Cooperative Learning Model with Process Skills for Mathematics Learning in Elementary School

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A R T I C L E   I N F O
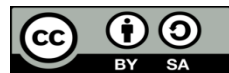
A B S T R A K

Permasalahan yang sering terjadi dalam proses pembelajaran adalah rendahnya hasil belajar siswa. Salah satu upaya yang dapat dilakukan untuk mengatasi permasalahan tersebut adalah dengan menerapkan model pembelajaran inovatif. Salah satu model pembelajaran yang dapat diimplementasikan dalam proses pembelajaran adalah model pembelajaran kooperatif. Penelitian ini bertujuan untuk menganalisis respon siswa terhadap keterampilan proses model pembelajaran jigsaw dan STAD mata pelajaran matematika. Penelitian ini merupakan penelitian dengan pendekatan kuantitatif dan menggunakan metode komparatif. Proses pengumpulan data dilakukan dengan menggunakan metode observasi, dengan responden sebanyak 144 orang siswa sekolah dasar. Proses analisis data dilakukan secara deskriptif dengan menggunakan bantuan Aplikasi SPSS 25.0. Hasil penelitian menunjukkan bahwa respon siswa terhadap keterampilan proses model pembelajaran dalam pembelajaran matematika sudah cukup baik dilihat dari perbandingan setiap data siswa antara model pembelajaran jigsaw dan STAD. Sehingga dapat disimpulkan bahwa terdapat suatu hubungan dan perbandingan dari kedua model pembelajaran yang di terapkan disekolah. Hasil penelitian ini diharapkan dapat memberikan sumbangan pemikiran bagi pengetahuan dan pendidikan serta memberikan gambaran tentang model pembelajaran dan keterampilan proses pengajaran pada mata pelajaran matematika.

A B S T R A C T

The problem that often occurs in the learning process is the low student learning outcomes. One of the efforts that can be done to overcome these problems is to apply an innovative learning model. One of the learning models that can be implemented in the learning process is the cooperative learning model. This study aims to analyze student responses to the process skills of the jigsaw and STAD learning models in mathematics. This study is research with a quantitative approach and uses a comparative method. The data collection process was carried out using the observation method, with 144 elementary school students as respondents. The data analysis process was carried out descriptively using the SPSS 25.0 application. The results showed that the student's response to the process skills of the learning model in mathematics learning was quite good, judging from the comparison of each student's data between the jigsaw and STAD learning models. So, it can be concluded that there is a relationship and comparison of the two learning models applied in schools. The results of this study are expected to contribute ideas for knowledge and education as well as provide an overview of the learning model and teaching process skills in mathematics subjects.

1. INTRODUCTION

Indonesia always evaluates and tries to improve its education system to suit the needs of education itself. Humans need education so that it can be useful for society and the nation, thereby producing an intellectual generation to increase knowledge (Pelullo & Di Giuseppe, 2018;Darmaji et al., 2019; Yanti & Yusliani, 2020). Education can be said to be the key to the success of students because with education, students can be more literate with the outside world and are the spearhead in developing resources and changing the behavior of each individual. education to improve their quality, by Improving educational processes and outcomes must be done through a focus on teaching (Kalaw, 2017; Şemin, 2019; Sman & City, 2020). This is what causes the renewal of the teaching curriculum. The curriculum itself is a set of subjects and educational programs provided by education providers. The curriculum is the entire program that is planned, the learning principles used in Indonesia are the latest revised 2013 curriculum where in addition to the vision and mission, learning outcomes must also be displayed in the learning model (Chalim, 2018; Handayani, 2018; Maman Suryaman, Tadkiroatun Musfi roh, 2020). Learning that integrates literacy skills, knowledge skills, skills and attitudes, and mastery of technology. These skills cover four aspects of education which include learning to know, learning to do, learning to be and learning to live together.

(Wegawati et al., 2016; Gelen Assoc, 2018; Gürsoy, 2021). Therefore, teaching skills are needed for a teacher to foster a desire to learn for students.

