

# THE EFFECT OF USING STUDENT TEAMS-ACHIEVEMENT DIVISIONS (STAD) TECHNIQUE ON THE ELEVENTH GRADE STUDENTS STRUCTURE ACHIEVEMENT AT MAN 1 JEMBER

Sunoko Setyawan<sup>61</sup>, Wiwiek Eko Bindarti<sup>62</sup>, Sudarsono<sup>63</sup>

**Abstract:** *The aim of this research is to investigate the significant effect of using Student Teams-Achievement Divisions (STAD) technique on the eleventh grade students' structure achievement at MAN 1 Jember. This research used Nonequivalent-Groups Posttest-Only Design, and the population was all of the eleventh grade students of MAN 1 Jember in the 2012/2013 academic year. The samples were taken randomly by lottery. The data of this research were gained from the results of the structure (passive voice) test conducted after the treatment was given. The treatment for the experimental group was teaching passive voice by using STAD technique, while the treatment for the control group was teaching passive voice by using lecturing method. The data obtained were statistically analyzed by using independent sample t-test with the significant level of 5%. The result of this research revealed that Student Teams-Achievement Divisions (STAD) technique had a significant effect on the eleventh grade students' structure achievement at MAN 1 Jember in the 2012/2013 academic year.*

**Key Words :** *Student Teams-Achievement Divisions (STAD), Structure Achievement, Effect*

## INRODUCTION

Teaching English as a foreign language is continuously researched and developed to find the best way for successful learning. The objective is to improve students' English competence dealing with the English language skills (listening, speaking, reading, and writing), and the English language components (vocabulary, structure or grammar, and pronunciation).

English structure, as one of the English components, is very important in learning a language. When the students master the English structure well, they will be able to construct correct sentences and to communicate effectively. Besides, the students will make the listener understand more easily about what they say.

Many researchers now believe that grammar instruction plays an important role in language teaching and learning. Harley and Swain (1984) state that teaching approaches that focus primarily on meaning with no focus on grammar are inadequate. Furthermore, Richard (2008:151) states that one of good reasons of teaching structure is for comprehension, in which by learning structure the students are able to know how to

---

<sup>61</sup> Mahasiswa Program Studi Pendidikan Bahasa Inggris FKIP Universitas Jember

<sup>62</sup> Dosen Program Studi Pendidikan Bahasa Inggris FKIP Universitas Jember

<sup>63</sup> Dosen Program Studi Pendidikan Bahasa Inggris FKIP Universitas Jember

build and to use a certain structure into comprehensible meaning. Thus, the understanding of English structure is very important in order to gain comprehension and to avoid misunderstanding between English speakers and listeners.

Based on the interview with the English teachers, the senior high school students still experienced many difficulties in applying English grammar in their communication, especially dealing with active and passive sentences. They sometimes had difficulties in understanding *who* or *what* was doing the action. They often made mistakes in putting a verb in a sentence, whether they had to put the base form of a verb, past form of a verb, past participle, present participle, or forms of be. Moreover, they still had problems in identifying the forms of verbs. This was due to the fact that the students were not familiar enough with the English structure, and that the students were lack of motivation and practices to learn English structure. Thus, the English teachers need to find a way to teach English structure which motivates the students and provides more practices to apply English structure.

Student Teams-Achievement Divisions (STAD), one of the techniques in Cooperative Learning Method, offers a solution to the problems the English students have in mastering English structure. STAD provides team rewards which are able to boost students' motivation to learn English structure more seriously. Furthermore, STAD also provides the opportunity for the students to have team practice and individual test which encourage the students to help each other master the material, and provides more practices to apply English structure (passive voice).

Student Teams-Achievement Divisions (STAD) is one of the Student Team Learning models developed by Robert Slavin. It has five basic components: forming heterogeneous learning teams, presenting content, team practice or concept development activities, assessing individual student mastery, and calculating team improvement scores and recognizing team accomplishments (Leighton, 1999:284).

The objective of this research was to know whether or not there was a significant effect of using Student Teams-Achievement Divisions (STAD) technique on the eleventh grade students' structure achievement at MAN 1 Jember in the 2012/2013 academic year.

