000, p. 13), CL is a generic term referring to numerous methods which maybe applied for organizing and conducting classroom instruction. Almost any teacher in any discipline and at any classroom level could find a way to use CL that is congruent with their philosophies and practices, thereby producing effective results.

Accordingly, many different CL methods have been used throughout the years and in different settings; out of these many methods, Johnson, Johnson, and Stanne (2000) report that the following methods have received the most attention as reported in the literature.

Table 1

Modern Methods of CL (Adopted from Johnson, Johnson, & Stanne, 2000)

Researcher-Developer	Date	Method
Johnson & Johnson	Mid 1970s	Learning Together (LT)
DeVries & Edwards	Early 1970s	Teams-Games-Tournaments (TGT)
Sharan & Sharan	Mid 1970s	Group Investigation (GI)
Johnson & Johnson	Mid 1970s	Constructive Controversy
Aronson & Associates	Late 1970s	Jigsaw Procedure
Slavin & Associates	Late 1970s	Student Teams Achievement Divisions (STAD)
Cohen	Early 1980s	Complex Instruction
Slavin & Associates	Early 1980s	Team Assisted Instruction (TAI)
Kagan	Mid 1980s	Cooperative Learning structures
Stevens, Slavin & Associates	Late 1980s	Cooperative Integrated Reading & Composition (CIRC)
Kagan	Early 1990s	Three-Step Interview

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Kagan	Late 1980s	Inside-Outside Circle

In line with what has been discussed so far, the aim of this study was to see whether using CL in a context where the traditional whole-class lecturing method is somewhat prevalent has a significant effect on EFL learners' overall achievement or not. To this end, the following research question was raised in this study:

- *Does fostering cooperative learning have any significant effect on the overall achievement of intermediate EFL learners?*

In line with the above research question, the following null hypothesis was also formulated:

H_0: Fostering cooperative learning does not have any significant effect on the overall achievement of intermediate EFL learners.

Method

In this section, first, the participants of this study and their selection process are described followed by all the instrumentation utilized throughout the work. The section ends with a detailed description of each and every single step of the study, i.e. the procedure.

Participants

A group of 90 adult female EFL learners at the intermediate level of English proficiency studying in Saba Language School in the south of Tehran were selected randomly to sit for a Preliminary English Test (PET). Fifty-six of those whose scores fell in the range of 49-65 were chosen as the participants of this study. Since the acceptable range for passing PET in this language school was 50-75, the participants of the study who were students in this school would naturally come from this range of score in the selection test. As only 47 students scored in this range, however, with the highest being 65, those who scored 49 were also included to have an overall 56 participants.

The participants were thus divided randomly into two groups: one experimental and one control. Since 28 is too large a number for the students in one English class and also because of already having access to two classes of maximum 15, a collection of two classes of 13 and 15 for each group was used, that is, two classes of 13 and 15 for the experimental group of 28 participants and two classes of 13 and 15 for the control group of again 28 participants.

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A group of 25 students with similar characteristics as the target sample were used for the piloting of the PET test. Another group of 27 students were used for piloting the achievement test used as the posttest in the study. All participants used in both test piloting cases were students with very similar language proficiency level as the target sample.

Instruments

A series of teaching materials and quizzes, a number of tests, and a rating scale were used in this study. All the participants in both the experimental and control groups received instruction based on *Interchange 2* by Jack C. Richards (units 9-16) as their course book, *Interchange 2 Workbook*, and the pertinent audio materials.

Furthermore, the *Interchange 2* quizzes (four in all) were also used for both groups. Each quiz, in the format of 25 items including multiple-choice, fill-in-the-blank, matching, and true-false consisted of four parts: listening, vocabulary, grammar, and reading. These quizzes were administered after covering every two units. The two tests used are described below.

Proficiency Test Used for Homogenizing the Participants

As described earlier, a sample PET adopted from *PET Practice Tests* by Quintana (2002) was used to homogenize the participants. The test consisted of two papers: paper 1 for reading/writing and paper 2 for listening. Each part of the test (reading, writing, and listening) consisted of 25% of the total score and the total score was 75. The reading part consisted of 35 items, writing 7 items (including two writing tasks), and listening 25 items and the administration of the whole test took 120 minutes.

