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## EFFICACY OF STAD AND TPS TYPE COOPERATIVE LEARNING MODELS IN THE LEARNING PROCESS OF SOCIAL AND HUMANITIES STUDIES FOR GRADE 3rd AT CRISTAL' SENIOR HIGH SCHOOL

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### ABSTRACT

The purpose of the study is to test the efficacy of the student's team achievement division cooperative learning model and the think pair share type of cooperative learning model. This research is the quantitative and comparative approach. The population was 281 students from 3rd-grade social studies. The experimental classes are 59 students, and 58 students in the control. Students are divided into several groups consisting of 4-5 students. Data collection techniques are pre-test post-test and questionnaire. The data analysis is descriptive statistical analysis and comparative, such as analysis of paired sample t-test and homogeneous test. The result showed that  $t_{count} = -11.022$ . The efficacy of the cooperative learning model in social studies learning material for grade 3rd Cristal senior high school with the paired samples test value is negative with  $-10,838$ . The median value before the implementation of the STAD and TPS type is smaller than the median value after.

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## INTRODUCTION

Education is an important pillar in the development of human resources in the context of increasing intellectual capacity, knowledge, self-confidence, and ensuring a sustainable life for themselves. Judging from this significant role, education in Timor-Leste can be given special attention in development in various sectors and contexts of social, economic, political, and cultural life. Learning science and social knowledge must try to help students solve the problems they face so that they can become knowledgeable about the social environment and community (Zandvliet et al., 2014).

The social environment and community developed the diverse characteristics of students in teaching and learning. The teaching and learning process needs to design in such a way. Students have to involve in active learning, such as cooperative learning (Selvaraj & Aziz, 2019). The benefits of using cooperative learning include better learning achievement when compared to working individually, increasing positive attitudes toward the subject being studied, and the ability to work collaboratively, as well as the development of critical thinking skills (Papathanasiou et al., 2014).

Cooperative learning in mathematics can help students increase positive attitudes and students interest in mathematics. Learning activities require concentration, hard work, and require good organization, and the effectiveness of learning can be measured through test results, task scores, and performance, as well as documentation of student behavior observations (Selvaraj & Aziz, 2019). Associated with effectiveness in learning, the effectiveness of learning is determined by four indicators, namely the quality of teaching instructions, the suitability of the level of teaching, incentives, and time. The professionalism of teachers in teaching can be seen in their ability to carry out all of the above demands. The fulfillment of these demands will be an indicator of the effectiveness of the learning process or not. Effective and meaningful teaching is closely related to classroom organization and management (Aktaş & Özmen, 2020).

Learning achievement can be measured using a measuring instrument called a learning outcome test, and the test provides the best information for both teachers and students in knowing their success in teaching and learning (Olufemioladebinu et al., 2018). Based on the opinions above, it can be concluded that mathematics learning achievement is the learning result achieved by students in the form of knowledge, understanding, and skills after learning mathematics within a certain time which is measured using evaluation tools or learning outcomes tests. Besides being able to improve achievement, the application of cooperative learning models can also increase students' interest in learning.

Students Team Achievement Division (STAD) and Think Pair Share TPS are examples of cooperative learning. STAD is a type of cooperative learning where students are divided into groups of 4 - 5 students. Slavin et al., (2019) define TPS as a type of learning in pairs through the mechanism of thinking alone, followed by pairs with friends, and then exchanging knowledge with other friends (Shakouri, 2014). Several studies have shown that STAD learning and TPS are known to improve learning achievement (Atmoko et al., 2022). Therefore, researchers are interested in knowing the efficacy of state and type cooperative learning models in the learning

process of social studies and humanities material for grade 3 at crystal private high school.

## **LITERATURE REVIEW**

### **Learning process**

Learning is a process of interaction between students and educators and learning resources in a learning environment. Learning is assistance provided by educators so that the process of acquiring knowledge and knowledge, mastering skills and character, and forming attitudes and beliefs in students can occur. In other words, learning is a process to help students learn well. (Gagné, 2015) defined that learning is a set of external events designed to support several internal learning processes. Furthermore, García et al., (2015) learning is intended to produce learning, external situations must be designed in such a way as to activate, support, and maintain the internal processes contained in each learning event. The learning process is a process in which there are interactive activities between teacher-students and reciprocal communication that takes place in educational situations to achieve learning goals. In the learning process, teachers and students are two components that cannot be separated.