This learning skill is a pattern in teaching so that conducive learning can be carried out. Based on the school's observations of students' problem-solving skills using the scientific method for future learning (Ratih Indah Puji Hartini, 2017; Setiawan, 2019; Chan et al., 2020). Monotonous learning will be difficult to accept, this causes students to be lazy to do assignments because of the applied education system(Mansouri & Moumine, 2017; Sari et al., 2017; Astalini et al., 2018). Learning can be carried out effectively by considering the presentation of literacy enrichment teaching according to the characteristics of students(Rochman et al., 2017; Hartini et al., 2018; Laila Puspita, 2019). So the learning process must increase the student's desire to learn. It is known that the learning process is an activity designed by educators to help students learn a new ability or value. Misinterpreting a construction or teaching characteristic reduces students' interest in learning (Apriyani, 2017; Kurniawan et al., 2019; Adom et al., 2020). interest in learning is a form of student interest in the lesson to be studied by having 2 cognitive and affective aspects in fostering interest in learning(Sari et al., 2017; I. N.Saputro & Amir, 2018; P., 2019). Given that learning integration is important, it can offer learning according to the interests of students, therefore students can apply what they learn (B. Setiawan et al., 2017; Asrizal et al., 2018; Mutakinati et al., 2018). Many lessons are taught in schools as a means of education, one of which is learning mathematics which is one of the most frightening lessons for students.

Mathematics is a learning that discusses magnitude, structure, space and change, both in elementary school and at the next level. Primary school mathematics learning can hone students' mathematical abilities to think logically, analytically, critically and systematically by improving the learning process proses (Kenedi, 2019; Nurlaily et al., 2019; Saleh et al., 2018). This states that participation and soft skills as well as a good point of view can be used to solve math problems (Hendriana et al., 2018; Ambussaidi & Yang, 2019; Lin et al., 2020). This tendency is a problem solving technique in determining mathematical concepts using concrete objects (Surya et al., 2017; Saleh et al., 2018; Nuryadi et al., 2020). Therefore, the learning model used must be able to create a good learning atmosphere. Talking about learning models where jigsaw and Student Team Achievement Divisions (STAD) are learning models that can be used. The jigsaw method is a method in which students are responsible for analyzing cooperative learning by grouping students (Jaya Wibawa & Suarjana, 2019; Santos et al., 2019; Booker, 2021). The jigsaw learning model further enhances students' general knowledge and basic skills by doing better tasks. Meanwhile, Student Team Achievement Divisions (STAD) is a simple cooperative learning model.In addition, the STAD learning model improves communication skills as well as a potential learning model (Rohika, 2017; Kusumawardani et al., 2018; Putra et al., 2018).

In the learning models that exist in various journals, we can review the jigsaw learning model and student team achievement divisions (STAD). This research is in line with previous research conducted by (Widayanti, 2019; Baken et al., 2020), stated that jigsaw is one type where students are assigned to discuss to exchange ideas. The function of the jigsaw itself is to make it easier to create tasks. Then we can also review the Student Team Achievement Divisions (STAD) learning model from several journals. Stated that in research student team achievement divisions (STAD) is the simplest method in the learning process.We can conclude from previous research that there has been no discussion of the comparison of the two learning models and there is no use of relevant indicators in research that is only done in general (Sadeghi & Ghaderi, 2018). The urgency in this study is very important because there has been no research comparing learning models with process skills and some of the tests used are very useful to know about the comparison of learning models and process skills in each class and the comparison of indicators to be used. The novelty of this research is the use of two learning models namely jigsaw and STAD in school learning so as to make learning more meaningful, while in previous studies. Therefore, this study aims to make a comparative analysis between process skills in the learning model using the existing achievement indicators. By looking at the importance of the learning model and student process skills from the questionnaire attachment and observation attachment, the researcher considers that the learning model is very well used in the learning process in elementary schools.

