

Effects of Cooperative Learning on Vocabulary Achievement of Reflective/Impulsive Iranian EFL Learners

Sajad Shafiee*, Department of English, Shahrekord Branch, Islamic Azad University,
Shahrekord, Iran
s.shafiee@iaushk.ac.ir

Seyyedeh Raziye Khavaran, Department of English, Shahreza Branch, Islamic Azad University,
Shahreza, Iran
Rezvan,khavaran@yahoo.com

Abstract

This study examined the effects of cooperative learning techniques (CLT) on vocabulary achievement of reflective/impulsive Iranian EFL Learners. From among 130 students at Fajr institute in Dehdasht, Kohkiluyeh and Boyer Ahmad Province, Iran, 90 participants were selected based on their performance on the Oxford Placement Test (OPT). The participants were then divided into two experimental groups (comprising reflective learners and impulsive learners) and one control group labeled as conventional instruction (CI) group. The instrument used to divide the participants into reflective and impulsive groups was the Eysenck's (1990) Impulsivity Questionnaire. The experimental groups were taught with the student team achievement division (STAD) technique, while the control group was taught through the traditional method for ten weeks. To measure the vocabulary knowledge of the learners in different groups at the beginning and at the end of the experiment, a pretest and a posttest, each consisting of 40 items on new English words based on their book were used. Independent-Samples and paired-samples *t* tests were used to determine whether there were significant inter- and intra-group differences. The statistical analysis of the results showed that the experimental groups (reflective and impulsive) performed better on vocabulary achievement posttest than the control group (CI), and also it was revealed that reflective learners performed better on vocabulary achievement than impulsive learners. In sum, cooperative learning enhanced learners' vocabulary performance, especially the reflective ones.

Keywords: Cooperative learning, EFL learners, impulsive, reflective, STAD, vocabulary achievement

Introduction

In learning a foreign language, vocabulary plays an important role. It is one element that links the four skills of speaking, listening, reading and writing all together. In order to communicate well in a foreign language, students should acquire an adequate knowledge of words and should know how to use them accurately.

A few decades ago, a new approach called cooperative learning (CL) seemed to attract a lot of attention and became popular. Slavin (1982) stated that CL refers to instructional methods in which students of all levels of performance in small groups work together toward a common goal which encompasses instructional methods such as student-team-achievement-divisions (STAD), team-game-tournaments (TGT), team-assisted individualization (TAI), cooperative integrated reading and composition (CIRC), jigsaw, learning together, and group investigation (GI). Slavin (1987) pointed to STAD, TGT, and Jigsaw as the general methods which can be used in all subjects and in all grade levels and TAI, CIRC, and GI as methods designed for particular subjects at particular grade levels. This research utilized the STAD method to attain its

objectives. According to Slavin (1987), STAD has been used in such diverse subject areas as math, language, arts, social studies, and science. This technique was chosen because, according to Ghaith and Yaghi (1998), it has consistently been shown to be among the most simple and effective CL methods in improving student vocabulary of well-defined objectives in various subjects.

According to Celce-Murcia (2001, p. 359), “learning styles are the general approaches that students use in acquiring a new language or in learning any other subjects”. Thus, one of the many factors which can be related to learning style is the personality type of different individuals. Among all different personality types and learning styles, the one which requires more study is perhaps reflectivity/impulsivity learning style. Messer (as cited in Jamieson & Chapelle, 1987) claims that “reflectivity/impulsivity is the extent to which a person reflects on a solution or a problem for which several alternatives are possible” (p. 532).

In fact, reflective learners are as the persons who prefer to first think and then respond. They often benefit from relatively complex thinking and tend to work accurately. However, their slowness can result in incomplete work on tests. On the other hand, impulsive learners respond very rapidly and tend to complete their work fast but often with less accuracy than do reflective learners.

In academic settings, a reflective learner might be labeled slow. A very reflective learner may have difficulty finding a test on time; however, the completed portions are probably correct. On the other hand, impulsive learners are anxious because stress is induced by the uncertain and ambiguous nature of the situation. Furthermore, impulsive behavior like routine actions and thought processes are sometimes inappropriate and erroneous. It was the aim of the current study to explore the possible differences between impulsive and reflective learners in terms of their vocabulary achievements when they are exposed to CL.

