



# Effect of Effectiveness of Application Used Cooperative Learning Model Type Numbered Head Together (NHT), Teams Games Tournament (TGT) and Course Review Horay (CRH) against Increased Critical Thinking Skill of Students (Experimental Study in Class fifth grade Social Science Subject In Cluster three Sub District Garawangi, Kuningan Regency)

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**Abstract.** This research was conducted because of the low critical thinking of students on social studies, this study aims to determine the Effectiveness of the application Cooperative Learning Model Type Numbered Head Together (NHT), Teams Games Tournament (TGT) and Course Review Horay (CRH) on Increasing Critical Thinking skill of Students in Social Studies. This type of research was quasi-experimental research, with a Counterbalance design research design. The subject in this study were fifth grade students of Gugus III Garawangi sub-district, Kuningan regency, class V SDN Pakembangan Garawangi sub-district, class V SDN kutakembaran 1 Garawangi sub-district, and Class V SDN Kutakembaran 2 Garawangi sub-district, all schools are located in Kuningan District, West Java, where each class was an experimental class. Data collection techniques used are instrument test in this study was the multiple choice questions. Data analysis used to the analysis of statistic. The results of data analysis used statistic tests with  $t_{\text{test}}$  (independent samples  $t$ -test) at the 95% level of confidence obtained value  $t_{\text{count}} > t_{\text{table}}$  and probability value sig. (2-tailed)  $< 0.05$ , this shows that there are differences in the students' critical thinking skills so that the hypothesis is accepted, the results show the results of the mean of student that the Cooperative Learning Model Numbered Head Together (NHT), Teams Games Tournament (TGT) and Course Review Horay (CRH) are effectively used to improve students' critical thinking skills in social studies subject in class fifth of Cluster 3 sub-District of Garawangi, Kuningan Regency, west java.

**Keywords:** Critical Thinking Skill, Number Head Together, Teams Games Tournament, Course Review Horay

**INTRODUCTION** ~ The development of the era in the 21<sup>st</sup> century currently affects various spheres of human life, as well as the Science and Technology which has developed as well. Today's development is experienced throughout the world, including Indonesia, which is a developing country that has experienced the influence of the times. This has an impact on the demand to improve human resources as a whole. Humans are required to be able to understand and be able to apply science and technology well so that they can adapt, survive, and be able to compete with other humans. Thus, humans must be

equipped with the ability to think logically, analytically, systematically, critically and creatively, and their ability to work together. Critical thinking is a process of systematic thinking in seeking the truth and building confidence in something that is factually and realistically reviewed and examined. Social science is one of the subjects that requires students to think critically. Social science is flexible so that it can change according to the times and progress of science and technology, to keep up with the times and progress of science and technology, students need to think critically. Thus, thinking as an activity



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involving mental processes requires the ability to remember and understand, on the contrary to be able to remember and understand a mental process called thinking is needed. One of the problems in social studies is the low ability of students to solve problems. This is based on the recognition of several elementary school social studies teachers that many students find it difficult to complete learning tasks and connect subject matter with the real life of students. According to social studies teachers, the low ability of these students is reflected in the low ability of students to think critically in learning and understanding the subject matter. It is proven by pre-research data regarding critical thinking skills of fifth grade students of elementary school Cluster three that of the total sample of 75 students 47 or 62.66% which are above the minimum completeness criteria, and 28 or 37.33% which are under the minimum completeness criteria. critical students, teachers must create learning that supports the creation of active, critical, and fun learning goals through the use of cooperative learning methods or models.

### RELATED WORKS/LITERATURE REVIEW

Social science is the simplification or discipline of the humanity social sciences as well as basic human activities that are organized and presented scientifically and pedagogically or psychologically for educational purposes. (Somantri: 2001: 73) The National Council for Social Studies NCSS

(1994) provides a definition of social science in an integral perspective.