2. METHOD

This study uses a type of comparative quantitative research. The design of a procedure in quantitative research in which you administer a questionnaire to a small group of people (called a sample) to identify trends in attitudes, opinions, behaviors, or characteristics of a large group of people (Creswell, 2013). The sample in this study was 144 students from SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II in Batanghari district. The sampling technique is purvosive sampling. Purposive sampling is a type of sampling in which a research more a less handpicks case (Stommel & Wills, 2004). The reason for

taking this technique is because not all samples have criteria that match the phenomenon being studied. The most important thing in sampling must consider the analysis of the sample (Luppens et al, 1992) The sample taken is class VII A and VII B consisting of 80 women and 64 men. There are 3 instruments in this study, namely Process Skills for Science, the Jigsaw Learning model and the learning model Student Team Achievement Divisions (STAD). The assessment instrument is one of the latest experimental assessment instruments in the field of assessment (Caltagirone et al., 2005.; Purwanti et al., 2020). There are 10 process skills items on the questions in the two valid learning models on this instrument using a Likert scale 4. The scale consists of 4 points for process skills in the model, namely 1 (very bad), 2 (not good), 3 (good) , and 4 (very good). Each statement is representative of each indicator of process skills and learning models. Next is the observation sheet for the adoption process skills.

This research was conducted by comparative quantitative data analysis. Where comparative is research that compares two or more variables.By using this type of comparative research to determine the relationship or the type of variables used. An overview or presentation of large amounts of data that includes the mean, mode, median, max. min, and standard deviation are descriptive statistics (Pramesti.2018; Santoso. 2019; Wahyuni. 2020). Therefore, differential statistics are used with assumption tests consisting of tests of normality, linearity, and homogeneity. As well as hypothesis testing T test and correlation. The normality test aims to determine whether a data can be said to be normal or not, while the homogeneous test aims to determine whether a data of the two samples is homogeneous or not. The first step in this research is to determine the normality and homogeneity of a data using normality test and homogeneity test. The research method is basically a scientific way to obtain data with specific purposes and uses, one of which is to clarify various analytical processes using real calculation methods (Suharsaputra, 2012). Next, identify the results for follow-up. At the data collection stage, questionnaires were given to 144 students in two schools, namely SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II in Batanghari district. From this data, data analysis is then carried out, namely data coding, filtering appropriate data and analyzing the data. In collecting data, the first activity that must be done is to select students based on the categories given by the researcher, then provide a questionnaire on student attitudes in science subjects. Then the questionnaire data was processed using the SPSS application. The use of the SPSS application functions to view descriptive statistics, in the form of mean, min, max, percentage, and category of students. The data needed in research can be collected or obtained from various data sources.

3. RESULT AND DISCUSSION

Result

In the results here we will discuss about the test descriptive statistical variables, the second is the assumption test which is divided into normality, homogeneity and linearity, then hypothesis testing (T test) Process skills and jigsaw learning models and learning modelsstudent team achievement divisions (STAD) students in Mathematics. The description of the classification indicators for the jigsaw learning model in elementary schools is presented in Table 1.

Table 1. Description of the classification indicators of the jigsaw learning model

Student response		interval	F	%	Category	mean	median	Min	Max
SD Negeri 04/I Sungai Ruan Ilir	VA	3.0-5.3	0	0	Not very good	2.29	3.0	2.0	4.0
		5.4-7.6	11	30.6	Not good				
		7.7-10	17	47.2	Good				
		10.1-12.4	8	22.3	Very good				
	VB	3.0-5.3	0	0	Not very good	3.02	3.0	2.0	4.0
		5.4-7.6	9	25	Not good				
		7.7-10	17	47.2	Good				
		10.1-12.4	10	27.8	Very good				
SD Negeri 52/I Kilangan II	VA	3.0-5.3	2	5.4	Not very good	2.75	3.0	1.0	4.0
		5.4-7.6	11	29.7	Not good				
		7.7-10	18	48.6	Good				

Student response		interval	F	%	Category	mean	median	Min	Max
		10.1-12.4	6	16.2	Very good				
	VB	3.0-5.3	0	0	Not very good	2.94	3.0	2.0	4.0
		5.4-7.6	8	21.6	Not good				
		7.7-10	23	62.2	Good				
		10.1-12.4	6	16.2	Very good				

The description of indicators measuring the jigsaw learning model in elementary schools is presented in Table 2.