### **Cooperative Learning Process**

Slavin et al., (2019), students work together as a group in cooperative learning methods. One group was composed of four-five students. It means that cooperative learning or cooperative learning is a learning model in which the system learns and works in small groups of 4-6 people collaboratively so that it can stimulate students to be more passionate about learning. Rajagukguk et al., (2020) define cooperative learning as learning based on a small-group approach to teaching that holds students accountable for both individual and group achievement.

(aduvanshi & Singh, (2019) in general cooperative learning is considered more directed by the teacher, where the teacher assigns tasks and questions and provides materials and information designed to help students solve the problem in question. Cooperation is significantly more effective than the interpersonal competition and individualistic efforts in promoting achievement and productivity and cooperation without intergroup competition seem to promote higher achievement and productivity than cooperation with intergroup competition. This definition implies that cooperative learning is more effective than learning that is individual competition and cooperative learning can increase learning achievement and productivity more than the competition in groups (Irene & Barry, 2017).

### **Social science**

Social Sciences is a science that studies society. Social Studies combines several concepts from the social sciences and humanities (Hechter, 2017). Social Sciences is a science that studies society. Social Studies combines several concepts from the social sciences and humanities. Huang (2016) Social Studies education is a simplification of social science disciplines, state ideology, and other scientific disciplines as well as related social problems that are organized and presented scientifically and psychologically for educational purposes at the primary and secondary education levels. Social Sciences is an integration of various branches of social sciences, such as

sociology, history, geography, economics, politics, law, and culture (Bush & Sargsyan, 2020). Social Sciences are formulated based on realities and social phenomena that embody an interdisciplinary approach from the aspects and branches of the social sciences. Social Sciences also discuss the relationship between humans and their environment, where students grow and develop as part of society and are faced with various problems that exist and occur in the surrounding environment.

### **Cooperative Learning Model Student team's achievement division**

STAD learning is a type of cooperative learning that emphasizes interaction between students to motivate each other and help each other in mastering the material and achieving maximum achievement. Group work encourages students to ask their group members about the material they have not understood. In one class students are divided into several groups consisting of 4-5 students in each group. The aim of this strategy is for each student to feel that they are one and a fighter. Meanwhile, if one group can meet the specified criteria, that group will get an award (Nielsen et al., 2020; Saiger et al., 2007).

STAD type cooperative learning, working in groups so that students can develop a willingness to cooperate, think critically, be motivated, and be responsible for the group. Students can help friends and themselves in taking the quiz later to achieve a goal, namely getting a super team award. With an evaluation, students can summarize the lessons received from the teacher's explanation and the results of group work carried out. The teacher evaluates learning outcomes about the material that has been studied where students are not allowed to work together (Wardana, Ika, 2017)

The steps of the STAD learning model are: (1) Forming a heterogeneous group of four members (mixed according to achievement, gender, ethnicity, etc.). (2) The teacher presents the lesson. (3) The teacher gives a task to the group to be done by group members. Members who already understand can explain to other members until all members in the group understand. (4) The teacher gives quizzes or questions to all students. (5) Giving evaluation (6) Conclusion (Yaduvanshi & Singh, 2019).