Literature Review

Several studies have investigated the effects of cooperative learning on EFL learning. Pan and Wu (2013), for instance, aimed to investigate the effects of using cooperative learning to enhance the English reading comprehension and learning motivation of EFL freshmen by comparing the cooperative learning instruction and traditional lecture instruction. This experiment was implemented in a Freshman English Reading course, a two credit course, with two hours of instruction per week, over a full semester. Seventy-eight EFL freshmen taking Freshman English Reading courses participated in this study, with 44 participants in the experimental group and 34 in the comparison group. The researchers employed a pretest-posttest comparison group quasi-experimental design. The experimental group received reciprocal cooperative learning instruction, whereas the comparison group received traditional lecture instruction. Both groups were administered three English-reading achievement tests and an English learning motivation scale. The data were analyzed by means, standard deviations, *t* tests, and one-way ANCOVA. The findings indicated statistically significant differences in favor of cooperative learning instruction on English reading comprehension, particularly among medium- and low-proficiency students. Cooperative learning instruction also created a significantly positive effect on student motivation toward learning English reading. In conclusion, they strongly suggested teachers use cooperative learning instruction in university-level EFL reading classes.

Moreover, HoonSeng (2012) investigated the relationship between cooperative learning and achievement in English language acquisition in literature class in a secondary school. Four instruments including pretest and posttest examinations, questionnaire, classroom observation,

and interviews were administrated. The results revealed a significant effect in posttest of experimental group. The qualitative part of the research indicated that using cooperative learning strategies could improve learner's social behavior.

In a wide variety of studies, the potential of cooperative learning to increase student achievement has been consistently shown (Ghaith, 2004). Liang (2002) conducted a study on the effect of cooperative learning on EFL junior high school learners' language learning, motivation toward learning English and high and low achievers' academic achievements with five structures and models of cooperative learning. Liang found that the experimental group outperformed control groups who were taught in Grammar Translation Method and Audio-Lingual Method.

Although results of the above mentioned studies have been supported by many studies, which proved that there was a significant difference between the achievement of the students who were taught by traditional method vs. CL method, there are some other studies that do not show a meaningful difference in this regard; one such study is the study conducted by Dabaghmanesh and Soori (2014) in the context of Iran. In their study, they intended to investigate the effect of cooperative learning versus traditional method on English proficiency of undergraduate students with different majors. This quasi-experimental research used a pre and posttest group design. Sixty Iranian undergraduate students in engineering and business administration majors at Shiraz Azad University who were taking General English courses participated in the study. They were asked to do the Cambridge English proficiency key test at the level A2 both for pre and posttests. The average gain score was taken to indicate students' overall English language proficiency. Results indicated no significant difference between cooperative learning and teacher fronted instructional method in language learning in General English course. Moreover, the outcomes of the study also showed insignificance of different majors through implementing cooperative language learning.

In another study, Vaughn et al. (2000) examined the effectiveness of partner reading compared to a comprehension-oriented strategy for third grade students. During a paired reading session, a more proficient reader was typically paired with a less proficient peer. The proficient reader read the material first to provide a model of fluent reading for the less proficient reader. The less proficient reader subsequently read the text. While one student read, the listening partner provided feedback and alerted the reader when an error was made. The results revealed that partner reading significantly improved reading fluency.

As far as the effectiveness of the CL in Iran is concerned, Zarei and Keshavarz (2011) studied the effects of two models of CL on reading comprehension and vocabulary learning, with 132 Iranian participants. They reported the success of the CL models as compared with the non-cooperative control groups. In another study, Rahvard (2010) investigated the effects of CL on 16 Iranian students-as compared with control group-reading comprehension ability. She proved CL as successful compared with the individually working control group. Also, in another research, Momtaz and Garner (2010) focused on some Iranian students' reading comprehension through CL and proved it to be successful as well.