*“Social studies are the integrated study of the social sciences and humanities to promote civic competence. Within the school program, social studies provide coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economy, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. The primary purpose of social studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world”.*

The definition of NCSS strongly emphasizes the view that every student (citizen) is able to analyze (make decisions) critically from every fact, event, past or current event to anticipate future life. Meanwhile, the concept of social studies is referred to as part of the elementary school curriculum which contains subjects from various social science disciplines that are applied to education. Along with community change and dynamics, social studies move towards transmitting values that shape citizens who actively participate in the community. Education Social science is very concerned with the dimensions of skills as well as understanding and dimensions of



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knowledge. The ability to process and apply information is a very important skill to prepare students to become citizens who are able to participate intelligently in a democratic society. Therefore, the following outlines a number of skills needed so that they become an element in the social dimension in the learning process: 1) Research skills; 2) Thinking skills; 3) Social participation skills; 4) Communication skills (Sapriya, 2014: 51).

Thinking is a process of systematic thinking in seeking the truth and building confidence in something that is factually and realistically reviewed and examined. According to Robert Ennis (Yuami, 2012) about critical thinking, it is said that, "critical thinking is reasonable, reflective thinking that is focused on deciding what to believe and do". It means that critical thinking is natural, reflective thinking is focused on deciding what is believed and doing it. Bloom (Filsaime, 2008) argues, critical thinking has the same meaning with a higher level of thinking, especially "evaluation". Bloom lists six levels of the simplest to the most complex critical thinking. The list starts with knowledge and moves upward towards mastery, application, analysis, synthesis and evaluation. Evaluation skills are the goals of the learning and thinking process. Furthermore, Yuami (2012) states that many people consider that critical thinking learning activities are considered very difficult to apply to low classes or even elementary schools. Such an assumption is not so if the material and stages of critical

thinking can be simplified or adjusted to the abilities of students. Because it is important for students to have the ability to think critically when taking social studies one way is to use a cooperative learning model that can involve active students in each learning activity. According Jauhari (2011, P.52) cooperative learning is "a learning strategy with a number of students as members of small groups with different levels of ability". This is in line with research conducted by Mashudi (2017), Heru (2015) and Erwin (2016, p.50) who reported in the results of the study that cooperative learning models were able to improve students' critical thinking skills. Cooperative learning provides opportunities for students to do academic assignments by working together in heterogeneous small structured groups and enabling communication and interaction in expressing their opinions, ideas, or friends. In addition, they are also trained to respect the opinions of others and exchange ideas so that they have a positive impact on the learning process. Suresh, Reddy (2017, p.37) states that cooperative learning models based on stages and learning activities can be distinguished by several types, namely: Student Achievement Divisions (STAD), Teams Games Tournament (TGT), Teams Assisted Individualization (TAI), Cooperative Integrated Reading and Composition (CIRC), jigsaw, Group Investigation (GI)". Then Rusman (2016) states that "for cooperative learning techniques are distinguished according to how to ask questions, discussions, and class



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presentations, namely: Numbered Head Together (NHT), Think Pair share, Think Pair Square, Round Robin, One Stay Two Stay, and the Roundtable. "

The research subjects involved were elementary school students fifth grade at SD N Pakembangan, Garawangi Subdistrict, SD N 1 Kutakembaran, Garawangi Subdistrict, and SD N 2 Kutakembaran, Garawangi, all of the public elementary schools in Kuningan District, West Java.

**METHODOLOGY**

**Data sources and collection techniques**

**Table 1.** Research Subject

Class	Stu- dent	Keterangan		
		Study 1	Study 2	Study 3
SDN PKB	25	Teams Games Tournament	Numbered Head Together	Course Review Horay
SDN 1	25	Numbered Head Together	Course Review Horay	Teams Games Tournament
SDN 2	25	Course Review Horay	Teams Games Tournament	Numbered Head Together

With regard to this research data sources and data collection techniques used are instrument test and observation

The design of this study uses three classes where each class is an experimental class and there is no control class because in this design treatment is carried out in each class, only the difference is located in the sub discussion or basic competencies carried out in each class with different treatments. The Counterbalanced Design research design does not use a pretest but in this design students are only given a posttest as a measure of learning success. (Sugiono, 2015, p.205).