The sample test was first piloted with 25 participants demonstrating similar characteristics as the target sample before the actual administration in order to make sure that the test had appropriate items and test characteristics and was thus suitable for the target sample (details of this procedure appear in the results section).

Achievement Posttest

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At the end of the course, all participants underwent a 50-item achievement test in order for the researchers to detect any significant differences between the mean scores of the two groups. The test included multiple-choice, fill-in-the-blank, true-false, and error-correction items and also rewriting sentences and was designed based on the course content. It consisted of four parts: listening (4 items), grammar (23 items), vocabulary (12 items), and reading (11 items). Twenty-seven students with almost the same characteristics as those in the target group were used in the pilot study. Items proven to be deficient following the item analysis were revised accordingly.

Rating Scale for the Writing Section

The rating scale used for the writing section of the PET in this study was the one provided by Cambridge: *General Mark Schemes for Writing* (www.cambridgeesol.org/exams/general-english/sfl/writing.html). The rating for Part Two was done on the basis of the criteria stated in the rating scale having a mark in the range of 0-5. And the rating for Part Three was done according to the rating scale provided especially for the part having a band score (0-5) which is translated to a mark out of 15.

Procedure

The first stage of the research was the selection of participants and their division into the two groups (described in full detail above). Throughout the period of instruction which lasted 24 sessions of 120 minutes spanning over a period of approximately three months, a communicative language teaching approach was used in all four classes in both the control and experimental groups. The difference lay in the CL component which was included in the experimental group. The description of this component appears in full below following the description of the procedure of the control group.

In the control group, students were asked to work mostly individually. They were supposed to pay attention to their own learning more than to that of others. If they faced any problems, they were required to ask the teacher. For some tasks, they were asked to work in pairs but simply practicing the same content without any changes. There was a sense of competition among the students and they were sitting in rows facing each others' backs.

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Students in the control group were paired in practicing dialogues. They also exchanged their roles while practicing them. They were mostly asked to do the grammar and vocabulary parts on their own without their friends' help and later they checked their answers with their teacher. For the reading sections, they had warm-up before reading the text.

The warm-up section included one of these procedures: guessing what the reading was about by looking at the pictures or the title, having some key words on the board and asking their ideas about the words, and trying to relate the reading to their real life by eliciting ideas and guiding them throughout the procedure and putting them in the right path (brainstorming). Later they did the reading tasks with the help of their partners in pairs.

For the speaking and discussion parts, they were placed in groups of three or four and were instructed what to do. In this phase, the teacher moved from one group to the other to check their assignment and detect their weaknesses. The teacher was a source of help for the students and they were more willing to ask about their problems in this phase. And finally came the writing parts which students did individually and they received feedback also individually.

Each class in the experimental group, however, was divided into groups from the very beginning of the course. There were three groups of four and a group of three in the class with 15 students, and two groups of four and a group of five in the class with 13 students. They could name their groups after their favorite singers, animals, or anything they liked; this would reflect a sense of identity. Each group would be referred to by their group identities henceforth. The team formation needed to be done with a lot of care and attention to ensure practicality for each group.

The participants were informed about the CL process used in their classroom and the teacher tried to be as motivating as possible in this briefing in order to lay a positive impression on the students. The classroom environment was supportive and very friendly. The seating arrangement was also changed in the classroom. Instead of sitting in rows facing each others' backs, the students sat face-to-face with their group members.

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To break the initial ice in the groups, the three-step interview (Kagan, 1993) was used for team members to get to know one another. In this process, student A would interview student B for a specified number of minutes, listening attentively and asking probing questions. At the designated signal, students reversed roles: B started interviewing A for the same number of minutes. At another signal, each pair turned to another pair, forming a group of four. Each member of the group introduced her partner, highlighting the most interesting points.

