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The Impact of STAD Model of CL on Overall Achievements and Creativity of Iranian EFL Learners

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Abstract
This study was an endeavor to investigate the impact of Student Team Achievement Divisions (STAD) on Iranian secondary school EFL learners' overall achievements and creativity. To fulfill the purpose of the study, 142 EFL students were selected based on their performance on the Oxford Quick Placement Test (OQPT). The students were divided into experimental group receiving treatment through STAD model of cooperative learning and control group devoid of the stated treatment. To recognize the entry behavior pretests were run. The same educational content was taught to both EG and CG during an educational term. To disclose the effect of treatment, a creativity posttest similar to pretest but in reshuffled order in options and items, and also an achievement posttest within the content taught were administered to the students in both groups at the end of the instruction. Furthermore, the mean scores of achievement and creativity tests were compared through an independent samples t-test, and one way ANCOVA respectively. The outcomes showed the rejection of the both null hypothesis consequently concluding that cooperative learning had a significant effect on the overall achievement of Iranian EFL learners, and creativity.

Keywords: Achievement; Cooperative Learning; Creativity; Iranian EFL learners; STAD

INTRODUCTION

Cooperative learning is an effective teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject matter and also it can improve social and interpersonal skills. Numerous studies corroborate the effectiveness of working in small groups regarding to their overalls achievement, social skills and also reported incremental changes in learners' progress. (Barkley, Major, & Cross, 2014; Johnson & Johnson, 1994; Strobel& Van Barneveld, 2009).

In particular, Student Team Achievement Divisions (STAD) was recognized based on achieving the instructional goals (Felder & Bren, 2001; Ghaith, 2001).STAD, as one of the modalities of CL introduced by Slavin's (1995), shows that when students have the willingness to learn in small group and share their experiences to the other members; then, they are able to reach cognitive development which help them to gain better achievements in their attempts. Using STAD, students are positioned in small groups. They all come together to achieve a shared learning goal. So, the students

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are assigned to various groups to attempt their contribution.

Johnson and Johnson (1994a) maximized the significance of interaction among students, arguing that it has inspiring effect in learning, and overall achievement as well. As Johnson and Johnson (1994b), declared, however, putting student in cooperative groups does not suffice and does not meet the assigned expectations. Furthermore, the organization and arrangement of groups will basically define for not they will be more fruitful than the other styles of learning including competitive or individualistic.

STAD is crucial for devising comprehensive strategies that satisfy the wants of all students as it focuses on heterogeneity, encourages interactive interactions, persuades positive interdependence, and entails peer support. Given the fact that Iranian students are not stretched enough, and they do not perform the learning that accrues from participation in discussion, it is plausible to practice a technique to teaching and learning which takes into account heterogeneity.

In addition, creativity and learning are two constituents of human experience, because there is a compromise, and a dynamic relationship between learning and creativity. Those students with new experiences can create new thoughts.

Mostly, people identified creativity as novelty. Eysenck (1996) stated that creativity may refer to creative personality, product, process, and situation. So, it is hard to define creativity, and there is no consensus among the scholars in this regard. However, we can enumerate some features for creativity. In some cases, creativity concerned with the process of doing an action in other cases we may attribute creativity to finding various solutions to a problem, and so on.

Stephan (2013) postulated five significant theories which drive creativity among people. They were presented as Psychoticism, Psychoanalytical, Mental illness, Addiction and Humanistic.

As a result of being creative, students can trust themself and also, they can find better ways constantly to achieve their shared goals. Moreover, creative students refuse to be brought down by obstacles. Eventually, creative students take a risk in order to move in the right path of innovation, they also dare to fail, and are willing to be different in the learning practices.

Regarding to theoretical underpinning, STAD has been rooted in cognitive theories developed by Vygotsky (1934/1986; 1978), and Piaget (1951). It also maintains a cordial relationship with social constructivism. These theorists proposed robust evidence that reasoning is strengthened in STAD as result of socio-cognitive conflict. Additionally, Vygotsky asserted that learning is a social phenomenon, therefore; it is socially constructed, in other words; social level precedes individual level.