Even though there are a relatively high number of studies on reading and cooperative learning, the existing literature seem to be deprived of empirical studies which have set out to test the possible outcomes of leaning vocabulary through cooperative learning. The two available research studies on the vocabulary learning in the literature are in learning vocabulary via collaborative interaction (Huong, 2006), and cooperative through communication tasks (Newton, 2001). Huong investigated learning vocabulary in collaborative groups at Vietnamese university, and the results showed that learning vocabulary was affected by group work. Newton investigated vocabulary learning through communication tasks. One of the options employed in

his study was cooperative learning in pre-task. Students looked for meaning of the words in dictionary corporately. The finding showed that cooperative learning helped to improve vocabulary learning process in the pre-task stage of the lesson. The paucity of the studies on the effect of CL (particularly STAD technique of CL) on the vocabulary learning of L2 learners provided an incentive for the present researchers to make an attempt to delve into the matter by investigating the effect of STAD on the vocabulary achievement of reflective/impulsive language learners.

Research Questions

To investigate the possible effects of the STAD technique of CL on the acquisition of vocabulary by reflective and impulsive EFL learners, the following research questions were put forward:

- Q1. To what extent do reflective learners who use STAD differ in vocabulary achievement from reflective learners who do not use the STAD technique?
- Q2. To what extent do impulsive learners who use STAD differ in vocabulary achievement from impulsive learners who do not use the STAD technique?
- Q3. To what extent, do reflective learners who use STAD differ in vocabulary achievement from impulsive learners who use the STAD technique?

Methodology

Participants

A sample of 90 learners at intermediate level of proficiency at Fajr Institute in Dehdasht city, Kohgiluyeh and Boyer-Ahmad Province, Iran, were chosen to serve as the participants of the study. They were chosen based on their scores on the Oxford Placement Test (OPT) and their homogeneity was assured according to the OPT results from among an available population of 130 EFL learners. The sampling procedure through which they were accessed was simple random sampling. Every effort was taken to select a homogeneous and representative sample of the population. As the next step and on the basis of the results of a revised version of Eysenck Personality Questionnaire (1990), the participants were assigned into two experimental groups of impulsive and reflective participants, and a control group as well.

Materials and Instruments

The materials included seven units of *American English File 2* and the instruments utilized in this study included an Oxford Placement Test (OPT), Eysenck's (1990) Impulsiveness Questionnaire, a vocabulary pretest, and a vocabulary posttest. The OPT was applied to determine the homogeneity of the groups regarding their levels of language proficiency. A vocabulary test was used as pretest before starting the experiment, and a posttest was administered at the end of the treatment sessions. The pretest and posttest included vocabulary items of the seven units of the book the learners were studying. In order to determine the reliability of the vocabulary test, it was pilot studied on some L2 learners ($N = 30$) who were similar to the learners of the main study. The results of the Cronbach's alpha analysis showed that both the pretest ($r = .79$) and the posttest ($r = .84$) were reliable. The content validity of the test was evaluated by three experts who were PhD holders of applied linguistics with more than five years of teaching and testing experience.

Procedure

As the first step of this study, the 90 homogeneous learners were chosen according to their OPT scores in order to make sure that the results of the study were not due to the initial

differences between the participants. The OPT was for the assessment of the participants' language proficiency level, and it was given to 130 EFL learners to determine the proficiency level with regard to placement test scores. After administration of the OPT, 90 out of 130 participants were chosen for the present study because all of them were able to pass the test with a score of 40 to 60 out of 100, and according to the OPT booklet, the learners were categorized at the same level (i.e. intermediate).

When the homogeneity was assured and later the impulsivity/reflectivity of the participants was revealed, the participants were divided into three groups: two groups of reflective (A) and impulsive (B) learners who were considered as experimental groups and the other group (C) as the control group. As the next step, each of the three groups were taught by the same teacher who had about 5 years of experience of teaching and also received training in using the STAD technique.

Then, the instructional period started, and there were the same instructor and the same book for the three groups, but their differences were related to the instructional strategies: cooperative learning technique (CLT) was applied for the two experimental groups which emphasized group working, and conventional instruction (CI) for control group, which emphasized individual work. The students in the control group received ordinary classroom instruction in each session which was a teacher-led method, as opposed to the experimental groups which were student-centered classes. The details of instruction are presented in the following sections.

