Using Cooperative Learning to Boost Creativity and Motivation in Language Learning

Hamid Marashi 1*, Homayra Khatami 2
1 Department of English Language Teaching, Islamic Azad University; Central Tehran Branch, Tehran, Iran
2 Department of English Language Teaching, Islamic Azad University; Central Tehran Branch, Tehran, Iran

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Abstract
This study sought to investigate the effect of cooperative learning on EFL learners’ creativity and motivation. Accordingly, 66 pre-intermediate female learners were selected among 90 through their performance on a piloted sample Preliminary English Test. Learners were assigned into two control and experimental group. The Abedi-Schumaker Creativity Test (ACT) and the Attitude/Motivation Test Battery (AMTB) were given to both groups as pretest. Both groups underwent the same amount of teaching time and same material with the same teacher during 18 sessions taking 90 minutes each. In the experimental group, the students experienced the cooperative learning strategies of think-pair-share, roundtable, three-step-interview, and three-stay one-stray. The learners in the control group, however, received the instruction based on the syllabus of the language school, which had no cooperative learning component. The same ACT and AMTB questionnaires were administered again as the posttest at the end of the treatment to both groups and their mean scores on the tests were compared through an analysis of covariance. The results in relation to cooperative learning proved to have a significantly positive effect on EFL learners’ creativity and motivation. This study provided yet further evidence in favor of applying cooperative learning in the ELT environment.

Keywords: Cooperative learning, Creativity, English Language Teaching (ELT), Motivation

INTRODUCTION
The modern world is a growing arena of human communication where people are inclined to communicate with their peers in order to play their role as a social creature in communities. Naturally, the knowledge of the first language (L1) suffices only to local communities while an increasing number of individuals are engaging with other communities at the global level and thus require to use/speak an international second language (L2) i.e. English. Not surprisingly, ELT circles have been concerned with creating an environment to enhance the English communication skills of nonnative speakers of the language (Lin, 2002). Accordingly, a major theme in the field of education and ELT can be ‘facilitating learners’
intake and mastery through boosting their motivation’ (Ellis, 2008; Gardner, 2010; Spolsky, 2000).

**Motivation**

One of the most interesting elements employed to elucidate individual differences in language learning process is the concept of motivation (Jahansouzshahi, 2009; Lim, 2007). Numerous studies in the field of language learning (e.g. Den Brok, Levy, Brekelmans & Wubbels, 2006; Dörnyei, 2001; Gardner, 2010; Oxford & Shearin, 1994) reveal that the concept of motivation is considered as a renowned factor in learning. Moreover, motivation, as aptly pointed out by Yuanfang (2009), is of “particular interest to second/foreign language teachers, administrators and researchers, because it can be presumably enhanced in one specific learning context but weakened in another learning context” (p. 87).

Brownate (1987) defines motivation as “an inner drive, impulse, emotion or desire that moves one to a particular action” (p. 114). In other words, to be motivated means to get moved to do something (Ryan & Deci, as cited by Golaghaei & Arefinezhad, 2015). In the context of language learning, motivation usually refers to the longing to initiate second language learning and also the exertion, which is basically applied to sustain it (Ortega, 2009). Motivation, in the context of second/foreign language learning, is primarily seen as the extent to which one student strives or works to learn the language as a result of a desire to do so (Kissau, 2006). Additionally, motivational constructs influence learners’ engagement in the learning process, which will consequently influence their achievements (Eccles & Wigfield, as cited in Rezaee, Kavianpanah, & Najibi, 2015).

Gardner (1985) asserts that motivation is categorized into two main types namely integrative motivation and instrumental motivation. According to Brown (2007), instrumental motivation refers to a longing to learn a second language because it would accomplish the assured practical objectives (e.g. passing an examination, getting a job, etc.) whereas, integrative motivation is concerned with having a longing to learn a second language to acquire the ability to communicate with people from different cultures speaking one language (Gardner, 2010).

Motivation in language learning occurs where English as foreign language learners (EFL) use the language to express their thoughts and exchange opinions (Vohs, Baumeister, Jean, Twenge, Nelson, & Tice, 2008, p. 885). It is of no surprise that the literature related to ELT is overwhelmed by studies proving that motivation bears a significantly positive impact on L2 learning (e.g. Dörnyei; 2005; Gardner, Tremblay, & Masgoret, 1997; Kimura, Nakata, & Okumura, 2001; Marashi & Tahan-Shizari, 2015; Moskovsky, Assulaimani, Racheva, & Harkins, 2016; Oxford & Nyikos, 1989; Vandergrift, 2005; Watkins, McInerney, Lee, Akande, & Regmi, 2002).