Both Piaget and Vygotsky obtained encouraging results that learners must be active in the process of learning, but Vygotsky greeted social aspect of learning with more enthusiasm. He proposed that learning is socially constructed in different contexts.

Statement of the Problem

The significance of this study springs out of the fact that STAD plays a major role in language learning frameworks. The present study seems to validate this view that STAD enhances social relations among language learners and subsequently leads to improving communication skills, which is end purpose of education as well.

Teachers should ground their pedagogy in well-established principles of language learning and teaching, and their beliefs should be aligned with their practices. Although no method or technique can claim supremacy, there is an apparent discrepancy in conclusion. Seminal studies support the positive effects of STAD on students' achievement in primary schools, but few on other leading factors such as students' creativity among the Iranian secondary educational context.

In other words, there remains a paucity of studies on STAD, the learning that accrues from participation in discussion, and some other leading factors including creativity, among Iranian EFL learners.

A large number of students in Iran cannot express themselves in their classes because of their low self-esteem or shyness; therefore, it is crucial to provide EFL learners with a less stressful situation to express their abilities easily. So, STAD plays a pivotal role in learners' success and can involve all the participants in the process of learning.

This study draws primarily on the work of Robert Slavin, et al (1994) who devised Student Team Achievement Divisions (STAD) as a model of CL. Since every school accords high priority to the quality of teaching and learning and also encouraging results of the STAD, the researcher intended to practice STAD. There also has been little research on the usefulness of STAD in English as a Foreign Language (EFL) environment particularly among Iranian secondary school learners and this issue preoccupies the researchers' mind. Also, the role and impact of STAD model in general and its impact on creativity has not been extensively researched in Iranian context, thus this study attempts to bridge the research gap and to investigate the following research questions.

Q1: To what extent does using STAD Model of cooperative learning have any impact on overall English achievement of Iranian secondary school EFL learners?

Q2: To what extent does using STAD Model of cooperative learning have any impact on creativity of Iranian secondary school EFL learners?

The above-mentioned research questions were reiterated in the form of the following research hypotheses:

1. Using the STAD Model does not impact the overall English achievement of Iranian secondary school EFL learners.

2. Using the STAD Model does not impact the creativity of Iranian secondary school EFL learners.

LITERATURE REVIEW

Before proceeding any further, the researchers should explain one point that an enormous amount of research related to the efficacy of CL has been conducted. (e.g. Deutsch, Coleman, & Marcus, 2006; Johnson & Johnson, 2009; Marashi & Baygzadeh, 2010; Gillies& Boyle, 2010; Marashi & Dibah, 2013; Norman, 2006; Slavin, 2011).

Davidson & Major (2014) scrutinized the effectiveness of CL on development of higher-order thinking skills and academic achievement. They also disseminated the encouraging results of their study. Nevertheless, the information that was gleaned from their study can be very useful for teachers and students.

Johnson and Johnson (1994a, 1994b) in a carefully thought-out study designed five elements for a sophisticated CL including positive interdependence, individual accountability, promoting face to face interaction, interpersonal and small group skills, and group processing.

For example, regarding to individual accountability, it is considered a pivotal element to prevent or lower free riders' effect. Individuals' performances are assessed and the consequences are echoed to the groups so as to recognize and provide assistance to those students who need help.

Johnson (1994) in a study stated that by working cooperatively together, students can support each other's success through clarifications, coaching, checking for understanding, negotiations, connecting old and new learning, moving from known to unknown.

Johnson and Johnson (1994a) afforded important insights into the nature of learning and discussed social competent of students. Moreover, they reported a substantial relationship between social skills and overall achievement regarding to using CL. By development of interpersonal skills, that takes place in small heterogeneous group, the learners are able to communicate their thought, ideas, feeling, and contribution. The students' interaction will be improved, specifically for those introvert personalities. Effective interpersonal skills can help students devise solutions to their current and future difficulties, and result in noticeable advancement. In a cooperative learning environment, strong interpersonal skill is an asset that can facilitate the overall achievements.

