

# The Effect of Student Teams Achievement Division Technique on English Achievement of Iranian EFL Learners

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**Abstract**—An approach called Student Teams Achievement Division (STAD) has been developed based on Cooperative Learning (CL) tenets. STAD emphasizes having team goals and success dependent on the learning of all group members. The purpose of the present study was to investigate the effects of STAD on the English achievement of Iranian third grade junior high school students. 60 third grade junior high school students (consisting of 2 classes, experimental and control) were chosen. Before the intervention took place, they had studied 2 lessons (1 & 2) of third grade junior high school book (English III) in one and a half months. For a period of 2 months, in the experimental class the teacher with the help of the researcher implemented STAD technique, and in the control group the teacher used the same traditional method. Two lessons (3 & 4) were taught during these 2 months. The materials of this study consisted of 2 teacher-made English achievement tests, and a questionnaire measuring their learning style preferences. The data was analyzed using paired and independent *t* tests. The results showed that the difference between the 2 classes was significant, and the experimental group was superior to the control group in terms of English achievement.

**Index Terms**—student teams achievement division, cooperative learning, traditional method, English achievement

## I. INTRODUCTION

Cooperative Learning (CL) is an approach based on group learning activity that beholds learning attached to social interchange of information between learners and in which each learner is responsible for his or her own learning and is instigated to help boost achievement of others (Jonassen, 1991). It is regarded as one of the most important circles of theory, research, and practice in pedagogy. It is mentioned that CL is one of the best option for all students CL highlights vibrant communication of learners with dissimilar competences and capabilities (Ghaith, 2003). It is also believed this approach can facilitate highly acceptable results when it comes to student outcomes in academic improvement, social conducts, and affective maturity (Tsai, 1998). The significance of student-centered learning has also been highlighted in recent theories of L2 learning where peer collaboration is key in the learning process.

Student Teams Achievement Division (STAD) is a type of CL developed by Slavin and his colleagues. STAD is one of the most significant CL approaches, which has been influential in bringing about positive effects in multiple grades and subjects. There has, however, been little research on the effectiveness of STAD in English as a Foreign Language (EFL) environment.

Slavin (1995) enumerated three main concepts of STAD as team rewards, individual accountability, and equal opportunities for success. Team rewards are certificates or other awards which are given if a STAD group achieves higher than a predetermined level. In this way the spirit of positive competition is reinforced and all or none of the groups would be rewarded based on how they score. In terms of individual accountability the individual learning of each of the group members determines the success of the teams. Students tutor one another ensuring that all group members are ready for the quizzes that students take individually. As for equal opportunities for success individual improvement of the students specifies their contributions to the group. In this way it is guaranteed that all group members with different levels are equally motivated to do their best.

CL strategies like STAD are supported by a multiplicity of theories from a variety of academic disciplines including psychological theories of motivation, social cohesion, individual, and cognitive development as well as sociocultural theory, cognitive apprenticeship, and situated cognition (Slavin, 1995).

Slavin (1994, 1995) mentions four steps of STAD for implementation in the classroom. First, teaching in which the teacher introduces new material through a lecture, class discussion, or some form of a teacher presentation. Second, team study in which heterogeneous team members cooperate on worksheets designed to extend and help boost the material taught by the teacher. Third, tests are individual quizzes students take on the assigned materials. Teammates are not allowed to help one another during these quizzes. And finally team Recognition stage where quiz scores are juxtaposed to past averages; points are given based on improvement from past performance. High-scoring teams are awarded by gifts or putting their names on bulletin board or by granting certificates to them.

Newman (1982) stated that well-structured cooperative learning techniques like STAD can ensure that all group members participate in the learning process actively. STAD has taken into consideration one of the key components of any teaching method which is motivation. According to Slavin (1992), by rewarding top teams both intrinsic and extrinsic motivation are reinforced. Newman (1982) count group work as an essential teaching strategy and also an important learning style. In STAD students foster collaboration when they work together to achieve a common goal or solve problems. Also in STAD groups, students are given more opportunities to practice English in real-life situation.