Student Teams-Achievement Divisions (STAD) is one of the Student Team learning models developed by Slavin. It is stated that STAD was the simplest of the Student Team Learning models. In STAD students are assigned to four or five member learning teams. Each team is a mix of the entire class, different in academic performance and gender. Each week, the teacher introduces new material in a lecture or a discussion. After that, team members study worksheets on the material. The objective of team study here is not simply to fill out the worksheet but to master the concepts. Team members are told they have not finished studying until all are sure that they understand the material. Following team study, each student takes individual quizzes on the material they have been studying. Teammates are not allowed to help one another on the individual quizzes. The scores of the individual quizzes will be formed into team scores. The amount each student contributes to his team is determined by the amount the student's quiz score exceeds his past quiz average (Slavin, 1991:9). This improvement score system gives every student a good chance to contribute maximum points to the team if the student does his best, showing substantial improvement. A weekly one-page class newsletter recognizes the teams with the highest scores and the students who exceed their own past records by the largest amounts or the perfect scores.

Slavin (1999:22) notifies some advantages in the classroom which uses STAD technique as follows; frequent quizzes give feedback to students and teachers; the circumstance in STAD class is relatively quiet; improvement scores challenge the students to show their best; STAD takes less instruction time than (Teams Games Tournament) TGT; curriculum materials are available in most subjects. Besides the advantages of STAD, Slavin (1991:61) mentions some problems the teacher may experience in applying STAD in the classroom. They are team members not getting along, students' misbehavior, noise, and absence.

The English structure, especially passive voice, is quite important in English language. Although the active construction is used more frequently in English than the passive construction, there are certain situations when the passive construction seems more effective or more appropriate. Hayden *et al*, (2003:109) state that the passive construction is often used in the following situations: the speaker considers the performer of the act expressed by the verb unimportant or not essential to the meaning he wishes to convey; the speaker wishes to emphasize the receiver of the activity

expressed by the verb; the speaker wishes to make a statement seem objective or impersonal.

There are many previous researches on the use of STAD technique. The first research was a quasi experimental pretest-posttest control group design conducted by Wyk (2010) entitled "Do Student Teams-Achievement Divisions Enhance Economic Literacy?" This research found out that the score of the experimental group increased 16.13 from the pretest to posttest compared to that of the control group. The second research was an experimental research conducted by Norman (2005) entitled "Using STAD in an EFL Elementary School Classroom in South Korea. This research found that the results of the study suggested that STAD have significantly positive effects on students' achievements toward learning English. The results of the previous researches on the use STAD above attracted the researcher to conduct an experimental research entitled "The Effect of Using Student Teams-Achievement Divisions (STAD) Technique on the Eleventh Grade Students' Structure Achievement at MAN 1 Jember in the 2012/2013 Academic Year".

The hypothesis of this research was "there is a significant effect of using Student Teams-Achievement Divisions (STAD) technique on the eleventh grade students' structure achievement at MAN 1 Jember in the 2012/2013 academic year".

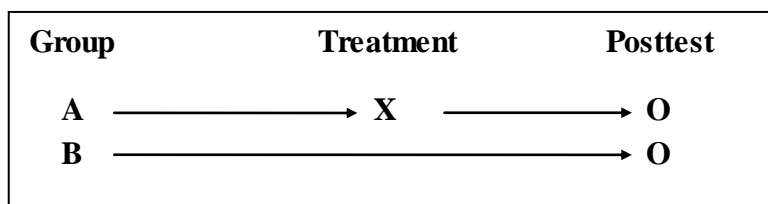
## **RESEARCH DESIGN**

The experimental research was used in this research because this research was intended to investigate whether or not there was a significant effect of using STAD teaching technique on the eleventh grade students' structure achievement at MAN 1 Jember in the 2012/2013 academic year. Nonequivalent-Groups Posttest-Only Design was chosen to be the research design of this research. McMillan (1992:176) states that Nonequivalent-Groups Posttest-Only Design is best employed when groups of subjects are comparable and can be assumed to be about the same on the trait being measured before the treatment is given to the subjects.