Springer and colleagues (1999) investigated implementation of CL in science, technology, engineering, and math among college students and reported that learners can attain higher levels of achievement, and more positive attitude than those peers who did not participated in CL.

Chi (2009) revealed that using CL can enhance conceptual understanding among learners for the sake of interactions and dialogues. The researcher asserted that challenging questions are raised as a result of mutual contributions.

Moreover, Bruffee (1995) and Silver (2004) reported astonishing consequences pertaining to using CL. They asserted that students can pursue their goals and work out solutions for various problematic situations in learning by incorporating CL. Some other researchers provided an extended discussion of the use of CL in the educational setting, and reported that student became the member of community within the classroom. (Brown &Campione, 2002; Rogoff, 1994).

There are grounds for believing that implementation of CL is beneficial. By practicing CL techniques, knowledge development, social skills, and overall achievements in many cases have been improved. (Johnson & Johnson, 1994; Stroebel & Van Barneveld, 2009; Barkley, Major, & Cross, 2014).

Different techniques of CL are introduced by instructors all of course with lots of commonalities regarding to the paradigm that students share their information and have joined responsibility for their own and their classmates' learning (Slavin, 2011); among its miscellaneous variations Student Teams Achievement Divisions (STAD) is recognized in this research. Several studies corroborated that STAD is a highly successful CL technique in ELT (e.g., Balfakih, 2003; Chim. 2015; Khansir & Alipour, 2015; Razavi, Nakhle, & Naghavi, 2012; RimaniNikou, Bonyadi, & Ebrahimi, 2014)

Also pertaining to creativity Hadley (2003) claimed that students should learn the language creatively, and rigorously. In another study Mehdizadeh, et al (2013) claimed that cooperative learning can improve creativity and it has encouraging effects on overall achievement as well. Michalko (1998) differentiated creating thinking from intelligence. He proposed that neither creativity represents intelligence nor does intelligence vaccinates creativity.

Although the link between teaching and learning is bound to be indirect, many investigators such as Runco (2007) believe that teaching cooperatively will lead to enhanced learning, and as a result creativity will be improved as well. All in all, there is consensual view among scholars who are pursuing creativity such as Lubart (1999) and Niu and Sternberg (2001). They delivered strong cases for the role of CL and its modalities in developing creativity potentials, social skills, and so on. Finally, some studies including Suharman (2011) reiterated creativity as thinking process that is able to devise new insights, which are useful for solving problem in an educational setting.

METHODS

Participants

One hundred and forty-two EFL students who were chosen from Chaharmahal and Bakhtiari province, Lordegan city, Iran took part in this study due to their availability. The researcher takes into account that stratified sampling is a valuable combination of categorization, and randomization, therefore; the participants were chosen based on stratified sampling.

All of the participants were at the senior high school, and they were male as well. The first language of all the students was Persian and they were all 16 years old. In order to make the groups homogeneous and also to identify the entry behavior of the students, Oxford Quick Placement Test (OQPT) was administered. Eventually, the students were divided into two experimental groups receiving treatment through STAD and two control groups devoid of the stated treatment.

Materials

Oxford Quick Placement Test (OQPT, 2001)

OQPT which was a standardized test was used as a general proficiency test before embarking the research. To meet the assumptions of the current research, it is essential to detect the level of proficiency of the participants. Thus, by administering OQPT we can identify the students' levels of proficiency, their entry behavior, and then make heterogeneous sub-groups.

This test consisted of 60 items developed by University of Cambridge Local Examinations Syndicate. The test is divided into two parts: part one contained 40 items: testing situations (five questions), cloze passages– testing prepositions, grammar, pronouns, and vocabulary– (15 questions), and completion items (20 questions). The second part contained 20 items; 10 questions on cloze passages and 10 completion type items. All items were in multiple-choice format and their reliability and validity have already been established.

Torrance Tests of Creative Thinking (TTCT)

TTCT is a test of creativity that examines divergent thinking and other problem-solving skills of the participants. This test is scored according to four scales: Fluency, the whole number of meaningful and appropriate ideas produced in response to the delivered questions; Flexibility, the number of dissimilar types of related responses; Originality, the statistical paucity of the responses, and finally elaboration; The quantity of mentioning details in the gained responses.