One of the ways through which learners’ interest and motivation can be enhanced is when they are required to provide creative notions and are given an instruction to do so. The significant effects of creativity in second/foreign language learning have been reported by several scholars and researchers (e.g. Hadley, 2003; Hargis, as cited in Farahi & Mohseni, 2014; Landry, 2000; Tepper, 2005).

**Creativity**

It is very important for students to learn and use language creatively to progress beyond the rudimentary levels (Hadley, 2003). Despite the growing body of literature on creativity, there is no general consensus over the definition of creativity. It is said that this lack of unity in defining creativity is associated with different philosophical and psychological views (e.g. Cropley, 2007; Ferrari, Cachia, & Punie, 2009). Marrapodi (2003), for instance, defines the concept of creativity as a deliberate and conscious process, which is primarily employed to understand or assess information and experiences with a set of insightful attitudes and capabilities that guide considerate actions and beliefs. Additionally, Chance (1986) defines creativity as the capability...
to scrutinize facts, create and form thoughts, defend views, make comparisons and contrasts, derive inferences, solve problems and assess arguments.

According to Ferrari et al. (2009), creativity in the classroom encompasses innovative instruction, high incentive, the capability of listening and communicating and the ability to inspire and interest. Furthermore, as pointed out by Runco (2004), establishing a creative atmosphere in the classroom will improve language teaching and learning. This was investigated in numerous studies (e.g. Carter, 2004; Lubart & Guignard, 2004; Marashi & Dadari, 2012; Neira, 2008; Parameswaran, 2007; Rao & Prasad, 2009; Sternberg, 2009).

It is believed that students’ creativity can be significantly enhanced in a milieu wherein sociocultural diversity, team work, independence, intrinsic-motivation, and risk-taking principles that tolerate and even inspire failure are fortified. According to Mehdizadeh, Nojabaei, and Asgari (2013), one of the methods, which improves students’ creativity can be cooperative learning as it has proven to have positive impacts on students’ achievement.

Cooperative learning

Cooperative learning (CL) is considered a group of instructional methods wherein a small group of students work together and has interaction in completing target tasks (Jacob, Rottenberg, Patrick, & Wheeler, 1996). As pointed out by Slavin (1992), CL is mainly based on the notion that the best way to learn a language is having small heterogeneous groups in which all students collaboratively and cooperatively work towards a common objective.

Slavin’s (1995) model of CL shows that when students have the motivation to learn and apply its power to encourage and help one another, they are to reach cognitive development which help them to better cooperate in the language classroom. Concerning the significance of CL, Johnson and Johnson (1994) argue that the way in which learners interact with each other can conceivably affect their learning, liking of school and other learners, along with their self-esteem. Moreover, according to Johnson and Johnson (1999), working cooperatively helps students to develop their social skills and take control of their learning.

It appears that adopting a CL approach in teaching creates an atmosphere for teachers to encourage students to become active participants in the learning process (Webb, 2009). In fact, when students interact, they learn to share opinions, ask questions, and improve their understanding (Mercer, Wegerif, & Dawes, 1999).

As pointed out by Kagan (1994), CL would inspire students to have higher accomplishment than individualistic or competitive learning due to the fact that CL offers students various opportunities that empower them to develop their self-esteem and also to be intrinsically motivated. Indeed, a large number of studies investigated the advantage of CL in language teaching (e.g. Deutsch, Coleman, & Marcus, 2006; Gillies & Boyle, 2010; Johnson & Johnson, 2009; Marashi & Baygzadeh, 2010; Marashi & Dibah, 2013; Norman, 2006; Slavin, 2011)

RESEARCH NULL HYPOTHESES

In line with what have been discussed above, the researchers considered that there was a gap in the existing literature in relation to the possible effects of CL on EFL learners’ creativity and motivation. The following null hypotheses were, therefore, formulated:

\[ H_{01} : \text{Cooperative learning does not have any significant effect on EFL learners’ creativity.} \]

\[ H_{02} : \text{Cooperative learning does not have any significant effect on EFL learners’ motivation.} \]

METHODS

Participants

The participants of this study included 66 pre-intermediate students from Kish Air Language School who were selected among 90 students in
the school based on a convenient sampling procedure and their scores on a sample Preliminary English Test (PET). The aforesaid test was piloted beforehand among 30 students with almost the same characteristics of the target group to estimate the reliability of the test and conduct item analysis. The 66 students who were all females and between 13-18 years old were those whose scores fell one standard deviation above and below the mean. Subsequently, they were randomly assigned into a control and an experimental group.

