The Impact of Student Teams Achievement Divisions Technique on Boosting Descriptive Writing Ability of Iranian EFL learners

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Abstract

Since students are required to prepare their papers in well-organized written works, it is important for academic learners to have a good command of writing skill. One of the methods gaining a reputation in enhancing students’ performance in language teaching is cooperative learning. This study intends to examine the effect of one of the CL techniques on enhancing upper-intermediate EFL learners’ descriptive writing ability. Fifty participants of this study were assigned into two groups. First, Nelson general proficiency test was administered to make sure both are homogeneous in terms of general proficiency. Then, a writing pre-test was given to both groups to examine if they possess the same writing proficiency. Analysis of both Nelson and writing pre-test showed that both groups were at the same level at first. The experimental group received treatment using Student Teams Achievement Divisions (STAD) as a cooperative learning technique while the routine teaching method was implemented to the control group. After carrying out the treatments for 16 sessions, the writing post-test was given to both groups. The results rejected the first null hypothesis and showed STAD was efficient in increasing students’ writing ability. The second null hypothesis was supported since the p value for this test was 0.74 and higher than 0.05 meaning males and females were similar in their performance. This study has implications on teaching and learning descriptive writing. This study also indicates that STAD is an effective alternative method and can be utilized by teachers to enhance the mastery of writing skill.

Keywords: STAD, Cooperative learning, descriptive writing, writing skill

1. Introduction

The English language has undoubtedly become the medium of communication in the global society and this trend in gaining greater importance in the never-ending scientific and technological advancement. All countries have recognized the necessity of incorporating English language programs in their national educational curriculum. During the last century different methods and approaches have been devised by the experts in the field in a never-ending strive for an effective and comprehensive method of language teaching which guarantees successful mastery of language skills. Each method made an improvement upon the previous one in order to compensate for the shortcomings of the preceding methods. As Celce-Murcia (2001, p.156) believes, “in this long journey towards an idealized method, different gods and heroes have come and gone in a manner consistent with the kinds of changes that occur in the field.”

Within the last quarter of the 20th century, the communicative language teaching has emerged as a new or innovative approach around the world to teach “English as a second or foreign language” (Celce-Murcia 2001, p. 156). In communicative era, the skill of writing has been gaining greater and greater importance specifically in academic situations. Given the importance of this skill, different orientations came into existence to help learners develop the writing skill. In the 1960s, ESL composition teaching within the oral approach framework, writing as a product was the focal point of evaluation in order to help learners reduce possible errors in a controlled manner (Celce-Murcia 2001). Later in the 1960s, the focus of attention changed from product to process of writing giving a greater role and importance to learners and the processes they go through in the production of a written work.

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Within the process-oriented framework of teaching-writing, cooperative learning is the one, which has been gathering momentum and popularity during the last decades. It is mainly perceived that cooperative learning is the best choice for all learners. Thus, it puts emphasis on highly active interaction among students of diverse potentials and educational records (Nelson, Gallagher and Coleman, 1993) and it displays better outcomes in students’ academic performance, societal behavior and emotional development.

Despite most research findings on the effectiveness of cooperative learning on academic achievement and societal behavior and emotional developments, many English teachers and educators in Iran, still find it complicated to incorporate this method of teaching in their classrooms. Furthermore, study of cooperative learning impacts on EFL learners overall proficiency and their writing ability in particular has been partially neglected. Additionally teachers’ acquaintance with cooperative learning techniques could influence the results of such teaching methods, that is, the above-mentioned negligence presumably arises from inadequate professional trainings in cooperative learning.

Contrary to the global trend of implementing the communicative approach in EFL teaching, the traditional teacher-fronted Grammar Translation Method has dominated the language teaching in Iranian schools and universities. It seems that we should revise our old methods of teaching English such as GTM, which has already come to a failure. In traditional classes, teachers have to cover the course material in a confined period and hence the teachers are not able to allocate sufficient time to individual learners, which consequently widen the gap between the less proficient and more proficient learners. Within the communicative framework of language teaching, cooperative learning is to believe the best alternative to alleviate the difficulties of the learners. According to Christensen (1994) language teachers in populated classes may face two different types of problems namely pedagogical and effective management.