The stages of the activities that the experimental group underwent were categorized as follows:

1. ***The three-step interview*** (Kagan, 1993), which was used as an icebreaker, was mainly used for the vocabulary, speaking, and grammar sections since it allowed the members of each group to ask and answer questions when more clarification was needed. It also increased the opportunity each member had in communicating with others. Furthermore, since it was done in a round of members (somehow practicing the same structures and vocabularies), it helped students to have better retention of the presented material. They had choices in what to say and also they were able to correct one another while moving from one member to the other.
2. ***Think-pair-share*** (Lyman, 1981) was used mainly in discussions because it entailed a time for thinking and caused further discussions in groups. In addition, it helped learners to have better social skills. For think-pair-share, students were given a topic or a question (usually a thought-provoking one). Later, they were given a short time to think about it (one minute or so depending on the question) and then they paired up and exchanged their ideas. Subsequently, they moved to the whole group and exchanged their ideas and had the opportunity to have extended discussions with different point of views. The teacher was a source of help for the students, especially in the third phase, by directing the students and sometimes by avoiding conflicts among members in groups. This also let the teacher check the students and find about their weaknesses.
3. ***Paired annotations*** (Kagan, 1992) were used for reading texts prior to the class to arouse critical thinking and also to help considerably in class time management. Accordingly, students were given reading texts (the texts in their books) to read at home prior to class and write a brief summary about the text (only the main points in their own words). Later, they shared and also compared their own summaries with that of their partners in class.

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And finally, each pair was asked to write a summary of the text trying to mention the best sentences and points addressed by both. In this way, not only their critical thinking in reading would improve but also they could practice writing skills.

4. ***Round-robin*** (Kagan, 1994) was used in the grammar and discussion parts based on the nature of the material presented in class. Students were put into groups of 3-5 and one would be appointed as the recorder. A question was posed with many answers (or possibilities in case of grammar) and students were given a short time to think about it and refer to what they had learned before. After the "think time", members of the team shared responses with one another in the round-robin style. The recorder wrote down the answers of the group members. This mostly led into active participation of the members and also encouraged students to learn grammar. A point worth mentioning here is the opportunity and attention each member had in providing answers and that they had to provide proof for what they thought to be true which was quite demanding on the part of the students. This activity also allowed each member to think and give the opportunity to share their answer while encouraging learning from other members, especially low achievers.
5. ***Learning together*** (Johnson & Johnson, 1987) could be used for every skill and section since it has more variety and flexibility. The researchers decided to mainly use this activity to practice dialogues, expressions, and pronunciation. The members shared roles and acted out dialogues. Later, the roles were changed so that everyone had the opportunity to practice different roles. This activity did not have a fixed framework to work within, so the teacher – based on the students' needs and capabilities – provided opportunities for practicing it in class. This activity was also a source of help for the teacher to detect the areas that needed to be worked on. It also made it possible for the students to act out different roles and encounter different situations, which was a good practice for real life contexts in the future.

It should be noted that these categorizations were not fixed. Based on the requirements of the context, some changes were made in applying the above mentioned activities in the experimental group.

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In the first three sessions of the course, adequate time was appropriated to helping students get used to the new method and this made them less stressful. Throughout the course, students were required to work in groups and the teacher was constantly monitoring the improvement of each group. Therefore, if a group was shown to have an inappropriate formation, the teacher made the necessary changes in the members of the group to ensure optimal functionality of each group. Furthermore, students were encouraged to work in groups and help one another. The teacher checked to see if the students had any misunderstanding in the learning process or learning materials presented.

The students were also paired within the group. The pairs were available whenever the teacher needed to use think-pair-share and paired annotation activities.

During the course, students in the control and experimental group took the four quizzes of *Interchange 2* for every two units to ensure individual accountability. By this, the teacher eliminated any chance of having free riders in groups and students were more attentive and felt responsible for their roles in the group.

At the end, all the participants in the experimental group as well as the control group took the achievement posttest (already described) in order to determine whether there was a significant difference between the two groups' mean scores after the treatment. Prior to the actual administration of the posttest, a pilot study was conducted in which the researchers administered the test to 27 students at the intermediate level of proficiency with almost the same characteristics as the target group in the same language school. Since the reliability was shown to be 0.79, which was relatively high, it gave assurance to the researchers that it could be used for the target sample.

Results and Discussion

In the process of this study, the researchers conducted a series of both descriptive and inferential statistics in the process, discussed in full detail below in a chronological order of participant selection, posttest administration, and testing the hypothesis.