**Instruments**

**Preliminary English Test (PET)**
A sample Preliminary English Test (PET) was administered for the participant selection process. The test covers all the four language skills of reading, writing, listening, and speaking. PET is part of a group of examinations developed by Cambridge ESOL called the Cambridge Main Suite. Furthermore, the test originally contained 75 items, however, two items were discarded as a result of the item analysis following the piloting.

For the assessment of parts two and three of the writing section, the researchers used the PET general mark scheme which is used as a rubric for a summative score. According to the PET rating scale, the criteria include language range, variety, complexity message communication, grammatical structure, vocabulary, spelling, punctuation, content points, length, and target reader and the maximum overall score would be five.

**Abedi-Schumacher Creativity Test (ACT)**
The Abedi-Schumacher Creativity Test (ACT) designed by O’Neil, Abedi, and Speilberger in 1992 (as cited in Cropley, 2000) was also applied in this study. The ACT consists of 60 multiple choice items to measure the four traits of Fluency (22 items), Flexibility (11 items), Originality (16 items), and Elaboration (11 items). Each item has three options ranging from least to most creative responses with a range of scores between 0-2. Therefore, the ultimate score is estimated in the possible range of 0 to 120 and participants are supposed to answer the items in 60 minutes.

According to Abedi (2002), the estimated correlation coefficient between the four subscales of the ACT and the Torrance Test of Creative Thinking (TTCT) was meaningful at the 0.01 level of significance. Therefore, the ACT has concurrent validity. The estimated reliability of each of the subscales of the ACT was 0.61 to 0.75 which demonstrates that the test is also reliable (Auzmendi, Villa, & Abedi, 1996).

The ACT was translated by Daemi and Moghimi (2004) and validated by Nosratinia and Zaker (2013). The Farsi version of the ACT (as the English is not available) was administered before treatment as pretest for checking the level of the students’ creativity, and after the treatment as posttest to both experimental and control groups.

**Attitude/Motivation Test Battery (AMTB)**
The Attitude/Motivation Test Battery (AMTB) developed by Gardner (1985) was used in this study and administered as a pretest and posttest to both experimental and control groups to check the possible changes on their level of motivation. This questionnaire includes 104 Likert-type items. Each item is followed by six alternatives including: Strongly disagree (1), moderately disagree (2), slightly disagree (3), slightly agree (4), moderately agree (5), and strongly agree (6).

The AMTB was developed to measure various components of the socio-educational model of second language acquisition. The administration required 35 minutes. The test is recognized universally as being valid with a reliability of around 0.87 (Gardner, 1985; Gardner, Lalonde, Moorcroft, & Evers, 1987; Gardner & Macintyre, 1993; Gardner & Tremblay, 1998).

**Course Book**
For all the participants in the experimental and control group, KSC books were used as their course book during a period of 18 sessions of one hour and 30 minutes. KSC is an American English program for teenagers. It has 12 books with work books and a pertinent CD. The pre-intermediate level of this series was taught. There are six units in the pre-intermediate level and each
unit contains four parts: reading and vocabulary, grammar, listening and speaking, and writing.

**PROCEDURE OF THE STUDY**

The PET was first piloted as explained earlier and subsequently administered for the homogenization process. Once the participants were randomly assigned into two groups (one experimental with 33 learners and one control with 33 learners), the ACT and AMTB were administered to both groups to measure their levels of creativity and motivation before the treatment.

All participants in both experimental and control groups were exposed to the same materials and the same amount of instruction time by the same teacher (one of the researchers). The whole course took nine weeks comprising 18 sessions of 90 minutes each.