STAD can be applied to a wide range of situations. According to Slavin (1994) although STAD is not a comprehensive teaching method it can administered to organize classes which can in turn precipitate the success of all students. The major principle behind this approach is that learners cooperate to learn and be held accountable with respect to their teammates and their own achievements.

Slavin (1995) considers STAD as one of the most researched of all the cooperative learning methods. According to him the median effect size for all the studies was  $+0.32$  on all tests and  $+0.21$  on standardized measures. Significantly higher achievement was gained for this method than for traditional instruction in 17 out of 22 studies of STAD in grades 3 through 12.

Karweit and Lavin (1981) applied this method in a ninth grade class and found significant improvement on performance of students in standardized tests. The importance of recognition of achievement of individual learners has been highlighted in the literature. An effect size of  $+0.32$  was reported when individual accountability was taken into consideration in STAD groups. When group goals and individual responsibility were not considered the effect size of just  $+0.07$  across 25 studies have been reported (Slavin, 1995). Bradshaw et al. (2003) juxtaposed traditional groups (lacking group goals and individual accountability) with STAD groups and came to the result that the STAD group performed significantly better. Madden and Slavin (1983) found significantly higher general self-esteem in STAD groups than in control groups. So self-esteem can be mentioned as an important psychological outcome of cooperative learning methods like STAD.

According to what has so far been mentioned, the following question was posed to be answered in this study: does STAD technique facilitate English achievement of Iranian EFL third grade junior high school students?

## II. METHODOLOGY

### A. Participants

The sample of this study consisted of 60 female third grade junior high school students in a private school in Isfahan, Iran. The researcher had access to female third graders. The sampling was done by chance. One class (30 students) was the experimental group and the other class (30 students) the control group. In the experimental group, STAD technique was used. In this class, the participants were divided into six heterogeneous groups. Each group had five students. Heterogeneous groups were selected according to the results of a Learning Style Preference Questionnaire and the grades of an English achievement test. Intervention in the experimental group was taken place one and a half months after the beginning of the semester.

### B. Instruments

Perceptual Learning Style Preference Questionnaire: In order to understand the learning style preferences of the participants for the purpose of heterogeneous grouping in the experimental group, a questionnaire from Reid (1990), which was translated into Persian, was given to the participants before the study. The original English version was translated into Persian by the researcher and crosschecked for content validity by two English teachers from junior high school. The result from this questionnaire was used as part of the criteria for heterogeneous grouping in the experimental group. The grouping strategy for the experimental group was that each group should have members of different learning styles, instead of putting the participants of the same learning style together in the same group.

English Achievement Tests: The last instruments included the two English achievement tests. The first examination tested the participants on the materials from Lesson One and Lesson Two of book III of junior high school. And, the content of the second examination covered Lesson Three and Lesson Four.

### C. Procedures

The teaching materials that the participants studied were from the junior high school textbook, Book III, for both groups. The instructional design presented in this section includes the teaching procedures in the control group and those in the experimental group. The teaching procedures and activities in the control group belonged to the traditional methods, which involved mainly the Grammar Translation Method (GTM) and some of the Audio-Lingual Method (ALM). In addition to the use of the GTM with a little ALM, the traditional teaching method in this study also included isolated learning context, as opposed to that of the CL in the experimental group.

Control Group: There were three major sections in the junior high school textbook, Book III: (1) vocabulary, (2) dialogue, and (3) sentence structure. The method of teaching each of the four components would be described in the subsequent sections:

Vocabulary: A typical way to start a new lesson in the textbook was by introducing the vocabulary first. The common way to introduce the vocabulary was to write the words on the blackboard and ask 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 grammar, mostly in Persian, and sometimes practicing 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.