Table 2. Description of indicators measuring the jigsaw learning model

Student response		interval	F	%	Category	mean	median	Min	Max
SD Negeri 04/I Sungai Ruan Ilir	VA	3.0-5.3	0	0	Not very good	2.29	3.0	2.0	4.0
		5.4-7.6	11	30.6	Not good				
		7.7-10	17	47.2	Good				
		10.1-12.4	8	22.3	Very good				
	VB	3.0-5.3	0	0	Not very good	3.02	3.0	2.0	4.0
		5.4-7.6	9	25	Not good				
		7.7-10	17	47.2	Good				
		10.1-12.4	10	27.8	Very good				
SD Negeri 52/I Kilangan II	VA	3.0-5.3	2	5.4	Not very good	2.75	3.0	1.0	4.0
		5.4-7.6	11	29.7	Not good				
		7.7-10	18	48.6	Good				
		10.1-12.4	6	16.2	Very good				
	VB	3.0-5.3	0	0	Not very good	2.94	3.0	2.0	4.0
		5.4-7.6	8	21.6	Not good				
		7.7-10	23	62.2	Good				
		10.1-12.4	6	16.2	Very good				

As for the description of the indicators, compiling a table on the jigsaw learning model in elementary schools as shown in Table 3.

Table 3 . Description of indicators compiling a table for the jigsaw learning model

Student response		interval	F	%	Category	mean	median	Min	Max
SD Negeri 04/I Sungai Ruan Ilir	VA	3.0-5.3	0	0	Not very good	2.29	3.0	2.0	4.0
		5.4-7.6	11	30.6	Not good				
		7.7-10	17	47.2	Good				
		10.1-12.4	8	22.3	Very good				
	VB	3.0-5.3	0	0	Not very good	3.02	3.0	2.0	4.0
		5.4-7.6	9	25	Not good				
		7.7-10	17	47.2	Good				
		10.1-12.4	10	27.8	Very good				

Student response		interval	F	%	Category	mean	median	Min	Max
SD Negeri 52/I Kilangan II	VA	3.0-5.3	2	5.4	Not very good	2.75	3.0	1.0	4.0
		5.4-7.6	11	29.7	Not good				
		7.7-10	18	48.6	Good				
		10.1-12.4	6	16.2	Very good				
	VB	3.0-5.3	8	21.6	Not very good	2.94	2.0	2.0	43.0
		5.4-7.6	23	62.2	Not good				
		7.7-10	6	16.2	Good				
		10.1-12.4	0	0	Very good				

The description of the classification indicators for the STAD learning model in elementary schools is presented in Table 4.

Table 4. Description of the classification indicators for the STAD learning model

Student response		interval	F	%	Category	mean	median	Min	Max
SD Negeri 04/I Sungai Ruan Ilir	VA	5.0-8.8	2	5.4	Not very good	2.29	3.0	2.0	4.0
		8.9-12.7	11	29.7	Not good				
		12.8-16.2	18	48.6	Good				
		16.3-20.3	6	16.2	Very good				
	VB	5.0-8.8	0	0	Not very good	3.02	3.0	2.0	4.0
		8.9-12.7	8	21.6	Not good				
		12.8-16.2	23	62.2	Good				
		16.3-20.3	6	16.2	Very good				
SD Negeri 52/I Kilangan II	VA	5.0-8.8	2	5.4	Not very good	2.75	3.0	1.0	4.0
		8.9-12.7	11	29.7	Not good				
		12.8-16.2	18	48.6	Good				
		16.3-20.3	6	16.2	Very good				
	VB	5.0-8.8	0	0	Not very good	2.94	3.0	2.0	4.0
		8.9-12.7	8	21.6	Not good				
		12.8-16.2	23	62.2	Good				
		16.3-20.3	6	16.2	Very good				

The description of indicators measuring the STAD learning model in elementary schools is presented in Table 5.