Procedure

Due to the fact that the major purpose of the study was to disclose the impact of STAD model of cooperative learning on Iranian EFL learners' overall achievement, and creativity in small groups, therefore we required some homogenous groups of students. To this end, OQPT was presented to identify the entry behavior of the students. In addition, another questionnaire in relation to creativity was also administered. In order to encourage the students, it was explained that 1 point would be awarded to everyone who filled out the questionnaires truthfully. Afterwards, the Persian validated version of questionnaire was administered to the participants to avoid ambiguity and misunderstanding. All students underwent a pretest session in order to measure the entry behavior of students before embarking the main body of research. The same behavior ran again at the end of the study. The participants were selected based on their performance on an OQPT, and teacher's familiarity to be assigned in the experimental and control groups. According to Slavin (1994, 1995) each experimental class was divided into small groups (normal and expert) including eight groups of four to five students. Students in the experimental group were given some materials from theirs books in the Expert Group before being reclassified into STAD groups to exchange their thoughts in detail. After the discussion and exchanging true information in the Expert Group, the students then returned to their STAD groups for information synthesis. They had to provide reasons and justify others' opinions, peer evaluate their understanding, and summarize the concepts that each individual student contributed. After practicing this technique for an educational period, the acquired grades were based on students' performance in their final exam in the fall semester (from late September 2019 to January twentieth 2020). Students were studying English for two sessions (135 minutes) each week, all with the Iranian English teacher. Students accomplished one part in their workbooks semimonthly, and a practice quiz delivered each fourth session. Practice quiz mostly was based on taught materials.

Students in the experimental group were occasionally retold the importance of working together and helping each other. Moreover, the teacher provided intermittent support for the learners whenever needed. Also, the participants were asked to monitor their way of doing at the end of their practices in small groups in order to identify their pitfalls and contributions to their peers. Subsequently, each group corrected the other group tests. Groups were provided feedback and suggestions and also their improvements were determined.

Furthermore, the groups that gained a better understanding of the process were praised by teacher in particular so as to encourage their overall achievements, and enhance their potentials creativity. In order to pinpoint the impact of the treatment (STAD), the attempts of participants were recorded. The records were used to compare and contrast the entry behavior of students and their improvement in overall achievement and enhanced potential creativity. It should be mentioned that the teacher used traditional way of teaching (teacher- fronted) for the control group.

Design and Statistical Analysis

The current study was a quasi-experimental with pretest-posttest. There were two groups, experimental, and control. The independent and dependent variables was STAD model of CL, and students' overall achievements and creativity respectively. Because we wanted to compare the average of interested groups, and to determine whether any of those means were statistically significantly different from each other or not, the data from the pretest and posttest scores of the learners were fed into SPSS and statistical tests such as independent-samples test, paired-samples t test, one-way MANCOVA, one-way ANCOVA, and chi-square. Those tests were conducted to help the researcher find the responses to the research questions of the study.

RESULTS

At the very outset of the study, the OQPT scores of the learners in the two groups of EG and CG were compared by means of an independent-samples *t*-test to ensure the homogeneity of the learners in these two groups prior to the commencement of the intervention. The results for the descriptive statistics of this analysis are presented in Table 1:

Table 1

Descriptive Statistics Results for the OQPT Scores of the EG and CG Learners

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
EG OQPT	75	18.85	2.24	.87	.27	1.04	.54
CG OQPT	66	18.57	2.54	.42	.29	.01	.58

In the table above, the mean scores, standard deviations, skewness, and kurtosis values for the OQPT scores of the EG and CG learners are presented. The mean score of the EG learners (M = 18.85) was only slightly larger than the mean score of the CG learners (M = 18.57). The skewness and kurtosis values for the OQPT scores of both EG and CG learners imply that both these distributions were normal because these values were found to be smaller than ±2.00. The results of the independent-samples *t*-test in Table 4.2 determine whether the difference between the OQPT scores of the EG and CG learners reached statistical significance or not:

Table 2

Results of Independent-Samples t Test Comparing the OQPT Scores of the EG and CG Learners

	Levene's Test for Equality of Variances		*t* test for Equality of Means						
	F	Sig.	*t*	*df*	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	1.86	.17	.68	139	.49	.27	.40	-.52	1.07
Equal variances not assumed			.68	130.63	.49	.27	.40	-.52	1.08

As Table 2 indicates, with the *F* value of 1.86 at the significance level of 0.17 being larger than 0.05, the variances between the two groups were not significantly different. Therefore, the results of the *t*-test with the assumption of homogeneity of the variances were reported here. The results ($t = 0.68$, $p = 0.49 > 0.05$) indicate that there was no significant difference between the mean scores of the two groups at the outset; consequently, any probable differences at the end of the treatment could be attributed to the effect of the treatment.

STAD Mode of CL and Learners' Achievements

Earlier in this article it was mentioned that one of the objectives of the current study was to compare the EG and CG learners with regard to their achievements. To achieve this objective, the researcher needed to compare the achievement (i.e., final) scores of the EG and CG learners via another independent-samples *t* test. The results of this analysis are presented in the following tables:

Table 3

Descriptive Statistics for Comparing the Achievement Scores of the EG and CG Learners

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
EG Achievement	75	17.73	1.56	-.81	.27	.93	.54
CG Achievement	66	13.44	3.44	.01	.29	-.98	.58

Table 3 demonstrates that the achievement mean score of the EG learners ($M = 17.73$) was much larger than the achievement mean score of the CG learners ($M = 13.44$). In order to make sure this difference was statistically significant, the researcher had to check the *p* value under the Sig. (2-tailed) column in Table 4.4 below:

Table 4

Results of Independent-Samples t Test Comparing the Achievement Scores of the EG and CG Learners

	Levene's Test for Equality of Variances		*t* test for Equality of Means						
	F	Sig.	*t*	*df*	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	59.47	.00	9.68	139	.00	4.28	.44	3.41	5.16
Equal variances not assumed			9.28	88.29	.00	4.28	.46	3.36	5.20

It could be seen in Table 4 that with the *F* value of 59.47 at the significance level of 0.00 being lower than 0.05, the variances between the two groups were significantly different. Hence, the results of the *t*-test without the assumption of homogeneity of the variances were reported here. The results ($t = 9.28$, $p = 0.00 < 0.05$) indicate that the difference between the two groups of EG ($M = 17.73$) and CG ($M = 13.44$) on the achievement test was statistically significant, implying that teaching the EG learners through the STAD model of CL was effective in helping them achieve the course objectives.

Effects of STAD Mode of CL on EG Learners' Creativity

The second research question of the study asked "To what extent does using STAD model of cooperative learning have any impact on creativity of Iranian secondary school EFL learners?" To find an answer to this research question, a one-way ANCOVA was conducted to compare the creativity posttest mean scores of the EG and CG learners while controlling for any possible differences between their creativity pretest scores. Prior to conducting the ANCOVA test, the researchers tested such underlying assumptions as normality, linearity, and homogeneity of the regression slopes and ensured they were not violated. Table 5 displays the results of descriptive statistics for this analysis:

Table 5

Descriptive Statistics for Comparing the Creativity Post-test Scores of the EG and CG Learners

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
EG Creativity Posttest	71	84.61	10.47	.06	.28	1.50	.56
CG Creativity Posttest	66	78.77	9.04	-.70	.29	1.50	.58

It is depicted in Table 5 that the creativity post-test mean score of the EG learners (M = 84.61) was greater than the creativity post-test mean score of the CG learners (M = 78.77). To make certain the there was a significant difference between these two mean scores, the researcher needed to check the p value in the ANCOVA table below.

As Table 6 indicates, the significance value was less than the alpha level of significance, $F(1, 134) = 12.20$, $p = 0.00 < 0.05$. This means that the difference between the creativity posttest scores of the two groups of EG (M = 84.61) and CG (M = 78.77) reached statistical significance, indicating that teaching EG learners through the STAD model of CL significantly enhanced their creativity. The size of this effect, shown under the Partial Eta Squared column was found to be large (.08) based on the guidelines suggested by Cohen (1988, as cited in Pallant, 2010).