### **TPS Cooperative Learning Model**

TPS type cooperative learning model is cooperative learning that gives students time to think and respond. This is a strong factor in improving students' ability to respond to questions and fostering an attitude of helping each other. There are three steps in this model, think, pair, and share (Vinet & Zhedanov, 2011a) as follows stages: (a) preliminary the teacher conveys the learning objectives to be achieved and the core topics of the material. (b) thinking, the teacher distributes worksheets to students and asks students to take a few minutes to think for themselves about the questions asked by the teacher. (c) pairing the teacher asks students to pair up and discuss what has been obtained at the thinking stage about the question or problem posed by the teacher. Interaction during the time provided can unify answers if a question is asked or unify ideas if a specific problem is identified. (d) sharing, the teacher asks pairs to share with the whole class what has been discussed by pointing at random. It is effective to go around the room from couple to couple and continue until about half of the couples have had a chance to report. The teacher assesses and

provides feedback on the results of the discussion. (e) the award, the teacher gives awards individually or in groups who successfully answer the task well. The advantages of the TPS type of cooperative learning model provide more opportunities for students to work alone as well as work together with other friends (Ebadi & Mozafari, 2016). According to Thobroni and Mustafa (2011), the weaknesses of TPS include (a) requiring simultaneous coordination of various activities, and (b) requiring special attention in the use of classroom space. (c) Switching from whole classes to small groups can take up valuable teaching time. For this reason, teachers must make a careful planning to minimize the amount of time wasted.

## METHOD

This study is using the quantitative method and experiment approach. A study was conducted at Cristal Senior High School in Dili Timor Leste. The population of this research is 281 students of social studies grade 3<sup>rd</sup> in senior high school of Cristal, According to Sugiyono (2019) population is a generalization area consisting of subjects that have certain quantities and characteristics when concluded. The population in this study was 281 third-grade students of Cristal High School. Creswell, (2018) and Da Costa et al., (2019) define the sample as part of the total characteristics possessed by the population. The sampling procedure used in this study is non-probability with purposive sampling. The technique of purposive sampling is a sampling technique with consideration of certain. The total sample came from two (2) classes, namely the experimental class using the STAD method from 3<sup>rd</sup> students of Cristal High School from Social Sciences-1 totaling 59 students, and the control class using the TPS method from 3<sup>rd</sup> students of Cristal Senior High School. From social sciences were 58 students. The types of data in this study are primary data and secondary data. The research model is a comparative study between the experimental class and the control class. Data collection techniques in this research are observation, test and questionnaire techniques, and documentation.

The instrument in this study is a test of validity and reliability. According to Riduwan (2008), validity is measuring what you want to be able to measure. To use this instrument, the person product moment formula can be used, namely:  $r_{count}$

$$= \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{(N \sum X^2 - (\sum X)^2)(N \sum Y^2 - (\sum Y)^2)}}$$

The reliability test according to Arikunto (2007) is one of the tests that can be said to have a high level of confidence if the test can give the right results. To test whether this instrument is reliable or not, the Spearman-Brown formula is used, namely:  $r_{11} = \frac{2 \cdot r_b}{1 + r_b}$

Data analysis techniques are descriptive statistical analysis and comparative analysis such as paired sample t-test, normality test, and homogeneity test. In this study, there are two (2) data analysis techniques as follows (Nyan, 2014): (1) Descriptive Analysis is to provide an overview of the distribution and behavior of the research sample data by looking at the minimum value, maximum value, mean, and standard deviation of each independent variable and dependent variable (Rachmawati et al., 2021). (2) Comparative Analysis Glaser & Strauss (2017) define comparison as a statistical procedure to test the differences between two groups of

variables or more. This test depends on the type of data and the sample group being tested. (3) Paired sample  $t_{test}$ : a paired  $t_{test}$  is one method of testing the hypothesis where the data used are not independent. The characteristics that are most often found in paired cases are that one individual gets 2 different treatments (Wulff, 2003). (4) Homogeneity test is a test of whether or not the variances of two or more distributions are equal. The homogeneity test that will be discussed in this paper is the homogeneity test of variance and the Bartlett test (Brito, 2020; Vinet & Zhedanov, 2011b).

## RESULTS AND DISCUSSION

### Results

Based on the results of a descriptive statistical analysis using the SPSS version 23.0 for windows program clearly as below: The Results of the Descriptive Analysis Paired Sample T-test Paired Samples Statistics from The STAD And TPS Type Cooperative Learning Model.