**Experimental group**

In the experimental group, cooperative learning (CL) was implemented. The students were divided into groups of three or four from the first session of the course. At first, the participants were informed by the teacher about the strategies of CL and its process. The teacher tried to make a friendly atmosphere in the experimental class to encourage the students to cooperate with each other. The seating arrangement was changed and learners had to sit face-to-face. The teacher monitored the progress of the groups and the teacher would change the group formation in case a group was not as active. The techniques of think-pair-share, three-stay one-stray, roundtable, and three-step-interview were used. Based on the teacher’s lesson plan for each session, the activities were used randomly throughout the treatment with the compatibility of the assigned topics of each session. Because of the shortage of time to cover the syllabus, it was not possible to use all the four techniques each session.

**Think-Pair-Share**

The think-pair-share (TPS) strategy (Lyman, 1981) is a CL strategy in which students work together to solve a problem or answer a question about an assigned reading. This technique requires students to (1) think individually about a topic or answer to a question; and (2) share ideas with classmates. Discussing an answer with a peer serves to maximize participation, focus attention, and engage students in comprehending the reading material. It helps students to think individually about a topic or answer a question. It teaches students how to share ideas with classmates. This strategy builds oral communication skills and further helps students to focus their attention and engage them in comprehending the reading material. This strategy consists of three phases which are think, pair, and share as follow:

- **T**: (Think) Teachers begin by asking a specific question about the text. Students "think" about what they know or have learned about the topic.
- **P**: (Pair) Each student should be paired with another student or a small group.
- **S**: (Share) Students share their thinking with their partner. Teachers expand the "share" into a whole-class discussion.

**Roundtable**

Roundtable can be a good cooperative structure and interactive activity to practice vocabulary, grammar, or even content. Students passed a paper around, adding an item according to the criteria the teacher designates. In Roundtable, each student responded, wrote it on the page, and passed it on to the next peer. The teacher used roundtable to brainstorm some ideas. As an instance, she wrote an incomplete sentence of “if at first, you don’t succeed,...” on the board and asked the students to try to complete it by writing on a piece of paper and then passing it to other group member. The whole group stopped when the time was called and the students shared their sentences with the entire class. Students’ sentences were then discussed.

**Three-Step-Interview**

The three-step interview (Kagan & McGroarty, 1993) can be used both as an ice-breaker, which
introduces students to one another and to provide students with a venue for soliciting opinions, positions, or ideas from their peers. The three-step interview takes the place of the traditional group discussion because each person in the group must produce and receive information.

In the first two steps of this CL structure, students interacted in pairs, and interviewed each other about a topic. Then, in the third step, students took turns sharing what they learned from their partners with the rest of their CL group. This step promoted equal participation, where only one person in the whole group or class was talking at once. The three-step interview helped students to develop listening and language skills while promoting individual accountability.

Three-Stay One-Stray
Even students working in groups could benefit from the feedback of additional peers. In this structure, students periodically took a break from their work (often at key decision-making points) and had a member of another group joined them to describe their progress. The role of the group was to gain information and alternative perspectives by listening and sharing. The number of times the group sent a representative to another group depended on the level of complexity of the problem. This method could also be used to report out final solutions.

After the treatment, the ACT and AMTB questionnaires were administered to the participants of experimental group as their posttest to examine whether the CL treatment sessions had any significant effect on their creativity and motivation.

Control Group
In the control group, the students received the instruction based on the syllabus of the language school and KSC teachers’ book in 18 sessions of one hour and 30 minutes, just like the experimental group. The participants in the control group did not receive any CL treatment. The teacher/researcher tried to encourage students to work individually and they were asked to refer only to the teacher when they encountered any problems.

The procedure, which was followed for students in control group was first having warm-up or preparing the students for the instruction they were going to receive. Warm-up was usually done by asking some questions. Then, there was a presentation of the actual teaching for the new lesson. The basic lesson plan included having students learn new vocabularies, sentence structures, and grammar rules. In this method, the teacher’s primary job was to give definitions of new words, explain word usages and collocation, analyze the grammatical rules, and also present sentence structure to students.

Moreover, practicing what was taught in pairs or individually was the next phase (this procedure was of course quintessentially different from what happened in the CL group). This helped the learners to use the presented points in different settings. Finally, there was a production phase considered as a sort of feedback. In this phase, the students were able to show what they had learned. At the end of the instruction phase in the control group, the ACT and AMTB questionnaires were also administered to the participants as their posttest.