**Dialogue:** As for the dialogue, the teacher explained the meaning of the content, first, in Persian, and then, asked the participants to repeat after her. Sometimes, they listened to the cassette and repeated after the tape for two or three times, as the ALM suggested. Then, two or more of the participants were randomly appointed to role-play the dialogue on the stage, while the rest of the class watched and listened to their performance. There were two or three pairs at most selected to practice the dialogue in front of the class during one class period. Most of the participants listened passively and quietly while the selected pairs were practicing on the stage.

**Sentence Structure:** The part on sentence structure was mainly taught through the explanation of grammatical terms translated into Persian. The sentence structure in each lesson was usually broken into discrete elements of grammatical function, such as nouns, the verb "to be," adjectives, gerunds, infinitives, pronouns, etc., and then the relationship between the grammatical elements was analyzed. In such a traditional learning context, the participants listened passively to their teacher's lecture without much student-student interaction for maximal practice of the L2.

**Experimental Group:** The experimental group consisted of one class of third grade students (30 students). The class was divided into six heterogeneous groups—each group having five participants. Heterogeneous groups were formed according to the results of a learning style preference questionnaire and the grades of the first achievement test. Each team was assigned a letter from A-G and asked to create a unique team name. Each team had their photos taken, and these photos were later used as team rewards, where they were publicly displayed whenever any teams achieved Super Team status (a team score of 25-30 points).

The participants studied English for two 90-minute classes each week, with both the English teacher and the researcher. The participants had completed lessons one and two of the textbooks in one and a half months before intervention took place. In the two-month period of the treatment, they completed the third and fourth lessons. A practice quiz was given in every session to each group containing about 20 questions (from the parts just learned). The participants were regularly reminded of how to work together in their groups and the importance of helping each other. Whenever possible, they were encouraged to engage in group processing at the end of the class so as to reflect on how well they worked together and how they could improve next time.

While working on the practice quizzes, the participants in the STAD groups were encouraged to work with a partner of a 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 Super Teams had their team photos displayed on the Super Team bulletin board till the next STAD quiz.

The major sections of the textbook (i.e., vocabulary, dialogue, and sentence structure were presented in the following details (step one):

**Vocabulary:** Vocabulary is usually taught through the five steps below (Nation, 2001):

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

**Dialogue:** The participants should have been ready for the conversation. They should have listened to the CD completely at home and checked the words. At first, the teacher asked them some questions related to the topic to raise interest or sometimes wrote a couple of questions in key words and asked the participants those questions. Then, they listened to the CD. From the picture prop of the conversation, they asked general questions, and some other participants answered. Then, the participants listened to the CD again and repeated the content. After that, they asked detailed questions about the conversation; other participants answered. The teacher wrote the conversation in key words on the board. Next, the participants practiced the conversation in twos or in groups. After that, volunteers said the conversation (with the help of key words). Then, they asked some questions about themselves related to the topic of the conversation from each other. For the next session, every two students made a new conversation about the same topic.

**Structure:** In teaching structure, it is important to show what the structure is, what it means, and how it is formed. For the warm-up, the teacher started with a previous related grammar topic, then he wrote a sentence on the board (related to the grammatical point) and read it out. The teacher clarified the topic through demonstration or dramatization (showing the meaning through a situation) or contrastive examples. After that, they had repetition, substitution, and

transformation. Then, the participants made sentences (sometimes in the form of questions and answers) and practiced with their partners. Next, they asked some communicative questions.

### III. DATA ANALYSIS AND RESULTS

The first comparison of English achievement was on the intragroup analysis in the experimental group. As shown in Table I the experimental group gained significant improvement in their L2 learning in terms of English achievement after the intervention of STAD for two months. As a contrast to the significant gain in the experimental group, there was no significant difference identified in the control group in terms of English achievement, as shown in Table I:

TABLE I.  
PAIRED SAMPLES TEST OF ENGLISH ACHIEVEMENT

Groups	Pretest	Posttest	n	MD	t	p
Experimental	14	16.55	30	2.55	5.766	.000
Control	14.15	13.96	30	.19	.416	.681