**Table 1 Paired Samples Correlations**

Paired Samples Correlations			
	N	Correlation	Sig.
Pair 1 pre-test STAD & Post Test STAD	59	.267	.041

Paired Samples Correlations			
	N	Correlation	Sig.
Pair 1 pre-test TPS & Post Test TPS	58	.227	.087

From the results of descriptive statistics, the median value of the pre-test test for experimental class students (STAD) with the median value of 54.8475, and the post-test value of 67.9492. The pre-test value of the standard deviation is 6.54115 and the post-test result of the standard deviation is 8.3491. The value of Std. The mean error pre-test is 0.85159 and post-test 1.08694, from the number of students who were observed was 59 students. So, these results indicate that the median value of the post-test is greater than the median value of the pre-test from the experimental class STAD, and the results of the descriptive statistics, the median value of the prices test in the control class TPS students with the median value of 54.7069 and the post-test score is 68.1207.

The pre-test value of the standard deviation is 6.65703 and the post-test result of the standard deviation is 8.34997. And the value of Std. The mean error pre-test is 0.87411 and post-test 1.09640, from the number of students who were observed, was 58 students. So, these results, show that the median post-test value is greater than the pre-test median value from the control class TPS.

**Table 2 Paired Samples Correlations**

Paired Samples Correlations			
	N	Correlation	Sig.
Pair 1 Pre-test STAD & Post Test STAD	59	.267	.041

Paired Samples Correlations			
	N	Correlation	Sig.
Pair 1 Pre-test TPS & Post Test TPS	58	.227	.087

The table above shows that the correlation value between the pre-test and post-test of the experimental class using the STAD cooperative learning model indicates that there is a significant correlation between the two groups. The value of the correlation coefficient is 0.267 with a significance of 0.041. And the correlation value between the pre-test and post-test of the experimental class using the STAD cooperative learning model shows that there is a significant correlation between the two groups. The value of the correlation coefficient is 0.227 with a significance of 0.087.

The conclusion that the correlation between the pre-test and post-test from the experimental class using the STAD-type cooperative learning model and the correlation between the pre-test and post-test data from the control group using the TPS type cooperative learning model indicates that there is a significant correlation between the data from both groups.

**Table 4 Paired Samples Test**

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre-test STAD - Post Test STAD	-13.10169	9.13065	1.18871	-15.48116	-10.72223	11.022	58	.000

The paired sample test table shows the different median scores of students in the pre-test and post-test. The significance of  $t_{count} > t_{table}$  ( $11.022 > 2.0017$ ) and P-value ( $0.000 < 0.05$ ) then rejecting  $H_0$  and accepting  $H_1$  means that there is a difference between student test scores before implementing the STAD type cooperative learning model and test scores after using the model. STAD type cooperative learning. The results showed that the median value of the test results

after using the STAD cooperative learning model was greater than the test scores before using the STAD cooperative learning model.

If there is a difference, we can see the median value of the Paired Samples Test or it is  $t_{count}$ .  $T_{count}$  positive means that the median value before using the STAD type cooperative learning model is greater than after using the STAD cooperative learning model. There is a difference if the value of  $t_{count}$  is negative means that the median value after using the STAD type cooperative learning model is greater than before using the STAD cooperative learning model. So in the Paired Samples Test table, the negative = -11.022 means that the median value after using the STAD cooperative learning model is greater than before using the STAD cooperative learning model.

**Table 5 Paired Samples Test**

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Paired Sample 1: Pre-test TPS - Post Test TPS	13.41379	9.42567	1.23765	-15.89215	-10.93544	-10.838	57	.000

The paired sample test table shows the different median scores of students in the pre-test and post-test. The significance of  $t_{count} > t_{table} = -11.022 > 2.0017$  and P-value =  $0.000 < 0.05$  then rejecting  $H_0$  and accepting  $H_1$  means that there is a difference between student test scores before implementing the TPS type cooperative learning model and test scores after using the model. TPS type cooperative learning. The results showed that the median value of the test results after using the TPS cooperative learning model was greater than the test scores before using the TPS cooperative learning model.