Table 6

Results of One-way ANCOVA for Comparing the Creativity Post-test Scores of the EG and CG Learners

Source	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Squared
Corrected Model	11956.84	2	5978.42	360.72	.00	.84
Intercept	615.79	1	615.79	37.15	.00	.21
Pretest	10672.59	1	10672.59	643.95	.00	.82
Groups	202.34	1	202.34	12.20	.00	.08
Error	2220.83	134	16.57			
Total	930943.00	137				
Corrected Total	14177.67	136				

DISCUSSION

As mentioned at the onset of the study, an industrious effort was made to find appropriate and plausible answers to the following research questions.

1.To what extent does using STAD Model of cooperative learning have any impact on overall English achievement of Iranian secondary school EFL learners?

2.To what extent does using STAD Model of cooperative learning have any impact on creativity of Iranian secondary school EFL learners?

In the following sections each research hypothesis is inspected in detail based on the data analyzed in result section and possible arguments for the findings are discussed.

Addressing Research Question One

In order to find a response to the first research question uncovering the impact of using STAD Model of cooperative learning on overall English achievement of Iranian secondary school EFL learners, an independent-samples t test was conducted. In order to compare and contrast the overall achievements, the pretest and posttest scores of EG and CG EFL learners were analyzed.

The achievement scores of the EG and CG learners was statistically significant, giving rise to the conclusion that teaching the EG learners through the STAD model of CL led to significant achievements in their final scores. Henceforth, the first null hypothesis was securely rejected.

The major endeavor of the first phase of this study is justified by some of the theories reviewed in Chapter one according to Sociocultural Theory (1.2.3). The constructivism theorists (cognitive and social) such as Vygotsky and Piaget established deeper reasoning as a result of socio-cognitive conflicts.

The result of this study agrees to the aforementioned theories, since Constructivists assign an active role for learners. Moreover, as mentioned before, Vygotskian theory asserted that knowledge is socially constructed. So, the implementation of CL techniques are inextricably linked and justified with the disciplined based theories.

This study agrees the research carried by Chan (2020). S/he said despite positive learning practices and enhancement as a result of talks amongst students, CL is not pervasive as a model of teaching worldwide. S/he asserted previous studies have not provided reasonable arguments regarding to using CL as a beneficial technique. Thus, teachers can cooperatively scaffold the process of teaching towards required achievements and introduce the merits to the educational environments.

The results of this study would agree with the previous studies done pertaining to the use of STAD model of Cooperative Learning (CL). Although scholars hold widely divergent views on the efficacy of CL, there are many convincing arguments that corroborate working in small groups as beneficial. Furthermore, in several areas such as learners' overall achievement the results were astonishing. (Johnson & Johnson, 1994; Strobel& Van Barneveld, 2009; Barkley, Major, & Cross, 2014).

This study is in line with a numerous investigation explored the benefit of CL in language teaching (e.g. Deutsch, Coleman, & Marcus, 2006; Norman, 2006; Johnson & Johnson, 2009; Gillies& Boyle, 2010; Marashi & Baygzadeh, 2010; Slavin, 2011; Marashi & Dibah, 2013;).

This study would agree to Norman study (2005). In that study Norman stated that the results of research clearly support the positive impact of STAD model of CL on learners' academic achievement. Norman also reported some astonishing effects of STAD on some non-academic factors such as motivation.

This study is in line with the research done by Gull and Shehzad (2015). In an effort they tried to determine the consequence of CL technique on learners' achievement in subject of education. The result of their study revealed positive effect of CL regarding to their overall achievement.

Furthermore, it is suggested that the outcome of this dissertation is in harmony with miscellaneous studies accomplished before. Those investigation indicated that CL is more

beneficial than traditional methods in enhancement of overall achievement, for example Ainley (2006); Thurston et al., (2012) e.g. The results of this endeavor are supported by studies led by Gillies, 2006; 2006; Bukunola & Idowu, (2012). Sambo (2003) in an experimental study confirmed the results of the current research and declared an improved mean score of experimental group in comparison with control group.