In Iranian educational settings, traditional learning methods are more widespread among teachers than other innovative methods such as cooperative learning due to several reasons that is the lack of language teacher training among the teachers and over-reliance on prescribed textbooks. There is a significant difference between group learning and cooperative learning. In-group learning, students should do a project or a task to carry out together but they may have no interest in doing so. This structure promotes competition at close quarters.

Cooperative learning group may specifically be advantageous for weaker students due to intellectual, linguistic and motivational differences among the learners. Activities, which are not practical in a lockstep situation such as using a picture or games, may turn out to be perfectly practical when performed in groups.

Research Questions

Research Question One: Can STAD as a cooperative learning technique significantly improve students’ descriptive writing ability?

Research Question Two: Is there any significant difference between the male and female participants’ performance on descriptive writing using STAD as a cooperative learning technique?

Research Hypotheses One: STAD as a cooperative learning technique can not significantly improve students’ descriptive writing ability.

Research Hypotheses One: There is no significant difference between the male and female participants’ performance on descriptive writing using STAD as a cooperative learning technique.

2. Theoretical Background

Ever since the era of post method, there has been a fundamental change in language teaching which suggests finding an alternative to the method rather than finding an alternative method. Some methods have come into existence in order to make use of teaching strategies practiced in foreign language classes. Some of these methods are well known as task-based learning and teaching. The primary
concern of EFL programs is group work in classes that significantly affects student performance and improves language proficiency. Some of the problems of learners in traditional individualized learning environments have been the lack of self-confidence and enough interaction among learners as well as lack of motivation. In contrast, cooperative learning increases the self-confidence, interaction and motivation of individual learners, which are of optimum importance in the process of foreign language acquisition.

Nowadays, there is a significant change in educational trends around the world from the teacher-dominated method or traditional learning to a more student-centred methodology that empowers learners play a more active role in the process of learning a foreign language (Sarigoz, 2008). One outstanding teaching method, which complies with the current shift in the trends, is cooperative learning (CL). Cooperative learning is an instructional method that enables students to work cooperatively in small groups, with precisely determined roles in order to boost interdependence, to make the learning environment less threatening for learners, to maximize students' participation, to minimize competitiveness, to decrease the teacher dominance, to develop a student-centered learning settings, and to enhance healthy psychological adaptation (Goosell, A. S., Maher, M. R. & Tinto, V., 1992).

2. Elements of Cooperative learning

Johnson (1999) enumerates the elements of cooperative learning as follows:

2.1. Positive Interdependence

By positive interdependence, it is meant that a success for one learner is accompanied by the success of the others. In fact, when a learner succeeds, other learners will benefit from this event too. It is in stark contrast to negative interdependence which is common in individualistic competitive learning environments; where the success of one learner is viewed as a loss for others.

2.1.2. Equal Participation

Equal participation emphasizes that no learner should be permitted to dominate the group neither socially nor academically. For the same token, no learner should be left to spare himself. In order to ascertain equal participation, teachers can use two techniques. Turn allocation is the first one where learners are obliged to take turns when speaking and to give their contribution to the discussions when their turns come. The second one is called the division of labor that necessitates each group member to play a specific role in the group.

2.1.3. Individual Accountability

Cooperative learning incorporates individual accountability. Group responsibility exists when the overall achievement of the group is evaluated and the results are given back to all the team members to compare against a standard of achievement.

2.1.4. Simultaneous Interaction

In collaborative group, team members interact with each other to accomplish assignment and enhance each other's achievements. To ensure supportive interaction among team members the following three steps should be taken.

• The first step is to make a time schedule for the teams to meet

• The second step is to create positive interdependence that necessitates members to work together to realize he aims of the teams

• The final step is to monitor teams to persuade positive interaction among team members.

2.1.5. Interpersonal and Small Group Skills

In cooperative learning learners involve in task work and team work concurrently. To realize the common aims, learners should trust each other. They should also communicate accurately and clearly.
They should not only accept and help each other but they should also find solutions to end conflicts in a constructive manner.

2.1.6. Group Processing

In group processing, decisions are made on what actions to follow or change considering the utility of the actions of team members. As Johnson (1999) recommends, five steps should be taken in order to promote the quality of team tasks. First assessing the quality of the interaction among team members should be done as they work to enhance each other’s learning. Second, the process through which the team does its work should be examined to provide each learning group with feedback. The third step is setting goals for promoting their effectiveness. The fourth step is conducting a session to evaluate the whole class processing, and the ultimate step is conducting small group and whole class celebrations.