If there is a difference, we can see the median value of the Paired Samples Test or it is  $t_{count}$ .  $t_{count}$  positive means that the median value before using the TPS type cooperative learning model is greater than after using the TPS cooperative learning model. There is a difference, if the value of  $t_{count}$  is negative it means that the median value after using the TPS type cooperative learning model is greater than before using the TPS cooperative learning model. So in the Paired Samples Test table, the negative -10.838 means that the median value after using the TPS cooperative learning model is greater than before using the TPS cooperative learning model.

**Table 6 Tests of Normality**

	Pre-Test and Post teste STAD and TPS	Tests of Normality					
		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.

STAD and TPS	Pre-Teste STAD	.182	59	.000	.902	59	.675
	Post Teste STAD	.157	59	.001	.902	59	.117
	Pre-Teste TPS	.187	58	.000	.896	58	.101
	Post Teste TPS	.157	58	.001	.903	58	.476

a. Lilliefors Significance Correction

The results of the test of normality show that the valor Sig. STAD and TPS (0.675; 0, 117; 0.101; 0.476 > 0.05), meaning that the distribution data group is normal. However, the proportional homogeneity test, simultaneous, will be analyzed with the One Way Anova test. The results of One Way Anova descriptive analysis of the STAD and TPS type cooperative learning models

**Table 7 Descriptive**

**Descriptives**

STAD and TPS

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Pre-testSTAD	59	54.85	6.541	.852	53.14	56.55	45	65
Post Test STAD	59	67.95	8.349	1.087	65.77	70.12	55	80
Pre-testTPS	58	54.71	6.657	.874	52.96	56.46	45	65
Post Test TPS	58	68.12	8.350	1.096	65.93	70.32	55	80
Total	234	61.41	10.001	.654	60.12	62.69	45	80

The table above only explains the median value, and standard deviation with other groups, and each group shows the pre-test and post-test values of the STAD and TPS type cooperative learning models. The results of the one-way ANOVA descriptive analysis homogeneous test results in levene statistics of the cooperative learning model type STAD and TPS.

**Table 8 Test of Homogeneity of Variances**

**Test of Homogeneity of Variances**

STAD no TPS

Levene Statistic	df1	df2	Sig.
2.582	3	230	.054

In the Table of Test of Homogeneity of Variances above, the test results show whether each group has the same variance or not. The Results of The F Anova Test Analysis Were Significant From The STAD And TPS Cooperative Learning Models.

**Table 9 Anova**

ANOVA					
STAD and TPS					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10281.785	3	3427.262	60.521	.000
Within Groups	13024.647	230	56.629		
Total	23306.432	233			

The table of Anova results shows that there is a difference or no difference between the results of the STAD and TPS cooperative learning models which are not the same. The value of Sig. <0.05 or 0.000 <0.05, then rejecting H0 and accepting H1 means that there is a significant difference between the STAD and TPS cooperative learning models.

**Post-Tests**

**Table 10 Multiple Comparisons**

Multiple Comparisons							
Dependent Variable: STAD and TPS							
						95% Confidence Interval	
						Lower Bound	Upper Bound
	(I) Pre-Test and Post-test STAD and TPS	(J) Pre-Test and Post-test STAD and TPS	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Tukey HSD	Pre-Test STAD	Post Test STAD	-13.102*	1.386	.000	-16.69	-9.52
		Pre-Test TPS	.141	1.391	1.000	-3.46	3.74
		Post Test TPS	-13.273*	1.391	.000	-16.87	-9.67
Post Test STAD	Pre-Test STAD	Pre-Test STAD	13.102*	1.386	.000	9.52	16.69
		Pre-Test TPS	13.242*	1.391	.000	9.64	16.84
		Post Test TPS	-.172	1.391	.999	-3.77	3.43
Pre-Test TPS	Pre-Test STAD	Pre-Test STAD	-.141	1.391	1.000	-3.74	3.46
		Post Test STAD	-13.242*	1.391	.000	-16.84	-9.64
		Post Test TPS	-13.414*	1.397	.000	-17.03	-9.80
Post Test TPS	Pre-Test STAD	Pre-Test STAD	13.273*	1.391	.000	9.67	16.87
		Post Test STAD	.172	1.391	.999	-3.43	3.77
		Pre Teste TPS	13.414*	1.397	.000	9.80	17.03

\*. The mean difference is significant at the 0.05 level.