**METHOD**

This type of research is an experimental method of Quasi Execution Experiment (quasi-experiment), namely the type of experiment that uses all intact subjects (intack Grup) to be treated (Quasi Exspermental Design) used in this study is Counterbalanced Design. (Sugiono, 2015, p.2)

**Table 2.** Counterbalanced design

<b>Kelas A</b>	X <sub>1</sub>	O <sub>1</sub>	X <sub>2</sub>	O <sub>2</sub>	X <sub>3</sub>	O <sub>3</sub>
<b>Kelas B</b>	X <sub>2</sub>	O <sub>2</sub>	X <sub>3</sub>	O <sub>3</sub>	X <sub>1</sub>	O <sub>1</sub>
<b>Kelas C</b>	X <sub>3</sub>	O <sub>3</sub>	X <sub>1</sub>	O <sub>1</sub>	X <sub>2</sub>	O <sub>2</sub>

(Jack (1993,p.253) in Siti Nurasiah (2013, p.38))

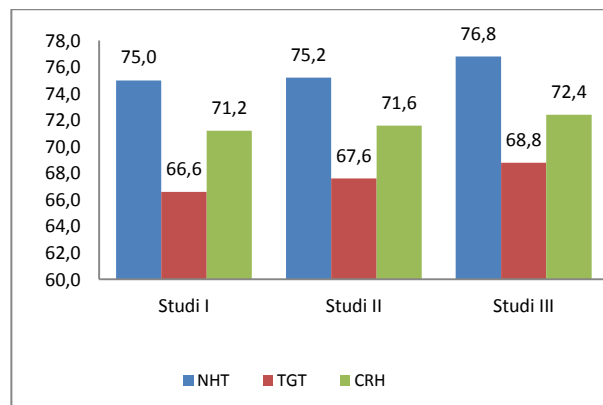
- X<sub>1</sub> = Use of learning methods *NHT*
- X<sub>2</sub> = Use of learning methods *TGT*
- X<sub>3</sub> = Use of learning methods *CRH*
- O<sub>1,2,3</sub> = Posttest Eksperimen Class

## RESULT

### POSTTEST AVERAGE

Based on the data analysis technique used, a comparison of post test results from

different methods and classes was seen in each meeting where for more clarity in each assessment criterion presented in the following histogram.



**Figure 1.** Comparison of the posttest results of each experimental class

The histogram shows that the posttest average score in Study I above shows there are differences from each treatment performed. The difference in points is from the Number Head Together (NHT) to Teams Games Tournament (TGT) method of 8.40, from the Number Head Together (NHT) to Course Review Horay (CRH) method of 3.80 and from the Teams Games Tournament (TGT) method to the Course Review Horay (CRH) method of 4.60. In the study II above shows there are differences from each treatment carried out. The difference in points is from the Number Head Together (NHT) to Teams Games Tournament (TGT) method of 7.60, from the Number Head Together (NHT) to Course Review Horay (CRH) method of 3.60 and from the Teams Games Tournament (TGT) method to the

Course Review Horay (CRH) method of 4.00. Then in Study III above shows there are differences from each treatment carried out. The difference in points is from the Number Head Together (NHT) to Teams Games Tournament (TGT) method of 8.00, from the Number Head Together (NHT) to Course Review Horay (CRH) method of 4.40 and from the Teams Games Tournament (TGT) method to the Course Review Horay (CRH) method of 3.60. The order of the highest average scores obtained from the results of Study I posttest, Study II and Study III were Number Head Together (NHT), Course Review Horay (CRH) and Teams Games Tournament (TGT).

### Normality Test



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The test for normality distribution was carried out on the final test results, namely the post test results of critical thinking skills.

This normality test is used to determine whether a data is normally distributed or not.

**Table 2.** Normality Test Result

N	Variabel	Statistic	df	Sig.	Ket
1.	Metode NHT studi I	0,180	25	0,057	Normal
2.	Metode TGT studi I	0,184	25	0,228	Normal
3.	Metode CRH studi I	0,218	25	0,078	Normal
4.	Metode NHT studi II	0,193	25	0,055	Normal
5.	Metode TGT studi II	0,270	25	0,200	Normal
6.	Metode CRH studi II	0,226	25	0,175	Normal
7.	Metode CRH studi III	0,239	25	0,165	Normal
8.	Metode NHT studi III	0,190	25	0,052	Normal
9.	Metode TGT studi III	0,239	25	0,180	Normal

Based on the results of normality test used SPSS version 22 as in the table above it can be concluded that all posttest data are normally distributed and can be used as a prerequisite for analysis of t test data.

### Homogeneity Test

The homogeneity test uses the Levine Statistics test. The results of the homogeneity test can be seen in the following table.