The treatments continued for about ten weeks (20 sessions) comprising one introductory session, sixteen sessions of treatment and three sessions of test administration (OPT, pretest, and posttest). After implementing the treatments, a posttest was used in order to detect the possible changes in the vocabulary knowledge of the participants. All sessions took place in the students' classrooms about 60-minute period, and the time for pre and posttests was the same and lasted 45 minutes. This test would reveal that any change in the vocabulary knowledge of the participants would be because of the treatments they received.

Vocabulary Instruction by STAD

In the experimental groups, the teachers had to use four steps of the STAD technique process: 1) Whole-class presentation, 2) Group discussion, 3) Test, and 4) Group recognition. According to the first step of STAD, the teacher divided the students in each experimental group ($N = 30$) into five smaller groups (each group was composed of six members). In the class, like all of the instructional classes, the teachers taught the instructional materials, which were related to every units of the selected book in this research, at the first half of the class. The teacher taught vocabulary through the five steps:

Pronunciation: Pronunciation was the first step. Here all students had to be involved in saying the word together a number of times. Even for difficult words, separate syllables could be emphasized. **Explanation:** Here a link had to be made between the new lexical item and students' previous knowledge. **Example provision:** Students would usually need, at least, two or three examples of a new term to firmly grasp the meaning. It was an important that examples be drawn from tangible contexts. **Elaboration:** Students were given chances to produce their visual representations and additional examples. **Assessment:** Informal assessment was included in the program.

The participants in the STAD groups were encouraged to work with a partner of a slightly different level to teach and quiz each other. They were also allowed to work together as a whole team if they preferred. The most important thing was for them to ensure that all the participants in

the group knew how to answer the questions. At the end of every two weeks, the participants were instructed to turn their desks to sit in rows and were given a quiz. At this stage, the participants were not allowed to help or speak to each other. After completion, the quizzes were graded by the researcher. The teams were given back their quizzes, and improvement and team scores were calculated. The teacher made an attempt to provide extra praise to the participants and the teams that showed improvement (particularly low performing participants and teams) to influence self-esteem and motivation. Immediately following the class, all teams had their team photos displayed on the bulletin board till the next STAD quiz.

Because of the shortage of time, the teacher corrected the students' vocabulary papers at home. After correcting their vocabulary papers, she gave their vocabulary papers back to them, in order to correct their errors and help them refrain from repeating similar mistakes in the future classes; she also gave the scores to them by her observation and pre and posttest vocabulary tests.

Vocabulary Instruction by CI

In group C, the traditional method group, which included 9 reflective and 21 impulsive learners, the teacher wrote some words on the board, and asked the participants to repeat. Then, the teacher explained the parts of speech, grammatical functions, collocations, and word usage. The participants spent most of the class time listening to the teacher's analysis of the words and its related grammatical explanation, mostly in Persian, and sometimes practiced making sentences. Once in a while, two or three of the participants were assigned to answer some of the questions the teacher asked during her lecture. The learners had to apply what they had learned in the first half time of the class. They had to write individually, without helping anyone. The teacher, as observer, helped them to have better performance, and she finally corrected their vocabulary papers and in addition to giving scores to each of them; in order to prevent them from making similar mistakes in the future, she illustrated the learners' errors.

Results

Results of the OPT and Eysenck's (1990) Impulsiveness Questionnaire

Before conducting the experiment and to make sure that the participants were homogeneous at the beginning of the treatment, an OPT was administered and the obtained data were calculated and analyzed. The result of this test is tabulated in the following table:

Table 1. Sample Mean and Standard Deviation for the OPT

<i>N</i>	<i>Max</i>	<i>Min</i>	Mean	Standard Deviation
90	60	49	55.57	5.24

Table 1, which is based on the result of OPT test scores, shows that the participants approximately had a similar performance. Given the minimum and maximum scores (*Min* = 49, *Max* = 60) and the standard deviation of the distribution (*Std. Deviation* = 5.24), it could be construed that the learners had similar scores, and that they could be categorized at the same level (intermediate level) according to the OPT result.