Table 5. Description of indicators measuring the STAD learning model

Student response		interval	F	%	Category	mean	median	Min	Max
SD Negeri 04/I Sungai Ruan Ilir	VA	5.0-8.8	2	5.4	Not very good	2.75	3.0	1.0	4.0
		8.9-12.7	11	29.7	Not good				
		12.8-16.2	18	48.6	Good				

Student response		interval	F	%	Category	mean	median	Min	Max
		16.3-20.3	6	16.2	Very good				
	VB	5.0-8.8	0	0	Not very good	2.94	3.0	2.0	4.0
		8.9-12.7	8	21.6	Not good				
		12.8-16.2	23	62.2	Good				
		16.3-20.3	6	16.2	Very good				
SD Negeri 52/I Kilangan II	VA	5.0-8.8	2	5.4	Not very good	2.75	3.0	1.0	4.0
		8.9-12.7	11	29.7	Not good				
		12.8-16.2	18	48.6	Good				
		16.3-20.3	6	16.2	Very good				
	VB	5.0-8.8	0	0	Not very good	2.94	3.0	2.0	4.0
		8.9-12.7	8	21.6	Not good				
		12.8-16.2	23	62.2	Good				
		16.3-20.3	6	16.2	Very good				

The description of indicators composes a table on the STAD learning model in elementary schools is presented in Table 6.

Table 6. Description of indicators compiling a table for the STAD learning model

Student response		interval	F	%	Category	mean	median	Min	Max
SD Negeri 04/I Sungai Ruan Ilir	VA	5.0-8.8	2	5.4	Not very good	2.29	3.0	2.0	4.0
		8.9-12.7	11	29.7	Not good				
		12.8-16.2	18	48.6	Good				
		16.3-20.3	6	16.2	Very good				
	VB	5.0-8.8	0	0	Not very good	3.02	3.0	2.0	4.0
		8.9-12.7	8	21.6	Not good				
		12.8-16.2	23	62.2	Good				
		16.3-20.3	6	16.2	Very good				
SD Negeri 52/I Kilangan II	VA	5.0-8.8	2	5.4	Not very good	2.75	3.0	1.0	4.0
		8.9-12.7	11	29.7	Not good				
		12.8-16.2	18	48.6	Good				
		16.3-20.3	6	16.2	Very good				
	VB	5.0-8.8	0	0	Not very good	2.94	3.0	2.0	4.0
		8.9-12.7	8	21.6	Not good				
		12.8-16.2	23	62.2	Good				

The data is normally distributed as seen from the significance value, if the significance value is > 0.05. Based on the results of normality test, it can be concluded that the data is normally distributed.

Homogeneity test is carried out in order to find out whether the x and y data are homohen or not. The requirement in this test is that if the significance value is > 0.05, it can be said that the x and y data are homogeneous (same). If the significance value is < 0.05 then the data is not homogeneous (not the same). Based on the table, it can be concluded that the variance of the two variables is the same or homogeneous which is obtained is a significance value has met the requirements > 0.05. In this test, it is carried out in order to find out the differences in variables on Mathematics subjects. The conditions in this test if the significance value is > 0.05, it can be said that the variable has no difference. If the significance value is <0.05, then the variable has a significant difference. The T-test of the jigsaw learning model at SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II in Batanghari district is described in Table 7.

Table 7. The T test of the jigsaw learning model at SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II

School name	class	N	Sig.	Sig. (2-tailed)
SD Negeri 04/I Sungai Ruan Ilir	VA	36		
	VB	36	0.905	0.030
SD Negeri 52/I Kilangan II	VA	36		
	VB	36	0.758	0.028

From Table 7, it is found that there are differences in the jigsaw learning model at SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II in Batanghari district on Mathematics. This is evidenced by the value of sig (2-tailed) 0.030 and 0.028 < 0.05. The T-test of the jigsaw learning model at SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II in Batanghari district is described in Table 8.