The independent samples test was performed to compare the intergroup difference in the students' English achievement. As Table II indicates, there was no significant difference between the two groups of students toward learning English in the pretest of the achievement tests. But there was a significant difference between the two groups in the posttest on their test results:

TABLE II.  
INDEPENDENT SAMPLES TEST OF ENGLISH ACHIEVEMENT

Tests	Experimental	Control	n	MD	t	p
Pre	14	14.15	30	.15	.182	.856
Post	16.55	13.96	30	2.58	3.400	.001

According to Table (4.2), the mean score of the pre test of the English achievement of the experimental group was 14, and that of the control group was 14.15. The mean difference between the two groups was not statistically significant ( $p = .8$ ). After the intervention of STAD for two months, the mean difference between the two groups in the post test was 2.58, as shown in Table (4.2), Such a mean difference was statistically significant ( $p = .001$ ).

In sum, the results of the intergroup and the intragroup comparisons of the English tests indicated that the experimental group gained significantly in terms of their achievement toward learning English as a foreign language.

### IV. DISCUSSION

The significant gains of the experimental group on the achievement tests supported Lave and Wenger (1990) in considering STAD a practice that can improve L2 learning. Due to the socially oriented lessons taught and learned through small group interaction, the participants in the experimental group were able to demonstrate significantly better English achievement than the control group.

The possible reasons to account for the significant gains in the experimental group could be synthesized into the following categories: 1) the expansion of engagement of students in the lesson through comprehensible input, interaction, and output, 2) the stimulating patterns of positive reinforcement, and 3) the complementary communicatory learning context. These three components of STAD seemed to contribute to the participants' academic achievement, as demonstrated in the results of this study.

Accomplishment of team-mates can have an effect on one's well-being so students become concerned with the common good. In the experimental group efforts were made to fulfill the tasks which can be attributed to characteristic value of liability to the shared objectives. It seems that students in the experimental groups had attained cooperative dexterities that encouraged them to advocate, expedite, and boost the achievement of others.

### V. CONCLUSION

Results of this study indicate that putting students in groups unreservedly may not be that helpful. The key concepts of CL are called for in which participants come to the insight to be effective contributors not only to their teams but also to the whole class. Heterogeneous classes are a major problem of EFL teachers in Iran. STAD views this heterogeneity as an opportunity by inspiring participants to learn from their more or less knowledgeable classmates. By promoting apprehension and acceptance of each and every individual member of the class social skills of the learners can also be improved.

Although students working in STAD groups had a significantly higher achievement compared to the students working in traditional methods it is not implied that participants should do everything in groups; individual work and whole class instruction have their righteous place in education. According to Johnson and Johnson (1994b) there are always students who choose to work alone. These students need to be instructed on communicative skills such as how to listen, help, and give opinion. In order to have successful teams participants need to get familiar to each other and try

to create the atmosphere of confidence, fair interaction, collegiality, and constructiveness amongst themselves (Johnson et al, 1995a).

This study was conducted for a period of just two months (about eight weeks) in an environment where the participants received English classes for just two 90-minute classes each week. This time frame may be acceptable for our purpose of research but it is definitely more helpful in case participants be allotted extensive programs using this approach e.g., application of STAD in a full academic year. Another solution is insertion of techniques like STAD into the whole educational curriculum (all subjects and not English alone) in order to make it more known to the stakeholders. If STAD is just implemented for English and in others subjects there would still be teacher-centeredness and destructive competition this technique would become much harder to be accepted.

Finally it is necessary for stakeholders to become familiar with the tenets of approaches like STAD before inserting it to the educational arena. During the course of this study the researcher and the teacher had cooperation to ensure its precise implementation. It goes without saying that provision of resources such as materials and complementary networks can facilitate stakeholders to make use of this approach in pedagogy. Especially in contexts such as Iran with rather nonflexible conventions there should be a call on the part of curriculum makers to be lenient enough for exerting these innovatory practices without which their programs are doomed to failure.

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