After ensuring the homogeneity of the participants, Eysenck's (1990) impulsiveness questionnaire was administered to classify the learners in the two groups of reflective and impulsive learners, and a third group which comprised both reflective and impulsive learners. Accordingly, the participants who received the scores between 58 and 95 on the questionnaire were categorized in group A—reflective participants, while the participants who received the

scores between 19 and 57 were categorized in group B–impulsive participants. Finally, based on their performance on this questionnaire, 30 reflective participants were assigned into group A, 30 impulsive participants were assigned into group B, and group C comprised 9 reflective and 21 impulsive learners.

Results of the Vocabulary Pretest

As the next step, a vocabulary pretest was administered to determine the students' prior vocabulary knowledge, the descriptive statistic of which is shown through Table 2:

Table 2. *Descriptive Statistics for the Mean Comparison of the Vocabulary Pretest of Reflective, Impulsive and Control Groups*

Groups		<i>N</i>	Mean	<i>Std.</i> Deviation	<i>Std.</i> Error of Mean
Experimental	Impulsive	30	11.81	2.25	.41
	Reflective	30	14.05	1.58	.29
Control		30	12.63	2.35	.43

Table 2 displays the mean differences of pretest for the three groups. As can be seen, the mean for reflective group is 14.05, while the mean for impulsive and control groups are 11.81 and 12.63 respectively. As a result, the mean difference for reflective and impulsive groups equals 2.24, while the mean difference for reflective and control groups equals 1.42. The mean difference for impulsive and control groups equals .82 which was in favor of the control group. Figure 1 depicts the mean plot of pretest of the three groups.

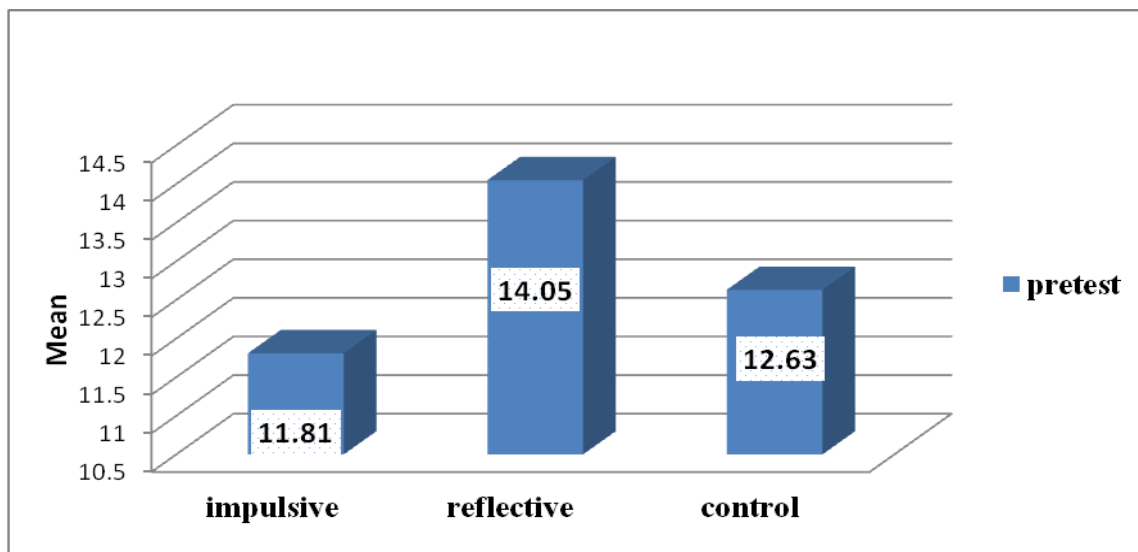


Figure 1. *The Mean Plot of the Pretest of the Three Groups*

What needs to be noticed is that the mean scores of the impulsive learners were lower than those of the control group. In other words, the impulsive learners had weaker vocabulary knowledge than the control group at the onset of the study.

Results of the Vocabulary Posttest

After the implementation of instructional period for sixteen sessions, a posttest was used. The descriptive statistics for the posttest are tabulated in Table 4.3:

Table 3. *Descriptive Statistics for the Mean Comparison of the Vocabulary Posttest of the Three Groups*

Groups		<i>N</i>	Mean	<i>Std.</i> Deviation	<i>Std.</i> Error of Mean
Experimental	Impulsive	30	13.66	2.54	.46
	Reflective	30	17.8	1.38	.25
Control		30	12.58	2.58	.47

According to Table 3, the mean for reflective group ($M = 17.08$) was greater than the mean for impulsive group ($M = 13.66$) and the control group ($M = 12.58$). The mean difference for reflective and impulsive groups equals 3.42, while the mean difference for reflective and control groups equals 4.5. The mean difference for impulsive and control groups equals 1.08.