Participant Selection

Descriptive Statistics of the Proficiency Test Piloting

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The PET was administered to a group of 25 intermediate-level EFL learners at the same language school bearing similar characteristics as the target sample. All items went through an item analysis procedure and no item was discarded as they all enjoyed acceptable indices. Table 2 shows the descriptive statistics of the PET in the pilot phase.

Table 2
Descriptive Statistics of the PET Piloting

	N	Min	Max	Mean	Std Deviation
Score	25	33.14	64.86	49.0286	6.8061

Table 3 shows the reliability of the test scores gained by the participants in the PET piloting phase. The Cronbach alpha formula was employed for this purpose and an acceptable reliability of 0.71 was obtained.

As described in detail earlier, there were two writing tasks in the test that were rated by two qualified teachers using the predetermined PET rating scale. The researchers used the Pearson correlation coefficient in order to calculate the inter-rater reliability between the raters. The results showed that there was a significant correlation between the two raters. Therefore, this gave assurance to the researchers that the same raters can be used for the actual administration of the test (the results are shown in Table 3 and Table 4).

Table 3
Inter-rater Reliability of the Two Raters in the Piloting for Part 2

		Q41.1	Q41.2
Q41.1	Pearson Correlation	1.000	.778**
	Sig. (2-tailed)	.	.000
	N	25	25
Q41.2	Pearson Correlation	.778**	1.000
	Sig. (2-tailed)	.000	.
	N	25	25

**Correlation is significant at the 0.01 level

Table 4
Inter-rater Reliability of the Two Raters in the Piloting for Part 3

		Q41.1	Q41.2
Q41.1	Pearson Correlation	1.000	.782**
	Sig. (2-tailed)	.	.000
	N	25	25
Q41.2	Pearson Correlation	.782**	1.000

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Sig. (2-tailed)	.000	.
N	25	25

**Correlation is significant at the 0.01 level

Descriptive Statistics of the Proficiency Test

The researchers used the piloted test as an instrument for homogenizing the participants of the study in the language school. On the whole, 90 students participated in the test administration with the researchers administering the test twice, each time to 45 students. Just as was done in the piloting phase, descriptive statistics were conducted after the administration of the test. Table 6 shows these statistics with the mean being 51.17 and the standard deviation, 7.01.

Table 5
Descriptive Statistics of the PET Administration

	N	Min	Max	Mean	Std Deviation
Score	90	33.14	65.57	51.1651	7.0128

The reliability of the PET in this actual administration for homogenizing the participants was calculated too with the achieved index of 0.75 reassuring the researchers of the reliability of this test.

Dividing the Participants into the Two Groups

Although the division of the learners into the two groups was done on a random basis, to make doubly sure that the two groups displayed no significant difference on the whole in terms of the their language proficiency prior to the treatment, a comparison of the means was also conducted to see whether there was a significant difference between the mean score of each group. Consequently, a *t*-test was required. To this end, first the descriptive statistics of the scores of the two groups on the proficiency test are presented in Table 8 below.

Table 6
Descriptive Statistics of the Two Groups Prior to the Treatment

	Code	N	Mean	SD	Std. Error Mean	Skewness	
						Statistic	Std. error
Total	Experimental	28	56.188	4.9306	4.88161	.726	.441

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	Control	28	54.306	4.8816	4.93061	1.068	.441

Prior to running a *t*-test, the normality within each group had to be checked through specifying the skewness ratio by dividing the statistic of skewness over the standard error. The results were 1.64 (0.726 / 0.441) for the experimental group and 2.42 (1.068 / 0.441) for the control group. While the experimental group's degree of skewness fell in the acceptable range of -1.96 and 1.96, that of the control group was beyond it. This meant that running a *t*-test was not legitimized. Hence the researchers had to resort to employing the Mann-Whitney test for this procedure. Tables 7 and 8 show the results for this statistical procedure.

Table 7
Mann-Whitney Test: Ranks

Group	N	Mean	Sum of ranks
Experimental	28	32.41	907.50
Control	28	24.59	688.50

Table 8
Mann-Whitney Test: Test Statistics

	Score
Mann-Whitney U	282.500
Wilcoxon W	688.500
Z	-1.798
Asymp. Sig. (2-tailed)	.072

According to Table 8, the results of the Mann-Whitney test indicated that at the 0.05 level of significance, there was no significant difference between the mean rank of the control group (24.59) and that of the experimental group (32.41) on the proficiency test ($U = 282.5$, $N_1 = 28$, $N_2 = 28$, $p = 0.072 > 0.05$); hence, any probable differences at the end of the treatment could be attributed to the effect of the treatment.