In this research, two classes were taken from the available classes of the eleventh grade at MAN 1 Jember, based on the result of homogeneity test. The homogeneity test was used to know whether or not the groups were equivalent on the trait being measured. After that, the two classes were chosen as the experimental and the

control groups randomly. The experimental group was taught passive voice (simple present tense and simple past tense) by using STAD technique, while the control group was taught passive voice (simple present tense and simple past tense) by using the conventional technique, that is, lecturing method. After each class received the treatment, both classes were given a posttest to find out the mean difference between the two groups.

The design of the research is illustrated in the following diagram.



Explanation:

- A : The experimental group
- B : The control group
- X : Treatment
- O : Observation (posttest)

(McMillan, 1992:175)

The procedures of the research can be described as follows.

- 1) Administering the homogeneity test to all of the eleventh classes to identify the homogeneity of the students. The results of homogeneity test were analyzed by using ANOVA formula (Analysis of Variance).
- 2) Determining the experimental and the control groups based on the results of the homogeneity test. The result of ANOVA analysis showed that P.sig (0.000) was lower than 0.05. It indicated that the population was not homogeneous. Therefore, two classes having the closest mean difference were chosen as the research respondents.
- 3) Determining the experimental and the control groups randomly by using lottery. Class XI IPA 5 (56.6) was chosen as the experimental group, and class XI IPA 4 (57.7) was chosen as the control group.
- 4) Giving the treatment to the experimental group by using STAD technique in teaching passive voice and the control group was taught passive voice by using lecturing method.

- 5) Administering try-out test to establish the test reliability and index of difficulty of the teacher-made test to know whether or not the test items and the time allocation were appropriate. The try out was administered to class XI IPS 4 (another class), which had the closest mean difference with the experimental and the control groups (59.00).
- 6) Giving posttest to both the experimental and the control groups to know the mean difference of both groups after the treatments were given.
- 7) Analyzing the results of the posttest by applying the independent simple T-test by using SPSS (Statistical Package for Social Science) to find out the mean difference of both groups. Then, the test results were compared to see whether or not there was a significant effect of using STAD technique on the students' passive voice achievement.
- 8) Drawing a conclusion from the results of data analysis to answer the research problem.

This research was conducted at MAN 1 Jember. This school was determined purposively based on certain reasons. The population of this research was all the eleventh grade students of MAN 1 Jember in the 2012/2013 academic year, in which each class consisted of 30 to 35 students. The researcher conducted a homogeneity test to all the classes. Based on the results of the homogeneity test, the groups of the students were not comparable in their academic performance, especially on English structure. Therefore, two classes having the closest mean difference were chosen as the experimental and the control groups. They were XI IPA 4 (57.7) and XI IPA 5 (56.6).

There were two types of data in this research. They were primary data and supporting data. The primary data, the students' structure achievement, were collected by applying passive sentence posttest to the research respondents. Meanwhile, the supporting data were taken from the result of the interview with the English teacher and documentation.

An achievement test was given to both the experimental and the control groups after the researcher gave the treatment. The purpose was to know whether or not the students had mastered the materials taught. The test that was conducted in this research was a teacher-made test in the form of multiple choice and short-answer items. The multiple choice test had 30 items in which each item had 5 options, and the short-answer item test consisted of 10 items. The test was administered for 90 minutes. The

test was divided equally for two tenses: present tense (passive voice) 20 items, and past tense (passive voice) 20 items. Dealing with the scoring, the total score of the test was 100, in which each correct item for the multiple choice test was scored two (2) points, while each correct item for the short-answer item test was scored four (4) points.

A try out was administered to class XI IPS 4 (59.00), which had the closest mean difference with the experimental and the control groups, to know whether or not the teacher-made test had met the reliability and the index of difficulty that were expected. The try out was analyzed by using split-half odd even technique to find out the reliability of the test items. In attempting to establish the content validity of the test, the researcher constructed the test items based on the research indicators and the basic course outline of the 2006 Curriculum (KTSP) for the eleventh grade students. Furthermore, the test items were consulted to the English teacher of MAN 1 Jember and both of the research consultants

An interview was conducted with the English teacher of MAN 1 Jember to collect the supporting data about the English curriculum used at the school, the English text book and the teaching technique used by the teacher, as well as the problems the students had in learning English structure. Another method used to gain the supporting data in this research was documentation. In this research documentation method was used to get the names of the research respondents of the eleventh grade students at MAN 1 Jember for both the experimental and the control groups.