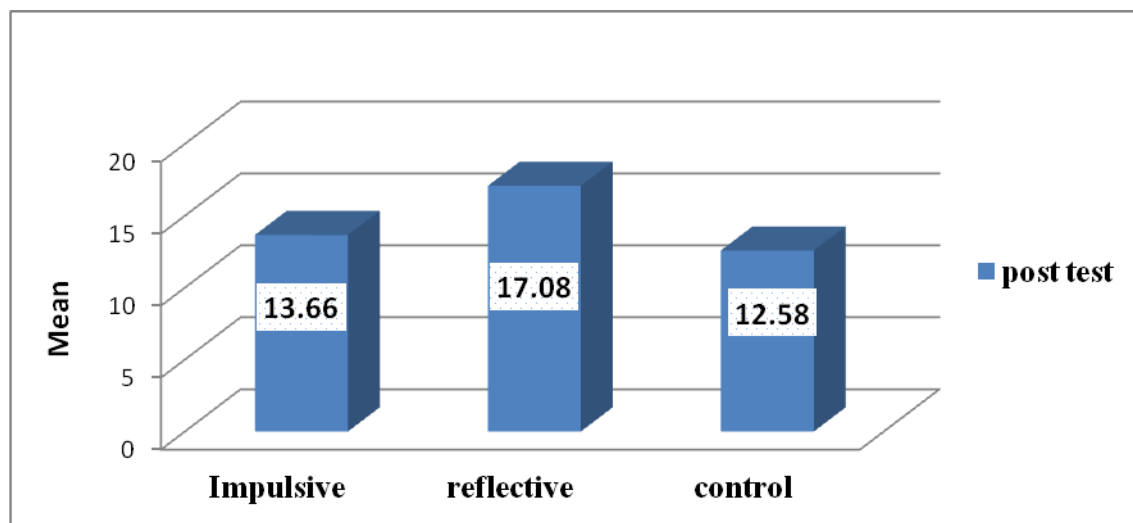


Figure 2. *The Mean Plot of the Posttest for the Three Groups*

It should be mentioned that the posttest scores were indicative of the fact that the two experimental groups of the study experienced a noticeable vocabulary improvement. This is said, not only the two experimental groups had a better performance after the treatment but the impulsive group which had weaker pretest results outperformed the control group on the basis of the posttest. This could be attributed to the effectiveness of the treatment (Cooperative Learning) applied to these groups during the study.

Investigating the First Hypothesis

The first hypothesis of the present study which was formulated based on the first question was that there is a statistically significant difference in English vocabulary achievement between the reflective learners receiving STAD and reflective learners who do not receive STAD. To test this hypothesis, the posttest scores of the reflective group comprising of 30 participants were to be compared to the results gained by reflective learners who were categorized in control group.

Table 4. *Descriptive Statistics for the Mean Comparison between the Scores of Reflective Learners Receiving STAD Technique and Reflective Learners Not Receiving STAD*

Group	N	Mean	Std. Deviation	Std. Error of Mean
Reflective(receiving STAD)	30	17.08	1.38	.25
Reflective(did not receive STAD)	9	14.94	1.52	.50

Table 4 indicates that there was a great difference (2.14) in English vocabulary achievement between the reflective learners receiving STAD (17.08) and reflective learners who did not receive STAD (14.94). In order to justify the claim of significance, an independent samples *t* test was run on the posttest scores of these two groups. The results are presented through the following table.