2.1.7. The STAD Method

According to Ishtiaq et al. (2017), the STAD method can be defined as a cooperative learning strategy in which learners work in heterogeneous groups to achieve a common goal. Van Wyk (2012) believes STAD is one of the cooperative learning methods that had been comprehensively explored and evaluated explicitly on academic accomplishments, attitudes, social interactions and interpersonal relationships.

2.2. Student Groupings

2.2.1. Lockstep

Lockstep is a kind of class grouping in which all the learners work with the teacher. Lockstep is the traditional teaching setting, that is, it is a situation where a teacher monitors the session. The appropriate production normally happens in lockstep with all the learners acting as one group and the teacher working as an evaluator and manager.

2.2.2. Pair Work

According to Brumfit (1986), pair work allows the learners to use language in social settings and enhances students’ cooperation that is of great importance or the atmosphere of the class and for motivation. Learners can assist each other to use and learn the language without the teacher's dominance. At the same time teacher can act his role as an assessor, prompter or as a resource person.

2.2.3. Group Work

As Brumfit (1986) says, group work appears to be an extremely appealing idea for several reasons. All the learners in a group cooperate with each other, they communicate with one another. Learners will be learning and teaching in the group in displaying a degree of self-reliance that is simply possible when the teacher is dominant in the classroom.

Placing learners in small groups enables learners to maintain their individual psychology and to work within their potentials and level of English proficiency. Small groups give them the chance of intensive engagement in the tasks. In this manner, their quantity and quality of their language practice will enhance. They are many opportunities for the learners to get feedback and help from the teacher (Brumfit, C. J. & Johnson, K., 1979). According to Johnson (1999), there are three kinds of cooperative learning groups: formal cooperative learning groups, informal cooperative learning groups and cooperative based groups.

3. Methodology

To collect the needed data, the researcher chose a quasi-experimental design. The main aim is investigating the effects of using STAD technique as one of the main techniques in CL on the learners’ ability in writing descriptive text. This study included two intact classes. The first class acted as the experimental group in which the teacher taught writing using STAD treatment. On the contrary, the
control group was not given STAD treatment and instead, it received instruction through the routine teaching method of product approach.

3.1. Participants

Convenient sampling method was used in this study. The final sample of the participants was a group of 50 students taking advanced-writing classes. Their ages ranged from 22 to 26 years. The participants were selected from a university which represents a population of typical university students in Iran i.e. large number of students, learners from different areas and background knowledge. Twenty-five participants attended the experimental group and the other twenty five members formed the control group, where they used the same materials with a traditional method of learning. Thirteen students in the experimental group were female, and 12 students were male.

3.2. Procedure

The research procedure includes, administering the Nelson general proficiency test, giving the descriptive writing pretest, organizing teaching procedure, conducting the treatment through STAD, administering the writing post-test, analysis of data through SPSS. Prior to the study and in order to determine the proficiency level of participants and to ensure inter and intra group homogeneity, Nelson general proficiency tests 450C was administered to both groups. The purpose was to make sure that the two groups were homogeneous with respect to their English language general proficiency.

3.3. Treatment

There were two types of lesson plans to fulfill the objectives of the study in the experimental and control groups. In other words, the two groups of the study were engaged in quite different activities in the treatment procedure. In the experimental group, STAD technique based on relevant materials and procedure was applied. However, the teacher taught control group thorough the routine teaching method i.e. the input-based and lecturing method. An exact treatment plan was set to make the treatment run well and not to interfere with the university schedule. The materials and topics were also specified in detail in the lesson plan beforehand.

4. Results

SPSS version 20 (2011) and Microsoft Excel for windows (2007) were used for statistical analysis of the accuracy of the cooperative learning tasks and tests. Statistical procedures used to analyse the data included descriptive statistics and independent t-test.

As mentioned before, in this study there were 50 participants divided into two groups: an experimental group and a control group. Independent sample t tests were used to analyse the data. All of the results were documented using statistical tables and graphs that are to be presented in the following parts.

4.1. Prior to the Experiment

First, to measure the participants’ overall language proficiency, a Nelson General Proficiency test was administered. As was included in the method and procedure, the participants of this study were Iranian EFL learners with upper-intermediate level of proficiency. In order to make sure that the two groups’ general level of proficiency was more or less the same, the mentioned test was administered to both groups. Besides, a standardized writing test was used as pre-test to compare the participants’ descriptive writing ability in both groups.