The Anova test results show that there are differences in student test scores from STAD and TPS (Pre-test and Post-test), so the Post Hoc tests (Multiple Comparison) table provides more detailed information on which groups there are differences and which are not. is a continuous analysis of ANOVA analysis and if the

results show there is a difference between the groups? From the Multiple Comparison table, some groups have significant differences (Mean Difference value with a \*), namely: Post-test STAD - Post-test TPS pair, with a Mean difference of -13,102 with a value of Sig. 0.000 ( $0.000 < 0.05$ ). Pair of Pre-test STAD. Pre-test TPS, with a mean difference of 13,102 with a value of Sig. 0.000 ( $0.000 < 0.05$ ). STAD post-test pair - TPS post-test, with a Mean difference of -13,242 with a Sig value. 0.000 ( $0.000 < 0.05$ ).

The other pair according to the results of the analysis showed no indication of differences, including the TPS pre-test pair STAD pre-test, with a Mean difference of -0.141 with a value. 1,000 ( $1,000 > 0.05$ ). STAD post-test pair - TPS post-test, with a Mean difference of -0.172 with a value of Sig. 0.999 ( $0.999 > 0.05$ ). Results of Homogeneous Subsets Analysis of the STAD and TPS Type Cooperative Learning Models.

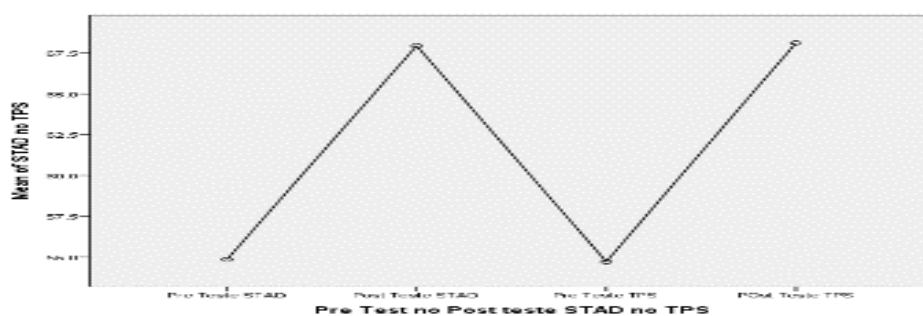


Table 11 homogeneous subsets

Homogeneous Subsets				
STAD no TPS				
	Pre Test no Post teste STAD no TPS	N	Subset for alpha = 0.05	
			1      2	
Tukey HSD a,b	Pre Teste TPS	58	54.71	
	Pre Teste STAD	59	54.85	
	Post Teste STAD	59		67.95
	Post Teste TPS	58		68.12
	Sig.		1.000	.999
Means for groups in homogeneous subsets are displayed.				
a. Uses Harmonic Mean Sample Size = 58.496.				
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.				

The Homogeneous Subsets table, with the same sequence, shows pairs of different groups, including TPS pre-test - STAD pre-test, there is no difference because of the sig.  $> 0.05$  ( $1,000 > 0.05$ ). STAD post-test - TPS post-test, there is no difference because of the sig.  $> 0.05$  ( $0.999 > 0.05$ ). The results above show that there are three (3) pairs with no difference (pre-test TPS and STAD, post-test STAD, and TPS). Result of the One-way ANOVA test with the STAD and TPS Type Cooperative Learning Model. The Means Plots image shows the median value graph of the results of the STAD and TPS type cooperative learning models. The above shows that the

STAD tipe cooperative learning model gets a higher and better median value than the TPS tipe cooperative learning model.