RESULTS

Participant selection
As stated earlier, a sample PET was used for the participants’ selection in this study. At the piloting, the reliability stood at 0.89. Furthermore, the two researchers who scored the writing section of the PET enjoyed inter-rater reliability ($r = 0.782$, $p = 0.0001 < 0.01$).

Table 1 shows the descriptive statistics of the main administration following the piloting with the mean being 44.79 and the standard deviation 4.88.
Table 1

Descriptive Statistics of the PET Administration

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET Administration</td>
<td>90</td>
<td>27</td>
<td>79</td>
<td>46.46</td>
<td>10.678</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
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<td>90</td>
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<td></td>
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</table>

Pretests

Once the two control and experimental groups were in place, the two pretests were administered to them. Table 2 below shows the descriptive statistics for the ACT and AMTB pretests.

Table 2

Descriptive Statistics of the Scores Obtained by the Two Groups on the ACT and AMTB Pretests

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
</tr>
<tr>
<td>ACT Pre Cont</td>
<td>33</td>
<td>74</td>
<td>122</td>
<td>96.55</td>
<td>12.760</td>
<td>.083</td>
</tr>
<tr>
<td>ACT Pre Exp</td>
<td>33</td>
<td>68</td>
<td>123</td>
<td>94.24</td>
<td>15.433</td>
<td>.019</td>
</tr>
<tr>
<td>AMTB Pre Cont</td>
<td>33</td>
<td>154</td>
<td>319</td>
<td>244.88</td>
<td>54.710</td>
<td>-.223</td>
</tr>
<tr>
<td>AMTB Pre Exp</td>
<td>33</td>
<td>156</td>
<td>317</td>
<td>238.88</td>
<td>51.845</td>
<td>-.078</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

As can be calculated from the above table, all scores enjoyed normalcy of distribution with the skewness ratios falling within ±1.96. Furthermore, the reliabilities of both questionnaires stood at 0.88 and 0.92.

Posttests

Table 3 below shows the descriptive statistics for the ACT and AMTB posttests. Again, all scores enjoyed normalcy of distribution with the skewness ratios falling within ±1.96. Furthermore, the reliabilities of both questionnaires stood at 0.89 and 0.90.

Table 3

Descriptive Statistics of the Scores Obtained by the Two Groups on the ACT and AMTB Posttests

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
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<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
<td>Statistic</td>
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<tr>
<td>ACT Post Cont</td>
<td>33</td>
<td>75</td>
<td>126</td>
<td>98.73</td>
<td>12.578</td>
<td>.197</td>
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<tr>
<td>ACT Post Exp</td>
<td>33</td>
<td>99</td>
<td>139</td>
<td>120.27</td>
<td>10.628</td>
<td>-.419</td>
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<tr>
<td>AMTB Post Cont</td>
<td>33</td>
<td>158</td>
<td>322</td>
<td>247.48</td>
<td>54.225</td>
<td>-.215</td>
</tr>
<tr>
<td>AMTB Post Exp</td>
<td>33</td>
<td>239</td>
<td>393</td>
<td>293.79</td>
<td>37.838</td>
<td>.739</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
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</tr>
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</table>

Testing the null hypotheses

To test the two null hypotheses, that is to check any significant difference in the degree of the two groups’ creativity and motivation as a result of the treatment, two sets of ANCOVA were run on both groups’ scores on the ACT and AMTB pre- and posttests. The test and its preconditions are discussed in the following two sections. All four sets of scores of course enjoyed normalcy as demonstrated earlier; hence, this prerequisite need not be discussed.

Testing the First Null Hypothesis

With the first assumption of normalcy in place, the second procedure was testing the homogeneity of variance for which the Levene’s test was
run; the variances were not significantly different ($F_{(1,64)} = 10.326, p = 0.25 > 0.05$).

As one covariate was investigated (ACT pretest), the third assumption of the correlation among covariates was not applied to this case. The fourth assumption is that of homogeneity of regression slopes. Table 4 below shows that the interaction (i.e. Group*ACT Pretest) is 0.236 which is larger than 0.05 thus indicating that the assumption of homogeneity of regression slopes has not been violated.