4.1.1. Performance of the Participants on Nelson General Proficiency Test

All the participants in both groups took Nelson General Proficiency Test. The test consisted of 50 questions in multiple-choice form and the time allocated for answering the test was 70 minutes. The analysis of the data showed that the students were at the same level of proficiency (sig=. 785> .05).
Table 1: Descriptive Statistics of the Participants on Nelson General Proficiency Test

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>25</td>
<td>31.76</td>
<td>4.024</td>
<td>.878</td>
</tr>
<tr>
<td>Control</td>
<td>25</td>
<td>32.05</td>
<td>2.460</td>
<td>.550</td>
</tr>
</tbody>
</table>

Table 1 displays the number of cases, mean value, standard deviation, and standard error of means in both groups. Considering the above table, it is indicated that this difference does not seem significant; however, an inferential test such as a t-test must be run to be on the safe side about the significance. According to table 2, it can be argued that this difference is not statistically significant.

Table 2: Independent Samples T-Test on Nelson General Proficiency Test

<table>
<thead>
<tr>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>6.091</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-2.2783.366</td>
</tr>
</tbody>
</table>

The analysis of the data through Levene’s test and t-test showed that there existed no significant difference between the two groups at the start of the study and initiating the treatment. To be more exact, the two groups were almost at the same level of proficiency and the subsequent effects could be attributed to any instructions that are given by the researcher in the groups under study. Since the level of significance amounts to 0.785 and is higher than 0.05, it means that, the difference between the two groups’ language proficiency was not significant.

4.1.2. Performance of The Participants on Writing Pre-Test

Since descriptive writing skills is one of the several skills in writing and language learning, the results of the participants’ performance on a general language proficiency test could not be used as a strong reason for checking whether they were at the same level of descriptive writing ability or not. To alleviate this problem, besides Nelson General Proficiency Test, a standard pre-test of descriptive writing was administered to make sure of the homogeneity of the participants and to determine the descriptive writing ability of the two groups.

Table 3: Independent Samples T-Test Results on Pre-Test

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.000</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.392</td>
</tr>
</tbody>
</table>

The results of the t-test on the writing pre-test showed that there was no significant difference between the two group’s descriptive writing ability before the researcher started the treatment of STAD. This can be verified through the magnitude of the 2tailed level of significance (0.699) which is higher than
the specified level of significance 0.05. Such a result is a prerequisite for later claims of any difference attributable to treatment sessions.

4.1.3. Performance of Males and Females on Pre-Test

Before giving any special treatment to the groups and in order to make sure that no difference existed between male and female participants’ descriptive writing ability, the mean of the males and females were compared through an independent t-test. The following table shows the data.

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.000</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.472</td>
</tr>
</tbody>
</table>

The results of the t-test on the possible differences between male and female participants’ descriptive writing pre-test revealed that there was no significant difference between the two groups before they were taught using different methods of instruction. This can be verified through the magnitude of the 2-tailed level of significance (0.397) which is higher than the specified level of significance 0.05. Such a result is a prerequisite for later claims of any difference attributable to treatment sessions.

4.2. Question One

The primary purpose of this study was to investigate the probable effect of one of the cooperative learning techniques, i.e. STAD on Iranian EFL learners’ descriptive writing ability. Therefore, the following null hypothesis was formulated:

H01: STAD as a cooperative learning technique can not significantly improve students' descriptive writing ability.

To test this null hypothesis, an independent-samples t-test was run to compare the average scores of each group on the writing post-test.

The descriptive results and mean score differences of both groups are displayed in Table 5.

<table>
<thead>
<tr>
<th>Table 5: Group Statistics on Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups</td>
</tr>
<tr>
<td>Experimental</td>
</tr>
<tr>
<td>Control</td>
</tr>
</tbody>
</table>

Since descriptive statistics is not enough for making decision regarding the significance of the differences, an independent samples t-test was run on the data, the results of which are shown in Table 6. These results indicated a significant difference in the writing mean scores of the experimental and control groups on post-test, which amounted to (M=15) and (M=13.74) respectively.
The result of the data analysis showed that there was a significant difference between the two groups as a result of the treatment given to them. The level of significance of .04 is lower than that of 0.05, and this shows a significant difference.