Posttest

Descriptive Statistics of the Posttest Piloting

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Prior to its actual administration, the posttest was piloted among 27 students at the intermediate level of proficiency with almost the same English language proficiency characteristics of the target group in the same language school. The test consisted of 50 multiple choice items and thus had a total score of 50. As table 9 displays, the mean of the scores in the pilot phase of the posttest was 40.52 and the standard deviation, 5.13.

Table 9
Descriptive Statistics of the Posttest in the Pilot Phase

	N	Min	Max	Mean	Std Deviation
Score	27	31	50	40.52	5.132

The next step was calculating the reliability of the posttest in the pilot phase; using the Cronbach alpha, the reliability was shown to be 0.79, acceptable enough to give assurance to the researchers that they could use the test for the target sample.

Posttest Descriptive Statistics

Following the piloting of the posttest, it was administered at the end of the treatment to both control and experimental groups. It is worth noting here that out of the 28 participants in the experimental group, one did not take part in the posttest.

Table 10
Descriptive Statistics of the Posttest Scores of Control and Experimental Groups

	Code	N	Mean	SD	Std. Error Mean	Skewness	
						Statistic	Std Error
Total	Control	28	41.04	4.726	.89	-.063	.441
	Experimental	27	44.26	4.72	.91	-.332	.448

Table 10 above displays the descriptive statistics for this administration in both groups with the means being 41.04 and 44.26 for the control and experimental groups, respectively.

Testing the Hypothesis

To verify the null hypothesis of the study, the researchers conducted an independent samples *t*-test. Again prior to this, the normality of the distribution of scores within each group had to be checked.

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As can be derived from Table 10, the skewness ratio of both groups indicated that the scores manifested a distribution and thus running a *t*-test was legitimized.

As Table 11 below indicates, with the *F* value of 0.139, and the *p* value of 0.710 being greater than 0.05, the variances between the two groups were not significantly different. Therefore, the results of the *t*-test with the assumption of homogeneity of the variances are reported here. The results ($t = 2.53$, df = 53, $p = 0.014 < 0.05$, two-tailed) indicate that there was a significant difference between the mean scores of the two groups at the posttest.

Table 11
Independent Samples *t*-Test of the Experimental and Control Groups

		Levene's Test for Equality of Variances		*t*-test for Equality of Means				
		F	Sig.	*t*	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Post	Equal variances assumed	.139	.710	2.53	53	.014	3.22	1.274
	Equal variances not assumed			2.53	52.9	.014	3.22	1.274

It can thus be concluded that the presupposed null hypothesis was rejected meaning that CL does have a significant impact on the general achievement of EFL learners. Hence, learners undergoing CL with a focus on the combination of the five techniques of the three-step interview, think-pair-share, paired annotations, round-robin, and learning together would have an overall advantage in their language achievement compared to those who are not exposed to such a treatment.

Following the rejection of the null hypothesis, the researchers were interested to determine the strength of the findings of the research, that is, to evaluate the stability of the research findings across samples; hence, effect size was estimated. While Cohen's *d* stood at 3.33, the effect size was 0.86. According to Mackey and Gass (2005), a value exceeding 0.8 is considered a large effect size. Therefore, the

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findings of the study could be considered strong enough for the purpose of generalization.

Conclusion

The outcome of the posttest analysis clarified that fostering cooperative learning had a significant effect on EFL learners' overall achievement. That is to say that the use of CL activities during instruction significantly increased learners' achievement. Hence, this study clearly supports earlier research on CL which found that it accelerates achievement as well as having positive effects on certain important factors such as motivation, and enjoying the class and working with others in CL groups. CL strategies are supported by a multiplicity of theories from a variety of academic disciplines – including psychological theories of motivation, social cohesion, individual and cognitive development as well as sociocultural theory, cognitive apprenticeship, situated cognition, and communities of practice.