### Table 4

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
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</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>70.250$^a$</td>
<td>3</td>
<td>23.417</td>
<td>11.079</td>
<td>.000</td>
<td>70.250$^a$</td>
</tr>
<tr>
<td>Intercept</td>
<td>111.243</td>
<td>1</td>
<td>111.243</td>
<td>52.631</td>
<td>.000</td>
<td>111.243</td>
</tr>
<tr>
<td>Group</td>
<td>.165</td>
<td>1</td>
<td>.165</td>
<td>.078</td>
<td>.651</td>
<td>.165</td>
</tr>
<tr>
<td>ACT Pretest</td>
<td>7.237</td>
<td>2</td>
<td>3.619</td>
<td>1.712</td>
<td>.236</td>
<td>7.237</td>
</tr>
<tr>
<td>Group * ACT Pretest</td>
<td>160.638</td>
<td>76</td>
<td>2.114</td>
<td></td>
<td></td>
<td>160.638</td>
</tr>
<tr>
<td>Error</td>
<td>1409.000</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td>1409.000</td>
</tr>
<tr>
<td>Total</td>
<td>230.888</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
<td>230.888</td>
</tr>
<tr>
<td>Corrected Total</td>
<td>70.250$^a$</td>
<td>3</td>
<td>23.417</td>
<td>11.079</td>
<td>.000</td>
<td>70.250$^a$</td>
</tr>
</tbody>
</table>

a. R Squared = 0.304 (Adjusted R Squared a. R Squared = 0.277)

With the above assumptions in place, running an ANCOVA was legitimized.

### Table 5

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
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</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>12969.512$^a$</td>
<td>2</td>
<td>6484.756</td>
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<td>.794</td>
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<td>Intercept</td>
<td>3198.903</td>
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<td>59.855</td>
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<td>.487</td>
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<tr>
<td>ACT Pretest</td>
<td>5310.102</td>
<td>1</td>
<td>5310.102</td>
<td>99.358</td>
<td>.000</td>
<td>.612</td>
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<tr>
<td>Group</td>
<td>8689.702</td>
<td>1</td>
<td>8689.702</td>
<td>162.594</td>
<td>.000</td>
<td>.721</td>
</tr>
<tr>
<td>Error</td>
<td>3366.988</td>
<td>63</td>
<td>53.444</td>
<td></td>
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<tr>
<td>Total</td>
<td>807693.000</td>
<td>66</td>
<td></td>
<td></td>
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<tr>
<td>Corrected Total</td>
<td>16336.500</td>
<td>65</td>
<td></td>
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</tr>
</tbody>
</table>

a. R Squared = 0.794 (Adjusted R Squared = 0.787)

According to above Table 5, there was a significant relationship between the covariate (the ACT pretest) and the dependent variable (the ACT posttest) while controlling for the independent variable ($F = 162.594, p = 0.0001 < 0.05$). Hence, the first null hypothesis of the study, which stated that cooperative learning did not bear a significant effect on EFL learners’ creativity was rejected with those in the experimental group who gained a higher mean bearing a significantly higher degree of creativity than those in the control group. Furthermore, with the eta squared of 0.721, the covariate accounted for 72% of the overall variance.

### Testing the Second Null Hypothesis

Again with the first assumption of normalcy in place, the second procedure was testing the homogeneity of variance for which the Levene’s test was run; the variances were not significantly different ($F_{(1,64)} = 98.761, p =$
As one covariate was investigated (AMTB pretest), the third assumption of the correlation among covariates was not applied to this case. The fourth assumption is that of homogeneity of regression slopes. Table 6 below shows that the interaction (i.e. Group*AMTB Pretest) is 0.798 which is larger than 0.05 thus indicating that the assumption of homogeneity of regression slopes has not been violated.

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>139147.963a</td>
<td>3</td>
<td>46382.654</td>
<td>66.504</td>
<td>.000</td>
<td>.763</td>
</tr>
<tr>
<td>Intercept</td>
<td>974.825</td>
<td>1</td>
<td>974.825</td>
<td>1.398</td>
<td>.242</td>
<td>.022</td>
</tr>
<tr>
<td>Group</td>
<td>657.250</td>
<td>1</td>
<td>657.250</td>
<td>.942</td>
<td>.335</td>
<td>.015</td>
</tr>
<tr>
<td>AMTB Pretest</td>
<td>120387.085</td>
<td>1</td>
<td>120387.085</td>
<td>172.614</td>
<td>.000</td>
<td>.736</td>
</tr>
<tr>
<td>Group * AMTB Pretest</td>
<td>46.030</td>
<td>1</td>
<td>46.030</td>
<td>.066</td>
<td>.798</td>
<td>.001</td>
</tr>
<tr>
<td>Error</td>
<td>43241.067</td>
<td>62</td>
<td>697.437</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4043742.000</td>
<td>66</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>182389.030</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. R Squared = 0.763 (Adjusted R Squared = 0.751)