After posttest was conducted to both the experimental and the control groups, the data obtained were statistically analyzed by using independent sample T-test using SPSS with 5% significant level in order to know whether or not there was a significant effect of using STAD on student structure (passive sentence) achievement.

## **FINDINGS AND DISCUSSIONS**

The posttest (passive voice test) was administered to both the experimental and the control groups on October 20<sup>th</sup>, 2012 soon after the experimental group had been taught passive voice by using STAD technique, and the control group had been taught passive voice using lecturing method. The scores of the posttest were used to investigate the significant difference between the experimental and the control groups. The results of the posttest were statistically analyzed by using Independent Samples T-test to

investigate whether the mean difference between the experimental and the control groups was significant or not.

In this research, the researcher formulated the null hypothesis ( $h_0$ ) that was “there is no significant effect of using STAD technique on the eleventh grade students’ structure achievement at MAN 1 Jember in the 2012/2013 academic year”.

Based on the output of Independent Samples t-test by using SPSS 17 computing system, the value of significant column of Lavene’s test was 0.865 which was higher than 0.05 (confidence interval 95%). It means that the variance of scores of both groups was equal. Consequently, the researcher analyzed the first row of the t-test for Equality of Means column.

In the t-test column, it can be seen that the value of the sig (2-tailed) with 70 degree of freedom was 0.001. It is lower than 0.05 (confidence interval 95%). It means that the null hypothesis ( $h_0$ ) was rejected. On the other hand, the alternate hypothesis ( $h_a$ ) was accepted. Therefore, it can be concluded that there was a significant effect of using STAD technique on the eleventh grade students’ structure achievement at MAN 1 Jember in the 2012/2013 academic year.

The result of data analysis in this research showed that using Student Teams-Achievement Divisions (STAD) technique in teaching English structure had a significant effect on the eleventh grade students’ structure achievement at MAN 1 Jember in the 2012/2013 academic year. It could be seen from the significant column value of the T-test with 70 degree of freedom that was 0.01, which was less than 0.05 (confidence interval 95%). Thus, it proved that there was a significant mean difference between the experimental group taught by using STAD technique and the control group taught by using lecturing method in the English structure ability. The results of this research were in line with the experts’ findings. Ghaith and Yaghi in Ghaith (2003:454) report that STAD is more effective than individualistic instruction in improving the acquisition of the second language rules and mechanics. Moreover, Slavin in Norman (2005:14) states that compared to traditional groups lacking group goals and individual accountability, STAD groups score significantly better.

The success of the implementation of STAD in this research was likely due to some elements: group work and team recognition. Group work and team recognition seemed to boost students’ motivation which resulted in the academic success. Slavin



(1995) states the interaction among the students on learning tasks will lead to increased achievement. Furthermore, Johnson and Johnson (1994) point out that positive interdependence created by cooperative learning groups (STAD) helps increase the motivation in the groups. He further states that there is an intrinsic state of tension within group members which motivates movements toward the accomplishment or desired common goals.

The group work in STAD promotes students' interaction among team members which also results in better learning. Johnson and Johnson (1994) state that students' interaction gives the chance to support each other academically and personally. Students' learning is enriched by peers' active involvement in explaining, showing, and motivating as part of their own work. In line with the idea, Leighton (1992:274) states when students of modest ability in a given academic task explain their answers and thinking to their peers, they learn better. He also says that the opportunity of high achieving students to explain their knowledge or to demonstrate their skills adds materially to their own learning. However in this research, the students' participation, motivation and attitude toward the technique implemented were not optimally observed since the researcher was only focusing on the cause and effect relationship between STAD technique and students' structure achievement.