Table 8. As for the T test of the learning model model student team achievement divisions (STAD) in SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II

School name	class	N	Sig.	Sig. (2-tailed)
SD Negeri 04/I Sungai Ruan Ilir	VA	36		
	VB	36	0.660	0.042
SD Negeri 52/I Kilangan II	VA	36		
	VB	36	0.632	0.018

From the table it is obtained that there are differences in the learning model student team achievement divisions (STAD) in SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II in Batanghari district on Mathematics. This is evidenced by the value of sig (2-tailed) 0.042 and 0.018 < 0.05.

Discussion

Descriptive statistics itself is the most basic data analysis process by focusing on the management, presentation and classification of data (Awaludin et al., 2020). With this process, the data presented will become more attractive, easier to understand, and able to provide more meaning for data users. When conducting descriptive statistical tests using several indicators of the learning method. Where the indicators on the learning model process skills here use 3 indicators, namely: classification, measuring, and compiling tables. On the results of the descriptive statistical test of SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II take two classes each, where in one class there are 36 students with 20 girls and 16 boys with a total of 144 students. The first statistical test here uses the jigsaw learning model, we can see in tables 4 to 6 where based on the results from the table, it can be seen that the category of classification indicators, measuring and compiling tables of the most dominant jigsaw learning model for students of SD Negeri 04/I Sungai Ruan Ilir can be seen from the percentage of good grades. Then proceed with descriptive statistical tests on the learning model student team achievement divisions (STAD) we can see in tables 7 to 9 where based on the results from the table, it can be seen that the classification indicator category for the STAD learning model in elementary schools is the most dominant of students at SD Negeri 52/I Kilangan II can be seen from the percentage of good scores. Then on the 2nd and 3rd indicators it can be seen where. Based on the results from the table, it can be seen that the indicator category composes a table of the STAD learning model in elementary schools which is the most dominant student of SD Negeri 04/I Sungai Ruan Ilir can be seen from the percentage value good.

In the next test, the assumption test is carried out where the data analysis used is: normality test, homogeneity test. Based on the results of the normality test on the jigsaw learning model at SD Negeri 04/I

Sungai Ruan Ilir and SD Negeri 52/I Kilangan II, the Kolmogorov-Smoniv test results obtained a significance value of 0.300> 0.05 and 0.148> 0.05, it can be concluded that the data is normally distributed. Then obtained the normality test of the STAD learning model with the Kolmogorov-Smoniv test with a significance value of 0.200> 0.05 and 0.248> 0.05, so it can be concluded that the data is normally distributed. In homogeneous test. Based on the table, it can be concluded that the variance of the two variables is the same or the homogeneity obtained by the significance value has met the requirements of 0.745 > 0.05. In this hypothesis test, it is carried out in order to find out the comparison of variables on Mathematics subjects. The conditions in this test if the significance value is > 0.05, it can be said that the variable has no difference. If the significance value is <0.05, then the variable has a significant difference. The first hypothesis test was obtained that there were differences in the jigsaw learning model at SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II in Batanghari district on Mathematics. This is evidenced by the value of sig (2-tailed) 0.030 and 0.028 < 0.05. Furthermore, it was found that there were differences in the learning modelstudent team achievement divisions (STAD) in SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II in Batanghari district on Mathematics. This is evidenced by the value of sig (2-tailed) 0.042 and 0.018 < 0.05. This is evidenced by the value of sig (2-tailed) 0.034 and 0.044 < 0.05. so it can be concluded that there is a comparisonetween 2 elementary schools on the learning model and teaching process skills in mathematics.