**Table 3.** Test of Homogeneity of Variances

Study	Levene statistic	df1	df2	Sig.	Ket.
Posttest Study I	2,538	2	72	0,086	Homogen
Posttest Study II	0,836	2	72	0,438	Homogen
Posttest Study III	0,333	2	72	0,718	Homogen

Based on homogeneity testing carried out in study I, study II, and study III which was tested it was declared homogeneous.

### Parametric Hypothesis Testing

Testing the hypothesis in this study was conducted using parametric t-test analysis

is by using two independent samples t test (*Independent Sample Test*). The results of the t test of two independent samples posttest of the experimental classes are presented in the table.

- **Study I**

**Table 4.** Test Two Difference Average 1  
(NHT – TGT)

**Independent Samples Test**

		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
Nilai	Equal variances assumed	3,568	,065	4,086	48	,000	8,400	2,056	4,266	12,534
	Equal variances not assumed			4,086	43,295	,000	8,400	2,056	4,255	12,545

Based on the results of calculations using SPSS version 22 as in table above, the value of sig <math>\alpha</math>, which is  $0,000 < 0,05$ , is thus obtained  $H_1$  is accepted.

**Table 5.** Test Two Difference Average 2  
(TGT - CRH)

**Independent Samples Test**

		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
Nilai	Equal variances assumed	3,394	,072	-2,254	48	,029	-4,600	2,041	-8,704	-,496
	Equal variances not assumed			-2,254	42,794	,029	-4,600	2,041	-8,717	-,483

Based on the results of calculations using SPSS version 22 as in table above, the value of sig <math>\alpha</math>, which is  $0,029 < 0,05$ , is thus obtained  $H_1$  is accepted.

**Table 6.** Test Two Difference Average 3  
(NHT – CRH)

**Independent Samples Test**

		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
Nilai	Equal variances assumed	,019	,892	2,282	48	,027	3,800	1,665	,452	7,148
	Equal variances not assumed			2,282	47,978	,027	3,800	1,665	,452	7,148

Based on the results of calculations using SPSS version 22 as in table above, the value of sig <math>\alpha</math>, which is  $0,027 < 0,05$ , is thus obtained  $H_1$  is accepted.



**Table 7.** Test Two Difference Average 4  
(NHT – TGT)

**Independent Samples Test**

		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
Nilai	Equal variances assumed	,555	,460	4,486	48	,000	8,000	1,783	4,415	11,585
	Equal variances not assumed			4,486	43,940	,000	8,000	1,783	4,406	11,594

Based on the results of calculations using SPSS version 22 as in table above, the value of sig <  $\alpha$ , which is  $0,000 < 0,05$ , is thus obtained  $H_1$  is accepted.

**Table 8.** Test Two Difference Average 5  
(TGT – CRH)

**Independent Samples Test**

		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
Nilai	Equal variances assumed	1,025	,316	-2,195	48	,033	-4,000	1,822	-7,664	-,336
	Equal variances not assumed			-2,195	44,938	,033	-4,000	1,822	-7,670	-,330

Based on the results of calculations using SPSS version 22 as in table above, the value of sig <  $\alpha$ , which is  $0,033 < 0,05$ , is thus obtained  $H_1$  is accepted.

**Table 9.** Test Two Difference Average 6  
(NHT – CRH)

**Independent Samples Test**

		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
Nilai	Equal variances assumed	,124	,726	2,198	48	,033	3,600	1,638	,306	6,894
	Equal variances not assumed			2,198	47,650	,033	3,600	1,638	,306	6,894

Based on the results of calculations using SPSS version 22 as in table above, the value of sig <  $\alpha$ , which is  $0,033 < 0,05$ , is thus obtained  $H_1$  is accepted.





**Table 10.** Test Two Difference Average 7  
(NHT – TGT)

**Independent Samples Test**

		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
Nilai	Equal variances assumed	2,944	,093	4,137	48	,000	7,000	1,692	3,598	10,402
	Equal variances not assumed			4,137	39,971				,000	7,000

Based on the results of calculations using SPSS version 22 as in table above, the value of sig <math>\alpha</math>, which is  $0,000 < 0,05$ , is thus obtained  $H_1$  is accepted.