With the above assumptions in place, running an ANCOVA was legitimized. According to Table 7 below, there was a significant relationship between the covariate (the AMTB pretest) and the dependent variable (the AMTB posttest) while controlling for the independent variable ($F = 80.572, p = 0.0001 < 0.05$). Hence, the second null hypothesis of the study, which stated that cooperative learning did not bear a significant effect on EFL learners’ motivation was also rejected with those in the experimental group who gained a higher mean bearing a significantly higher degree of motivation than those in the control group. With the eta squared of 0.762, the pretest covariate accounted for 76% of the overall variance.

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>141968.403a</td>
<td>2</td>
<td>70984.202</td>
<td>134.243</td>
<td>.000</td>
<td>.810</td>
</tr>
<tr>
<td>Intercept</td>
<td>21655.196</td>
<td>1</td>
<td>21655.196</td>
<td>40.953</td>
<td>.000</td>
<td>.394</td>
</tr>
<tr>
<td>AMTB Pretest</td>
<td>106592.888</td>
<td>1</td>
<td>106592.888</td>
<td>201.584</td>
<td>.000</td>
<td>.561</td>
</tr>
<tr>
<td>Group</td>
<td>42604.762</td>
<td>1</td>
<td>42604.762</td>
<td>80.572</td>
<td>.000</td>
<td>.762</td>
</tr>
<tr>
<td>Error</td>
<td>33312.869</td>
<td>63</td>
<td>528.776</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5009388.000</td>
<td>66</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>175281.273</td>
<td>65</td>
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</tr>
</tbody>
</table>

a. R Squared = 0.810 (Adjusted R Squared = 0.804)

DISCUSSIONS AND CONCLUSION
The literature on English language teaching (ELT) is abundant with studies demonstrating that CL is a proper option for students, in general, and English as foreign language (EFL) learners, in particular, due to the fact that this mode of learning highlights active interaction among all learners of different competences and skills (e.g.

According to the effect of CL on EFL learners’ creativity, the results of this study clarified that nurturing CL had a significantly positive effect on EFL students’ creativity. In other words, the use of CL techniques, namely, think-pair-share, three-stay one-stray, roundtable, and three-step-interview, significantly improved EFL students’ creativity. The findings were in accordance with those of John and Meera (2014), which indicated the fruitfulness of CL in fostering secondary school students’ creative thinking abilities. Moreover, the findings are in line with those of Ahangari and Samadian (2014) that demonstrated CL strategies can foster different cognitive skills such as creativity, problem solving, and discovery learning.

The use of CL techniques generated more comfortable, stimulating and amusing learning environment wherein EFL learners could naturally share and exchange their ideas to accomplish their aimed purpose. The substantial improvement on the creativity of EFL students might possibly have stemmed from the routes and processes that learners in the CL group experienced while working together in groups. These routes and processes involved various creativity demanding activities such as thinking, discussing, planning, and also finding answers to particular problems in small groups as opposed to doing such activities individually.

Using CL, EFL students could take advantage of the full experience, knowledge and creativity of all the other students in their group; therefore, when one student has problem understanding a concept, idea or issue, another student’s experience, creativity, and knowledge can take the issue or idea to the next phase. Consequently, CL helps EFL students develop different ideas and issues in greater depth and thus improve their creativity, whereas those EFL students who experience individual learning do not have the same opportunity.

Concerning the effect of CL on EFL learners’ motivation, the findings of the study revealed that this method of teaching had a significantly positive effect on the motivation of EFL learners. The findings can be supported by Richards and Rodgers’ (2001) argument that “cooperative learning strategy increases the motivation, reduces the stress, and also creates a positive affecting classroom climate” (p. 13).