Another similar study was conducted by Shimazoe and Al-drich (2010). They had an attempt to explore students' mathematics achievement between the cooperative group and the traditional group. Content analysis data of that study unveiled that students' overall achievement in the CL group were dramatically improved, and they also reported the treatment significant.

Moreover, Lavasani, et al (2011) in a line with this study inspected the relation between CL and social skills. The findings of their quasi-experimental research revealed that the experimental group (EG) enjoyed a significantly higher level of social skill than the control group (CG).

In another study Hossain and Tarmizi (2013) examined the effects of CL on learners' mathematics enhancement and they also investigated the participants' attitudes towards mathematics among secondary school learners in Bangladesh. The findings of that endeavor would agree with our study as it showed a great progress regarding to the dependent variables.

As the findings related to this investigation are reinforced by a number of previous investigations, thus it can be suggested that Using STAD model of CL, due to its beneficial uses, can positively affect the overall achievements of the Iranian EFL learners.

Addressing Research Question TWO

In order to find a response to second research question, i.e., to what extent does using STAD Model of cooperative learning had any impact on creativity of Iranian secondary school EFL learners, the same measures were followed, in the sense that paired-samples t tests and an independent-samples *t*-test were run on the pretest and posttest scores of the EG, and CG EFL learners. After analyzing data, the researcher concluded that the difference between the creativity posttest scores of the two groups of EG (M = 84.61) and CG (M = 78.77) reached statistical significance. This indicates that teaching EG learners through the STAD model of CL meaningfully improved their creativity.

Agreeing to Mehdizadeh, et al (2013), CL revealed positive effects on students' potential creativities, and it has also proven to have positive impacts on students' Achievement.

In the line with this study Gunawan, et al (2018) inspected the enhancement of students' creativity through CL using virtual media for the static fluid concept. The results of that exploration revealed that the students in the experimental group outperformed the students in the control group. Also, they identified that the difference in creativity potentials enhancement In EG and CG was significant.

In the same vein, Marashi& Khatami (2017) scrutinized the influence of CL on EFL learners' creativity and motivation. The outcomes of that study confirmed that implementation of cooperative learning (CL) had a meaningful and positive effect on EFL learners' creativity and motivation. Thus, that study provided yet further evidence in favor of applying CL models in the EFL environment.

Gunawan, et al. (2018) investigated the students' creativity using CL. The results showed that the improvement of students' creativity in the experimental group was higher than the control group. Additionally, the difference in the improvement of students' creativity in both groups is significant. Likewise, they concluded that the application of cooperative learning model had a positive effect on students' creativity. Accordingly, this study also provided proof in favor of implementation of CL models in enhancement of creativity.

The information gleaned from this study would agree with John and Meera (2014), which examined the effectiveness of CL in development of creative thinking abilities among secondary school learners. In addition, the results of this attempt of this attempt are justified by Ahangari and Samadian (2014) that proved CL tactics can nurture different

intellectual abilities such as problem solving, and creativity.

This research would agree with Kaptan and Korkmaz (2019) who determined the impact of the CL on the creativity of 7th grade students in primary school science subject in Turkey. That study revealed significant difference in favor of experimental group.

In another study Damon (1984) stated that when children discover new potentials cooperatively, their thinking is not restricted by an expert who is more experienced but rather is limited only by the boundaries of their joint imaginations. When teachers provide cooperative situation for their students at different developmental levels, then the students can work together and encourage each other's efforts to fulfill their common goal, that's why CL becomes a valuable part of the curriculum for enhancement of creativity.

Consequently, the researcher in this attempt confirmed that by implementing CL in language learning the EG showed greater gains. Similarly, the barriers which were generated by traditional teaching were easily eradicated, and all students were capable of working with each other to learn and grow - irrespective of their individual differences, and backgrounds.