**Table 11.** Test Two Difference Average 8  
(TGT – CRH)

**Independent Samples Test**

		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
Nilai	Equal variances assumed	,096	,758	-2,340	48	,023	-3,600	1,538	-6,693	-,507
	Equal variances not assumed			-2,340	47,799				,023	-3,600

Based on the results of calculations using SPSS version 22 as in table above, the value of sig <math>\alpha</math>, which is  $0,023 < 0,05$ , is thus obtained  $H_1$  is accepted.

**Table 10.** Test Two Difference Average 9  
(NHT – CRH)

**Independent Samples Test**

		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
Nilai	Equal variances assumed	,250	,619	2,410	48	,020	4,400	1,826	,729	8,071
	Equal variances not assumed			2,410	45,303				,020	4,400

Based on the results of calculations using SPSS version 22 as in table above, the value of sig <math>\alpha</math>, which is  $0,020 < 0,05$ , is thus obtained  $H_1$  is accepted.

The results of data analysis using the t test level of confidence obtained  $t_{count} > t_{table}$  (independent samples t-test) at the 95% and the probability value sig. (2-tailed) <

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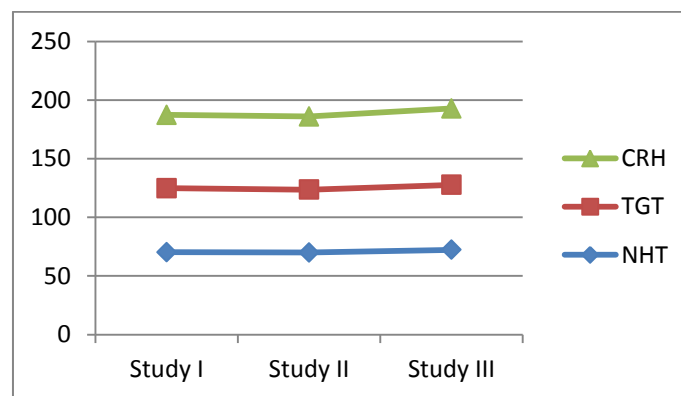
0.05, in study I, study II and study III, this shows that there are differences in the students' critical thinking skills from the treatment carried out in each class with different models and different subjects so that the hypothesis submitted can be accepted.

## DISCUSSION

The use of learning methods has to do with the learning material that will be delivered. Learning material has a different level of difficulty so it takes techniques, methods, and strategies that are relevant to the characteristics of the material. The use of relevant learning methods will certainly be directly proportional to the results of learning. Of course good learning

outcomes are contributions from the use of learning methods. The analysis of the effectiveness of the method used in each study that has been done shows that using three classes as subjects in learning reveals that the effectiveness of the three methods applied gives a different influence on students' creative thinking abilities. In studies I, II, and III always showed that the NHT method was more effective than the TGT and CRH methods. These results are based on testing the average value derived from the value of each student through the posttest that has been given. The following is a description of the posttest results of each treatment that has been carried out.

**Grafik 1.** Average Value of Use Method



The graph above shows that the value of the NHT method is always higher in each study compared to the TGT and CRH methods, this suggests that NHT is consistent in each study. Based on the results of the analysis using a statistical approach that is relevant to this study, it shows that the three methods namely NHT, TGT and CRH provide differences in students' critical thinking abilities.

### **Effect of Effectiveness of the Use of the Number Head Together (NHT) Method on Teams Games Tournament (TGT) Method**

Based on the results of statistic test with SPSS version 22 that has been done, the results show that there is a significant difference between students' critical thinking skills using the Number Head Together (NHT) method and students using the Teams



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Games Tournament (TGT) method. This can be seen based on the average value of the three models in studies I, II, and III, that is, from the three studies that have done the average value of students using the Number Head Together (NHT) method learning model after adding up and then averaging 75.67, the Teams Games Tournament (TGT) method is 67.67 and the Course Review Horay (CRH) method is 71.73. From the average it is clear that there are differences in terms of the average scores of students but the difference is not significant. To see if there are differences in critical thinking skills between students who get learning with Number Head Together (NHT) method and Teams Games Tournament (TGT) method, then the two difference test is averaged or known as the t test. The t test is carried out on data obtained consecutively, namely from study I, study II, and study III. In the first study the results of the two difference test averaged sig. (2-tailed) values of  $0,000 < 0,05$ , which means there were significant differences between students who received learning using the NHT method and the TGT method. In the second study the results of the two difference test averaged sig. (2-tailed) values of  $0,000 < 0,05$ , which meant that there were significant differences between students who received learning using the NHT method and the TGT model. In study III the results of the two difference test averaged sig. (2-tailed) value of  $0,000 < 0,05$ , which means that there were significant differences between students who