## DISCUSSION

From the results of descriptive statistics, the median value of the pre-test test for experimental class students (STAD) with the median value of 54.8475, and the post-test value of 67.9492. The pre-test value of the standard deviation is 6.54115 and the post-test result of the standard deviation is 8.3491. And the value of Std. The mean error pre-test is 0.85159 and post-test 1.08694, from the number of students who were observed was 59 students. So these results indicate that the median value of the post-test is greater than the median value of the pre-test from the experimental class (STAD) and the results of the descriptive statistics, the median value of the pre-test in the control class (TPS) students with the median value of 54.7069 and the post-test score are 68.1207. The pre-test value of the standard deviation is 6.65703 and the post-test result of the standard deviation is 8.34997. And the value of Std. The mean error pre-test is 0.87411 and post-test 1.09640, from the number of students who were observed, was 58 students. So these results show that the median post-test value is greater than the pre-test median value from the control class (TPS).

The correlation value between the pre-test and post-test of the experimental class using the STAD cooperative learning model indicates that there is a significant correlation between the two groups. The value of the correlation coefficient is 0.267 with a significance of 0.041. And the correlation value between the pre-test and post-test of the experimental class using the STAD cooperative learning model shows that there is a significant correlation between the two groups. The value of the correlation coefficient is 0.227 with a significance of 0.087. The conclusion that the correlation between the pre-test and post-test from the experimental class using the STAD-type cooperative learning model and the correlation between the pre-test and post-test data from the control group using the TPS-type cooperative learning model indicates that there is a significant correlation between the data from both groups.

The paired sample test table shows the different median scores of students in the pre-test and post-test. The significance of  $t_{\text{count}} > t_{\text{table}}$  ( $11.022 > 2.0017$ ) and  $P_{\text{value}}$  ( $0.000 < 0.05$ ) then rejecting  $H_0$  and accepting  $H_1$  means that there is a difference between student test scores before implementing the STAD type cooperative learning model and test scores after using the model. STAD type cooperative learning. The results showed that the median value of the test results after using the STAD cooperative learning model was greater than the test scores before using the STAD cooperative learning model. The test of normality shows that the valor Sig. STAD and TPS ( $0.675; 0, 117; 0.101; 0.476 > 0.05$ ), meaning that the distribution data group is normal. However, the proportional homogeneity test, simultaneous, will be analyzed with the One Way Anova test.

## CONCLUSION

There is an efficiency of the STAD type cooperative learning model in the learning process of social science subjects in grade III high school Cristal because The significance of  $t_{\text{count}} > t_{\text{table}}$  ( $11.022 > 2.0017$ ) and  $P_{\text{value}}$  ( $0.000 < 0.05$ ) then rejecting  $H_0$  and accepting  $H_1$  means that there is a difference between student test scores before implementing the STAD type cooperative learning model and test scores after using the model. The results showed that the median value of the test results after using

the STAD cooperative learning model was greater than the test scores before using the STAD. Existing a difference that the median value of the Paired Samples Test. There is a difference if the value of  $t_{count}$  is negative. It means that the median value after using the STAD type cooperative learning model is greater than before using the STAD cooperative learning model. So in the Paired Samples  $t_{table}$ , the negative -11.022.

There is an efficiency of the STAD type cooperative learning model in the learning process of social science subjects in grade III high school Cristal because the significance of  $t_{count} > t_{table}$  ( $11.022 > 2.0017$ ) and  $P_{value}$  ( $0.000 < 0.05$ ) then rejecting  $H_0$  and accepting  $H_1$  means that there is a difference between student test scores before implementing the TPS type cooperative learning model and test scores after using the model. The results showed that the median value of the test results after using the TPS cooperative learning model was greater than the test scores before using the TPS cooperative learning model.  $T_{count}$  positive means that the median value before using the TPS type cooperative learning model is greater than after using the TPS cooperative learning model. There is a difference if the value of  $t_{count}$  is negative. It means that the median value after using the TPS type cooperative learning model is greater than before using the TPS cooperative learning model. In the Paired Samples  $t_{table}$ , the negative -10.838 means that the median value after using the TPS cooperative learning model is greater than before.

The conclusion that the Paired Samples Test results show that there is a difference in the test of the median value between the pre-test and post-test student scores for the experimental class using the STAD type cooperative learning model and the control class using the TPS type cooperative learning model, the results show that after using the model This two (2) learning method is that the student's value is greater than before using this learning model.

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