4.3 Question Two
The study also aimed to investigate if the performance of male and female participants was significantly different from each other. To be more exact, the researchers aimed to find out if using the STAD technique influenced the male and female students differently. Therefore, the following null hypothesis was posed:

H02: There is no significant difference between the male and female participants’ performance on descriptive writing using STAD as a cooperative learning technique.

Table 7 displays mean value, number of cases, standard deviation, and standard error of the means of the male and female participants' performance on writing ability post-test.

Table 7: Male and Female Participants’ Performance on the Descriptive Writing Post-Test

<table>
<thead>
<tr>
<th>Scores</th>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>19</td>
<td>14.08</td>
<td>1.289</td>
<td>.281</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>31</td>
<td>13.43</td>
<td>1.870</td>
<td>.190</td>
</tr>
</tbody>
</table>

Merely looking at the descriptive statistics of the two groups does not indicate a very big difference. Thus, an independent samples t-test was run on the data, the results of which are presented in Table 8.

Table 8: Independent Samples t-test Results for Male and Female Participants on the Post-Test

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
<td>t</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.133</td>
<td>.717</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.952</td>
<td>46.971</td>
</tr>
</tbody>
</table>
The data analysis of the difference between males’ and females’ performance showed that there was not any significant difference between the performance of males and females as a result of being instructed by STAD. This can be shown statistically through the level of significance in the table, which is much higher than the specified level of significance 0.05. The level of significance shown in the table is 0.074. Therefore, the null hypothesis is confirmed.

5. Discussion and Conclusion

As was stated in the introduction, this research was undertaken in order to investigate the effect of STAD as a cooperative learning technique on the descriptive writing ability of Iranian upper-intermediate EFL learners. The findings of the study suggested that STAD brought significant positive outcomes when incorporated into teaching descriptive writing class. The fact that the students in the present study gained an advantage of STAD and performed better in the writing test was consistent with the previous research conducted by Adeyemi (2008). This study revealed a significant increase in the writing achievement of the experimental group after incorporating CL techniques into the writing class. Furthermore, the results of this study seem to be in agreement with Sirikan (2000), Ismail and Maasum (2009). It is also in agreement with the findings of Wichitra (2009) who investigated the effects of CL on summary writing of EFL learners and concluded that CL techniques were useful for improving this aspect of writing.

With regard to performance of male and female learners, it should be mentioned that some studies found a significant difference between the performances of the two genders. For instance, the study done by Wichitra (2009) showed males performed better than females, which is in contrast with the results of this study. In totality, the results of this study are in agreement with other studies done on the effect of CL on different language skills such as Adams (1995), Ghaith, (2003), and Stevens (2003); all of which investigated the effect of CL on different language skills. These studies review lend support to this idea that incorporating CL activities into writing classes increases the learners’ academic achievements to a great extent.

As for the research questions posed at the beginning of the study, it is now possible to state that cooperative learning techniques do have a significant effect on writing ability. Results of hypothesis testing indicated that there is a significant difference between the performances of the two groups. In this study, by comparing the performances of the two experimental and control groups in pre-test and post-test and using independent samples t-test for analysis, it was revealed that there was a statistically significant difference between pre-test and post-test. The pre-test and post-test scores were analysed using descriptive statistics to determine whether the students’ performance showed an increase in the post-test compared to the pre-test for the writing ability. The enhancement in the students’ performance in the post-test compared to the pre-test provided proof that the students showed an increase in their writing performance after the incorporation of STAD as a cooperative learning technique in the writing lessons. Thus, it was approved that the inclusion of cooperative learning in the writing lessons had positive effects on the students’ writing performance. In the beginning of the study, it was statistically depicted that there was no significant difference between the control group and experimental group and the male and female participants in terms of their writing ability as well as general language proficiency.

The findings of the study rejected first but supported second null-hypotheses. It was concluded that there is a significant difference with regard to the impact of using STAD as a cooperative learning technique for special treatment on one hand and traditional teaching on the other hand on EFL learners’ writing ability and that cooperative learning has a positive effect on EFL learners’ writing ability. Based on the descriptive analysis, it can be concluded the incorporation of cooperative learning can enhance students’ writing performance in descriptive writing. The elements and effects of STAD as a cooperative learning technique can provide an avenue for the students to excel themselves in the writing classes in the descriptive genre.

References