received learning using the NHT model and the TGT model. After knowing the existence of a significant difference and based on the results of the posttest average in Studies I, II, and III, it was found that students using the Number Head Together (NHT) method were better / superior compared to students who used the Teams Games Tournament (TGT) method. In addition, the use of the Number Head Together (NHT) method This contributed to the improvement of students' critical thinking skills by 8.00 from the Teams Games Tournament (TGT) method Where this is in accordance with previous research, namely research from Femmy (2014) which suggests that there is an effect of NHT cooperative learning strategies on improving students' critical thinking skills, compared to conventional learning

### **Effect of Effectiveness in Use the Teams Games Tournament (TGT) Method on the Course Review Horay (CRH) method**

Based on the results of statistic test with SPSS version 22 that has been done, the results show that there is a significant difference between students' critical thinking abilities using the Teams Games Tournament (TGT) method and students using the Course Review Horay (CRH) method. This can be seen based on the average value of the three models in studies I, II, and III, that is, from the three studies that have done the average value of students using the Teams Games Tournament (TGT) method after adding up and then averaging 67. 67 and the Course Review Horay (CRH) method is



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71.73. From the average it is clear that there are differences in terms of the average scores of students but the difference is not significant. To see whether there are differences in critical thinking skills between students who get learning with the Teams Games Tournament (TGT) method and Course Review Horay (CRH) method, the two difference test is averaged or known as the t test. The t test is carried out on data obtained consecutively, namely from study I, study II, and study III. In tstudy I the results of the two difference test averaged sig. (2-tailed) value of  $0.029 < 0.05$ , which means that there were significant differences between students who received learning using the Teams Games Tournament (TGT) method and the Course Review Horay (CRH) method. In study II the results of the two difference test averaged sig. (2-tailed) values of  $0.033 < 0.05$ , which means that there were significant differences between students who received learning using the Teams Games Tournament (TGT) method and the Mind Course Review Horay (CRH) method. In the third study the results of the two difference test averaged sig. (2-tailed) values of  $0.023 < 0.05$ , which means that there were significant differences between students who received learning using the Teams Games Tournament (TGT) method and the Course Review Horay (CRH) method. After knowing the existence of significant differences and based on the results of the average posttest in Studies I, II, and III, it was found that students using the Course Review Horay (CRH) method were

better / superior compared to students who used the Teams Games Tournament (TGT) method. In addition, the use of the Course Review Horay (CRH) method contributed to the improvement of students' critical thinking skills by 4.07 from the Teams Games Tournament (TGT) method. Where this is in accordance with previous research, namely research from Rini (2017) who argues that there is the influence of the Course Review Horay cooperative learning strategy on improving students' critical thinking, compared to conventional learning.

#### **Effect of Effectiveness of Using the Number Heads Together (NHT) Method on the Course Review Horay (CRH) method.**

Based on the results of statistic test with SPSS version 22 that has been done, the results show that there is a significant difference between students' critical thinking skills using the Number Head Together (NHT) method and students using the Course Review Horay (CRH) method. This can be seen based on the average value of the three models in studies I, II, and III, namely from the three studies that have done the average value - students using Number Head Together (NHT) method obtained results of 75.67, the Teams Games Tournament (TGT) method of 67.67 and the Course Review Horay (CRH) method is 71.73. From the average it is clear that there are differences in terms of the average scores of students but the difference is not significant. To see whether there are differences in critical thinking skills