CONCLUSION

The statistical analysis of the data corroborated the positive effects of STAD model of CL on creativity, and overall achievement of Iranian secondary school EFL learners. This positive effect is related to the advantages that are associated with the instruction of CL technique, namely, STAD model of cooperative learning. Therefore, it may be safely assumed that this technique is effective in teaching.

Implementation of STAD model of CL supported Iranian secondary school EFL learners to raise their overall achievement at their final exam. It also built positive interactions and created a learning community that values diversity. CL provides experiences for students in such a way that they benefited both good learning skills and social skills. Furthermore, greater creativity was reported as well.

This study showed that participants supported the idea that when they work with other learners they attain more than when they work on their own. Besides, we can conclude from the results of this study that the learners generally had willingness towards supporting the implementation of CL techniques in the process of teaching and learning. This attempt helped the students to develop positive attitude towards CL techniques, and in this way, learners' attitude towards language learning, and their interest, ultimately has been changed.

Majority of the students in small groups of EG acknowledged that the STAD model of CL was an effective technique because their overall achievements were astonishing. The students were pleased with the implementation of CL techniques in their classes. They felt that it was adaptable for Iranian educational situation. Students believed that learning cooperatively was better than individualistic and competitive learning. CL also made learning more interesting, and provided fun for all students. Students learned in a satisfactory, stress-free situation, and their socialization improved as well. Students also stated that they were responsible for their learning. They also were committed to success of each member and their group.

Also, this study validated the efficacy of CL regarding the enhancement of creativity. In many cases the number of alternative responses, which were generated by students in small groups, was increased. And there also were flexibility of thought in finding solutions to the problems. Likewise, some solutions were pure and enjoy originality. Therefore, we strongly conclude the usefulness of incorporating CL for improvement of creativity.

In the current study, the CL delivered students some chances to scrutinize, produce, and measure notions helpfully. The relaxed and stress-free situation facilitated discussion and communication. These small group interactions helped students to strengthen each other's abilities, and experiences. The students could express their ideas and monitor as well. Consequently, all given ideas were subject to careful inspection. After implementation of this study, students were competent enough to

recognize the flawed and wrong solutions from the plausible ones, i.e., their critical thinking were incredibly improved.

Furthermore, by implementation of CL then numerous properties of CL particularly positive interdependence were practiced in depth. Cl is beneficial because it inspires learners to gain more achievements as a result of receiving help from peers, and praising efforts from teachers. In CL, individuals know that their contributions to the groups and whole class are appreciated. This can motivate them continue to try, especially when their contributions are supported by their group mates. Because CL involves enjoyable activities at the level of their own proficiency, all members of the group will participate in group tasks. In sum, CL by creating a self-governing, peaceful and non-threatening atmosphere, stimulate learners to be courageous enough to participate in group activities.

All in all, teachers cannot simply make small groups and waiting for astonishing results. The principles of CL such as individual and group accountability, positive interdependence, interpersonal skills, face to face interactions, and group processing must be exercised so that students reach to the conclusion that they are positive contributors, not only to their teams, class, but also to the society. Most EFL teachers are experiencing large heterogeneous classes (regarding to their level of proficiency), for the sake of mentioned reason they cannot meet the needs of all students in the class. CL techniques like STAD, take advantage of this heterogeneity, by encouraging students to learn from more knowledgeable teammates.

IMPLICATIONS

The significance of all research projects depends on the implications of the findings they have for various stakeholders. The discoveries of this attempt also bear valuable theoretical and pedagogical implications for EFL learners, teachers, and materials developers.

As far as the theoretical implications are concerned, this study may improve global insight into the impact of STAD on overall achievement, and creativity. Also, the outcomes of this study are supportive of second language acquisition theories and approaches as well as the theories of mind already put forward by scholars in the field, such as 'Vygotsky's social constructivist theory of mind', Piaget's theory of cognitive development, and the 'theory of social interdependence'. Consequently, the ideas emphasized in such theories are generalizable to Iranian EFL context referring to the findings of this study.

All in all, the time has come that textbook designers and curriculum developers take the advantages of STAD in general, and the outcomes of this study in particular. They are supposed to devise a right change in the current language education in Iran.

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