Moreover, the findings in this respect were in agreement with the findings of several studies like Ghaith, (2002), Ghaith and Bouzineeddine, (2003), Liang (2002), Liao (2006), Zahedi and Tabatabaei (2012), and Wang (2012), which found that CL was fruitful in significantly enhancing motivation and other affective factors of ESL/EFL students. As pointed out by Marashi and Baygzadeh (2010), “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” (p. 92).

Additionally, as pointed out by Weiner (2000), the concept of students’ motivation is primarily subject to students’ attributions of past experience, either accomplishment or disappointment. That is to say that when the amount of self-confidence in students escalates due to experience and when EFL students attain more control in their learning process, there are more motivational reasons to continue their own leanings. Using four types of CL (i.e., think-pair-share, three-step interview, roundtable, and three-stay one-stray) strategies made the activities more meaningful, relevant, motivating, and also lessened apprehension as learners in small groups interact with each other.

In general, CL strategies provide an environment for EFL learners to practice and learn affective, social and cognitive abilities. Knowing how
to build social relationship, how to deal with various opinions and viewpoints, how to solve different problems and how to stand different conflicts are essential issues which need to be taken into consideration if EFL learners are to be readied for a truly prosperous future life.

One point, which the researchers strongly recommend is the notion of not eliminating competitiveness in its entirety while subscribing to CL. At the first sight and indeed some may well argue epistemologically that cooperation and competition may stand in sheer opposition of one another and thus not marriageable. There is, however, another approach: complementarity between seemingly contradictory paradigms. As Khabiri and Marashi (2016) argue, cooperation and competition are not universally, “uncompromising denials of one another when as teachers and educators we could promote both trends alongside rather than against one another” (p. 197). They further write that, “This is especially true bearing in mind that in real life learners will have to work out for themselves a practicable means of balancing the two in their learning activities and social functions” (p. 197). Hence, the best results are perhaps materialized through the nourishment of a balanced state of cooperation-competition.

CONTRIBUTION TO NEW KNOWLEDGE
The present study can produce significant implications in several aspects in relation to the productive application of CL in the classroom. The findings of the study can, to a large extent, contribute to both teachers as well as syllabus designers’ effective use of CL in their teaching program in practice as in the following:

Teachers can benefit from the findings of the study as they can implement CL in their classroom to stimulate the learners’ creativity and motivation, leading to their interaction in the classroom. Since teachers are concerned with better teaching, they can apply CL in their classes to take advantage of the learners’ involvement in the classroom, which may help the learners to be motivated and creative.

Syllabus designers are also the beneficiaries of the present study. In fact, they can incorporate CL techniques in their syllabus material to be applied by English teachers. Materials can focus on methods to foster the learners’ interaction as well as their engagement, which can be fulfilled by the application of CL in the syllabus.

LIMITATIONS AND SUGGESTIONS FOR FURTHER STUDIES
This study was conducted under certain limitations and thus future studies are suggested to achieve and guarantee more robust evidence. Firstly, the present study investigated female language learners’ creativity and motivation as a result of being exposed to CL classes. To gather more generalizable data regarding the learners’ gender, male participants can also be taken into account to look into the two groups’ performance in the CL environment. Secondly, there were only four CL techniques, which the learners went through a CL environment. Other CL techniques can be applied to see whether various CL techniques can have significant effect on the learners’ creativity and motivation and finding out which techniques can lead to more creative and motivated learners. Thirdly, the present study was limited to pre-intermediate language learners. To gather more reliable results, learners at other proficiency levels can be investigated to find out the possible relationships between those learners and their creativity and motivation through CL. The present study benefited from young language learners (i.e. 13 to 18 years of age) for collecting the data. Adults and also younger language learners can also be studied to measure the effectiveness of CL on their creativity and motivation and find out which group can benefit from CL more.
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Biodata

Hamid Marashi is an associate professor in the field of Applied Linguistics at the Islamic Azad University, Central Tehran branch. He currently teaches at the graduate and postgraduate level and his main areas of research interest include cooperative learning, TBLT, and critical thinking. He has published in international academic journals and also presented in international conferences.
Email: ahmuya@yahoo.com

Homayra Khatami graduated with a master’s degree in the field of Teaching English as a Foreign Language (TEFL) from Islamic Azad University, Central Tehran branch. She has been teaching English at different language schools in Chaloos (a city in north of Iran) for several years. Her main areas of research interest are cooperative learning and motivation.
Email: homeira.khatami@gmail.com