Furthermore, the positive effect of STAD technique was supported by previous researches which found that STAD was effective to enhance students' achievement. The first was an experimental research conducted by Norman (2005) entitled "Using STAD in an EFL Elementary School Classroom in South Korea: Effects on Student Achievement, Motivation, and Attitudes toward Cooperative Learning". This research reported that STAD had significantly positive effects on students' achievement and students' attitudes toward learning English. The effect of STAD was greater for achievement than that for attitudes toward learning English. The other research was a classroom action research on the use of STAD conducted by Astutik (2010) entitled "Improving the VIII-C Students' Structure Achievement by Using STAD Model in Cooperative Learning at SMPN 12 Jember in the 2009/2010 Academic Year". The research reported that the use of STAD model in Cooperative Learning could improve the students' active participation in the teaching and learning process and their structure achievement at SMPN 12 Jember in the 2009/2010 academic year.

In conclusion, based on the result of this research and the discussion above, STAD technique had a significantly positive effect on the eleventh grade students' structure achievement at MAN 1 Jember.

## CONCLUSION AND SUGGESTIONS

Based on the results of the discussion above, it could be concluded that there was a positively significant effect of using Student Teams-Achievement Division (STAD) technique on the eleventh grade students' structure achievement at MAN 1 Jember in the 2012/2013 academic year.

Inasmuch as this research found that there was a significant effect of using STAD technique on the students' structure achievement, the researcher proposes some suggestions to the following people.

Firstly, it is suggested that the English teacher of MAN 1 Jember apply STAD teaching technique in teaching English structure to their students because STAD can foster students' motivation and attitude toward learning English which can result in better learning.

Secondly, concerning the demands of the recent curriculum, particularly on English structure, the researcher expects that the students continuously upgrade their English structure mastery by working in groups since working in groups can provide the chance for the students to share their ideas.

Finally, the result of this research did indicate that STAD had positive effects on students' structure achievement. However, these positive effects could be strengthened by implementing STAD more widely. Therefore, it is expected that the other researchers conduct further researches dealing with STAD teaching technique on the other English language skills or components by using similar or different research design.

## REFERENCES

- Alter, J. B. 1991. *Essential English Usage and Grammar*. Singapore : Preston Corporation.
- Arikunto, S. 2006. *Prosedur Penelitian, Suatu Pendekatan Praktik*. Jakarta : PT. Rineka Cipta.

- Astutik, R.D, H. 2010. “*Improving the VIII-C Students’ Structure Achievement by Using Students Teams-Achievement Divisions (STAD) Model in Cooperative Learning at SMPN 12 Jember in the 2009/2010 Academic Year*”. Unpublished. Thesis. Jember : English Education Program Jember University.
- Frankel,J and Wallen,N. 2000. *How to Design and Evaluate Research in Education*. New Yor: the McGraw-Hill Companies.
- Hayden, Pilgrim, and Haggard. 1956. *Mastering American English*. New York : Prentice Hall.
- Hughes, A. 1996. *Testing for Language Teaching*. New York : Cambridge University Press.
- Kagan, S & Kagan, M. 2009. *Cooperative Learning*. San Clamente : Kagan Publishing.
- Kohonen, V. 1992. “Experimental Language Learning: Second Language Learning as Cooperative Learner Education”. In Nunan, D. *Collaborative language learning and teaching*. New York: Cambridge University.
- Leighton, M. S. 1999. “Cooperative Learning”. In Leighton, M.S. *Classroom Teaching Skill*. New York. Houghton Mifflin Company.
- McMillan, J. H. 1992. *Educational Research: Fundamental for the Consumer*. New York : Virginia Commonwealth University.
- Norman, D. G. 2005. Using STAD in an EFL Elementary School Classroom in South Korea: Effects on Student Achievement, Motivation, and Attitudes toward Cooperative Learning. *Asian EFL Journal*.
- Richards, J. C. & Rodgers, T. S.2001. *Approaches and Methods in Language Teaching Second Edition*. New York: Cambridge University Press.
- Slavin, R. E. 1991. *Student Team Learning: A Practical Guide of Cooperative Learning-Third Edition*. Washington, D.C : National Education Association.