Table 5. *Results of the Independent Samples t Test between Scores of Reflective Learners Receiving STAD Technique and Reflective Learners Not Receiving STAD*

		Levene's Test for Equality of Variances		t test for Equality of Means						
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean Difference	Std. Error Difference	%٩٥ Confidence Interval of the Difference	
								Lower	Upper	
Vocabulary achievement	Equal variances assumed	.101	.753	3.97	37	0.000	2.138	.538	1.047	3.229
	Equal variances not assumed			3.75	12.20	0.003	2.138	.569	.901	3.376

Since the *p* value under the *Sig.* (2-tailed) column in Table 5 was less than the significance level (i.e. $.000 < .05$), it could be concluded that there was a significant difference between the vocabulary achievement scores of reflective learners who received STAD and those reflective learners who did not receive STAD.

Investigating the Second Hypothesis

The second hypothesis of the study proposed that there was a statistically significant difference in English vocabulary achievement between the impulsive learners receiving STAD

and impulsive learners who did not receive STAD. To test this hypothesis, the performance of the experimental impulsive group (amounting to 30 learners) was compared to the impulsive learners (21 learners) of the control group.

Table 6. *Descriptive Statistics for the Mean Comparison between the Scores of Impulsive Learners Receiving STAD Technique and Impulsive Learners Not Receiving STAD*

Group	N	Mean	Std. Deviation	Std. Error of Mean
Impulsive(receive STAD)	30	13.66	2.5	0.46
Impulsive(not receiving STAD)	21	11.57	2.27	0.49

Table 6 indicates that impulsive learners who received STAD scored more than 2 points higher than impulsive learners not receiving STAD regarding their posttest. But it is difficult to conclude based on the descriptive statistics whether the observed difference met the criteria of significance. Thus, another independent samples *t* test was administered on these results to technically scrutinize the claim of meaningfulness.

Table 7. *Results of the Independent Samples *t*- test between Scores of Impulsive learners Receiving STAD Technique and Impulsive Learners Not Receiving STAD*

	Levene's Test for Equality of Variances		<i>t</i> test for Equality of Means						
	<i>F</i>	<i>Sig</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean Difference	Std. Error Difference	%95 Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	0.012	0.905	3.02	49	0.004	2.09	0.693	0.702	3.488
Equal variances not assumed			3.08	46.5	0.003	2.09	0.697	0.728	3.462

The *p* value in Table 7 (0.004) was less than the required level of significance. This means that the difference between the impulsive learners who received STAD and the impulsive learners who did not receive STAD was meaningful. So the second hypothesis was supported.

Investigating the Third Hypothesis

The third and the last hypothesis of the study stated that there was a statistically significant difference in English vocabulary achievement between the reflective learners receiving STAD and impulsive learners receiving STAD. To test whether this hypothesis applied for the present

study, the performance of the two experimental groups of the study on the posttest was compared.

An independent samples *t* test was applied on the results of posttests of the two experimental groups to determine the group (reflective or impulsive learners) which had a better performance regarding their vocabulary achievement. The descriptive statistics for this test are tabulated in Table 8.

Table 8. *Descriptive Statistics for Vocabulary Achievement between Reflective Learners Receiving STAD Technique and Impulsive Learners Receiving STAD*

Group	<i>N</i>	Mean	<i>Std.</i> Deviation	<i>Std.</i> Error of Mean
Impulsive(received STAD)	30	13.66	2.54	0.46
Reflective(received STAD)	30	17.08	1.38	0.25

Referring to Table 8, one can see that there was difference between the reflective learners receiving STAD (17.08) and impulsive learner receiving STAD (13.66). The result indicates that there seems to be a statistically significant difference in English vocabulary achievement between the reflective learners receiving STAD and impulsive learners receiving STAD. In order to ensure about the significance of the difference, independent-samples *t* test was run.

Table 9. *Results of the Independent Samples *t* Test between Scores of Reflective Learners Receiving STAD Technique and Impulsive Learners Receiving STAD*

		Levene's Test for Equality of Variances		<i>t</i> test for Equality of Means						
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2 - tailed)	Mean Differ ence	Std. Error Differ ence	%95 Confidence Interval of the Difference Lower Upper	
Vocab ulary achiev ement	Equal variances assumed	4.205	0.045	-6.46	58	0.000	-3.41	0.528	-4.475	-2.358
	Equal variances not assumed			-6.46	44.78	0.000	-3.41	0.528	-4.481	-2.235

Levene's test depicted in Table 9 indicates that groups' variances were not equal. Thus, the *p* value in front of Equal-variances-not-assumed row should be checked. As can be noticed in this table, the difference between the posttest scores of the two groups was significant at .05 alpha level (.000 < .05). In fact, reflective learners had a significantly better achievement on the vocabulary posttest than their impulsive counterparts.