Many teachers are faced with large heterogeneous classes, making it difficult to serve the needs of all students in the class. CL approaches take advantage of this heterogeneity by encouraging students to learn from one another and from both more and less knowledgeable peers. The bonds developed in this process can lead to increased understanding and acceptance of all members of society, a benefit of CL which extends well beyond the walls of the class itself.

However, like other innovations, techniques of CL need to be tailored to the cultural and linguistic context in which they are used. Designed and implemented by teachers who are loyal to the key elements of CL and dedicated to regarding diversity as a resource, CL can create supportive environments that will enable students to succeed in their course, enhance their oral communicative competence, boost their motivation toward learning English as a foreign language, and improve their interpersonal relationships. Based upon the results yielded in this study, several conclusions may be drawn in response to the research questions of the study.

CL is a feasible and practical teaching method that puts communicative approach into action. Such a student-centered teaching method helps improve the students' overall achievement of the target language.

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CL is a cost-effective teaching method with characteristics compatible with the current wave of educational reform in Iran, especially with respect to the aim of fostering the basic competencies of our students. CL does not only enhance the students' overall achievement and boost their motivation toward learning English as a foreign language, it also cultivates the students' overall ability as holistic human beings with the facility of caring, sharing, respecting, and cooperating with others.

One point worth elaborating here is that, contrary to what many might think, CL extends well beyond group work. In other words, individuals working together in a group is not necessarily synonymous with CL. At a theoretical level, group work in a language classroom necessitates a number of individuals assuming certain tasks or parts of a task and heading to reach certain goals. CL, however, heads much further: as discussed albeit briefly in the introduction section of this paper, CL is the promotion of the culture of not just fulfilling your role in harmony with the mandate of a group but assuming responsibility for the learning of others as well. This is an indisputable distinction between the two concepts of group work and CL.

At a practical level too, there is a clear difference between CL and group work as demonstrated by this study among the many others conducted bearing the same results. As noted in the procedure section and as those practitioners who have used the *Interchange* series would know, there was pair and group work involved in the control group, that is of course group work but not cooperative work. Hence, if the two were not different, the experimental and control groups should have reflected not much of a significant difference in their achievements bearing in mind that with the teacher, materials, and duration being uniform, the major difference was over the methods applied. This of course means that simply any group work is not CL quintessentially.

Last but not least, the following are some points that need to be observed in the process of implementing CL on a large scale to gain optimal outcomes:

- It is essential that teachers be given intensive training on how to implement CL and the benefits of doing so before attempting to make it part of the curriculum. It is a good idea that teachers cooperate with one another as well in this regard. Team teaching, establishing support groups in which teachers provide help and assistance to each other, and coordinating strategies for teaching difficult students are all examples of teacher cooperation.

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- Such initiatives need to be complemented with support networks and ready made materials to increase the likelihood that all teachers will adopt this approach to teaching and learning in a proper way.
- One of the key challenges for teachers not only in Iran but in many educational environments is adopting such approaches in rigidly hierarchal contexts where decisions are often made by administrators whose primary interest may not be the teachers or students themselves. More engagement with the management level is required to promote CL and encourage them to support its advantageous application.
- Implementing CL approaches on a large scale takes serious commitment and resources. Without these, such approaches – regardless of their track record of success – will be doomed to failure. In simple terms, a shot-in-the-dark trial of CL will end nowhere; strategic thinking and adequate resource mobilization are required both at the managerial and implementation levels.

If CL is going to become a large-scale success story, planning beyond the classroom by the teacher is indispensable. Though the paramount importance of the teacher and his/her internalization of a CL culture is vital in implementing efficiently such an approach inside the classroom, teaching materials inter alia bear an indelible role in the degree of his/her achievement in doing so. To this end, syllabus designers and textbook writers can include textbooks tasks adjacent to CL activities in their products thus encouraging the students to work in groups and share their ideas in a range of tasks aiming at better comprehension as well as higher involvement of the learners. This goal, however, can by no means materialize without primarily establishing forums in which teachers, syllabus designers, managers, and of course a group of learners sit down prior to designing any syllabi and share their ideas and experiences with one another. Only through this kind of engagement, could experts develop a promising curriculum.

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