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between students who get learning with the Number Head Together (NHT) method and Course Review Horay (CRH) method, the two difference test is averaged or known as the t test. The t test is carried out on data obtained consecutively, namely from study I, study II, and study III. In the first study the results of the two differences test averaged sig. (2-tailed) value of  $0.027 < 0.05$ , which means that there were significant differences between students who received learning using Number Head Together (NHT) method and Course Review Horay (CRH) method. In study II the results of the two differences test averaged sig. (2-tailed) values of  $0.033 < 0.05$ , which means that there were significant differences between students who received learning using Number Head Together (NHT) method and Course Review Horay (CRH) method. In study III the results of the two differences test averaged sig. (2-tailed) values of  $0.020 < 0.05$ , which means there were significant differences between students who received learning using the Number Head Together (NHT) method and the Course Review Horay (CRH) method. After knowing the existence of significant differences and based on the results of the posttest average in Studies I, II, and III, it was found that students who used the Number Head Together (NHT) method were better / superior compared to students who used the Course Review Horay (CRH) method. In addition, the use of the Course Review Horay (CRH) method contributed to the improvement of students' critical thinking skills by 7.24 from the Talking Chips method.

Where this is in accordance with previous research, namely research from Mufidatur (2015) which suggests that there is an influence of Course Review Horay (CRH) method cooperative learning strategies on improving the skills of students' critical thinking skills, compared to conventional learning

## CONCLUSION

Based on the results of the research conducted, the Numbered Head Together (NHT) learning model is more effective in improving students' critical thinking skills compared to the Teams Games Tournament (TGT) and Course Review Horay (CRH) methods. This means that at the time of learning students are more enthusiastic in participating in learning activities students can actively discuss and ask questions in more developed learning here showing the quality of learning that uses Numbered Head Together learning model more effectively can improve students' critical thinking skills.

## REFERENCES

Chinna Suresh, Reddy. (2017). The Effects of Cooperative Learning Strategy in Facilitating Critical Thinking Abilities of XI Standard Students International Multidisciplinary e-journal Department of Education, Sri Venkateswara University, Tirupati-517502 ISSN:227-4262 vol-6.



**ICEE-2**

- Filsaime, Dennis K. (2010). *Menguak Rahasia Berpikir Kritis dan Kreatif*. Jakarta: PT Prestasi Pustakaraya.
- Ilmiyah, Rosikhatul. dkk. (2015). Application of Cooperative Learning Model Type Teams Games Tournament (TGT) in Improving Social Studies Learning Outcomes of Grade IV Students of Elementary School. *Journal PGSD*.
- Jauhari, Mohammad. (2011). *Impementasi Paikem dari Behavioristik Sampai Konstruktivistik*. Jakarta: Prestasi Pustakaraya.
- Mashudi. (2017). Improvement of students' critical thinking skills through the cooperative learning model of NHT type University of Indonesia.
- Miftahul Fuad, Siti Zubaidah, dkk. (2017). Improving Junior High Schools' Critical Thinking Skills Based on Test Three Different Models of Learning *International Journal of Instruction, January 2017 Vol.10, No.1 (102) e-ISSN: 1308-1470*.
- NCSS. *Curriculum Standards for the Social Studies*. Washington, DC: The National Council for the Social Studies. 1994.
- Nurasiah Siti. (2013). Comparative Study on the Use of Discovery and Inquiry Methods on Critical Thinking Ability of Indonesian Education University Students. UPI.
- Permana Erwin. (2016). Application of Numbered Heads Together (NHT) Cooperative Learning Method to Improve Students' Learning and Critical Thinking Outcomes in Elementary Social Studies Subjects. *Archipelago Basic Education Journal Volume 1 Number 2 ISSN.2460-6324 University Nusantara PGRI Kediri Hal. 50*.
- Putri, N.D.A, dkk. (2017). The Effectiveness Of The Use Of Course Review Horay (CRH) Methods To Improve Numeracy Division Skill Of Children With Mild Mental Retardation In Slb Negeri Surakarta, Indonesia Year 2016/2017. *European Journal of Special Educational Research. Volume 2, Issue 3. [www.e-iji.ne](http://www.e-iji.ne)*
- Rusman. (2016) *Model-Model Pembelajaran mengembangkan Profesionalisme Guru*. Jakarta: Rajawali Pers.
- Sugiyono. 2015. *Metode Penelitian Pendidikan*. Bandung: ALFABETA
- Yuami, Muhammad. (2012). *Pembelajaran Berbasis Multiple Intellegences*. Cetakan Pertama. Jakarta: PT Dian Rakyat.
- Yuono Heru. (2015). Effect of Cooperative Learning Techniques and Critical Thinking on Learning Outcomes Social Science Hal 146 *Basic Education Journal Volume 6 Issue 1 University of Jakarta*.