Discussion

This study elucidated that cooperative learning enhanced students' vocabulary performance for both impulsive and reflective learners. Cooperative learning techniques like STAD are supported by a multiplicity of theories from a variety of academic disciplines—including behavioral theory, cognitive developmental theory, as well as social interdependence theory. Student Team-Achievement Divisions (STAD) is also supported by a large body of empirical research across different time periods, subjects, and geographical locations and has consistently found a variety of positive outcomes—including accelerated academic achievement, increased self-esteem, and motivation.

Examples of previous empirical studies which demonstrated the effectiveness of cooperative learning techniques include (though are not limited to) the following studies: Ying Pan and Wu (2013), for instance, investigated the effects of using cooperative learning to enhance the English reading comprehension and learning motivation of EFL freshmen by comparing the cooperative learning instruction and traditional lecture instruction. Their findings indicated statistically significant differences in favor of cooperative learning instruction on English reading comprehension, particularly among medium- and low-proficiency students. Cooperative learning instruction also created a significantly positive effect on student motivation toward learning English reading. Their findings are, obviously, in agreement with the findings of the present study, which referred to the effectiveness of CL techniques for vocabulary instruction.

In another study, Tok (2012) investigated the relationship between cooperative learning and achievement in English language acquisition in literature class in a secondary school. The results revealed a significant effect in the posttest of experimental group. The qualitative part of the research indicated that using cooperative learning strategies could improve learner's social behavior. This study as well backs up the results of the present study, and indicates the usefulness of the CL techniques.

In another study, Vaughn et al. (2000) examined the effectiveness of partner reading compared to a comprehension-oriented strategy for third grade students. The results revealed that partner reading significantly improved reading fluency, which provides additional evidence for the effectiveness of CL techniques.

In the context of Iran, Zarei and Keshavarz (2011) studied the effects of two models of CL on reading comprehension and vocabulary learning, and reported the success of the CL models as compared with the non-cooperative control groups. In another study, Javadi Rahvard (2010) investigated the effects of CL on 16 Iranian students—as compared with control group—reading comprehension ability. She proved CL as successful compared with the individually working control group. Also, in another research, Momtaz and Garner (2010) focused on some Iranian students' reading comprehension through CL and proved it to be successful as well. Like all the studies cited above, the present study verified the usefulness of the CL techniques, but for the purpose of vocabulary learning by impulsive and reflective learners.

In cooperative learning, the students are given opportunity to say the word together a number of times. Peer criticism aids them to have the high level of vocabulary performances, since they have the opportunity of evaluating each other's work separately (i.e. the student have the opportunity of evaluating their own works). The students working with partners ask each other for help and improve their attitude towards vocabulary.

In this study, before cooperative learning was incorporated in the class, the students obtained low scores but after the implementation of cooperative learning for seventeen weeks, the students scored significantly better in their vocabulary. Thus, it is obvious that the implementation of cooperative learning in vocabulary has been proven to produce positive effects

in students' learning of vocabulary provided that the personality types of the students are first determined.

Conclusion

As this study has demonstrated, simply putting students in groups does not guarantee positive results. Teachers cannot simply place students together and expect them to work well with each other. Central components of effective CL must be in place so that students can come to feel that they are positive contributors, not only to their teams, but to the class as a whole. Most teachers are faced with large heterogeneous classes, making it difficult to serve the needs of all students in the class. Cooperative learning techniques like STAD take advantages of this heterogeneity, by encouraging students to learn from one another and from more and less knowledgeable peers and they demonstrative more confidence in vocabulary learning decrease their apprehensions towards vocabulary learning.

Although cooperative learning strategies are difficult to practice as novel strategies of instruction, the learners show high level of enthusiasm, curiosity and involvement in being taught through cooperative learning tasks. Thus, this study lends credence to the belief that cooperative learning has positive effects on the students' vocabulary performance. Therefore, teachers should consider this learning approach as a viable alternative for teaching vocabulary.

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