Mathematics is a learning that discusses magnitude, structure, space and change, both in elementary school and at the next level. Primary school mathematics learning can hone students' mathematical abilities to think logically, analytically, critically and systematically by improving the learning process proses(Kenedi, 2019; Nurlaily et al., 2019; Saleh et al., 2018). This states that participation and soft skills as well as a good point of view can be used to solve math problems (Hendriana et al., 2018; Ambussaidi & Yang, 2019; Lin et al., 2020). This tendency is a problem solving technique in determining mathematical concepts using concrete objects (Surya et al., 2017; Saleh et al., 2018; Nuryadi et al., 2020). Therefore, the learning model used must be able to create a good learning atmosphere. Teaching skills are abilities or skills that are special (most specific instructional behaviors) that must be possessed by teachers, lecturers, instructors or widyaiswara in order to carry out teaching tasks effectively, efficiently and professionally. The learning process must create an atmosphere so that students are active in education. Based on the school's observations of students' problem-solving skills using the scientific method for future learning (Hartini, 2017; Setiawan, 2019; Chan et al., 2020). Thus, basic teaching skills relate to several skills or abilities that are fundamental and must be mastered by teaching staff in carrying out their teaching tasks. Process skills are important to be promoted as one of learning. So that they are able to carry out the desired learning process. Active learning is seen when students enthusiastically answer questions to improve their skills.

Talking about learning models where jigsaw and Student Team Achievement Divisions (STAD) are learning models that can be used. The jigsaw method is a method in which students are responsible for analyzing cooperative learning by grouping students (Jaya Wibawa & Suarjana, 2019; Santos et al., 2019; Booker, 2021). The jigsaw learning model further enhances students' general knowledge and basic skills by doing better tasks. Meanwhile, Student Team Achievement Divisions (STAD) is a simple cooperative learning model.In addition, the STAD learning model improves communication skills as well as a potential learning model (Rohika, 2017; Kusumawardani et al., 2018; Putra et al., 2018). Jigsaw is an active learning techniques are commonly used because these techniques maintain a high level of personal responsibility. The jigsaw learning model further enhances students' general knowledge and basic skills by doing better tasks (Sri & Murda, 2017; Toril et al., 2018). Therefore, jiksaw is one of the most effective methods used for the learning process. Then there is also a learning modelstudent team achievement divisions (STAD) namely is a learning method with the simplest and most easily understood approach and contains cooperative learning strategies that provide opportunities for multiple developments with exercises to learn concepts and skills.STAD learning model improves communication skills as well as a potential learning model (Rohika, 2017; Kusumawardani et al., 2018; Putra et al., 2018). This has been explained in various articles but no one has discussed these two learning models in one discussion and with descriptive statistical testing using several indicators. In the learning models that exist in various journals, we can review the jigsaw learning model and student team achievement divisions (STAD This research is in line with previous research which stated that jigsaw is a type of learning where students are assigned to discuss to exchange ideas (Widayanti, 2019; Baken et al., 2020). The function of the jigsaw itself is to make it easier to create tasks. Then we can also review the Student Team Achievement Divisions (STAD) learning model from several journals. In research student team achievement divisions (STAD) is the simplest method in the learning process.We can conclude from previous research that there has been no discussion of the comparison of the two learning models and there is no use of relevant indicators in research that is only

done in general (Wulandari et al., 2017). Therefore, the purpose of this study is to make a comparison between process skills in the learning model using indicators.

The novelty of this study is that it discusses the comparison of learning models in more detail with indicators while previous research can be concluded that there has been no discussion of the comparison of the two learning models and there has been no use of relevant indicators in research that is only done in general. Therefore, the purpose of this study is to make a comparison between process skills in the learning model using indicators. Limitations in this study do not cover all existing indicators, only take a few indicators but are more detailed than the previous article which only measures in general. The results of this study are expected to contribute ideas to knowledge and education as well as provide an overview of the learning model and teaching process skills in mathematics subjects. Based on the exposure of various studies that have been conducted regarding the comparison of learning models and skills, this can be the basis and reference in conducting research for further research on learning models and teaching skills. in this study discusses in detail about the indicators used, there are 4 indicators of the learning model and 3 indicators of skills used. In this study, researchers measured the learning model and mathematical skills as the object. The essence of this measurement in schools is to find out how students feel during the learning process. The researcher here tests several indicators of process skills which will be tested further. Then in testing this learning model includes all indicators of the two learning models, namely jigsaw and student team achievement division (STAD).

4. CONCLUSION

Based on the conclusions of this study, there were 144 samples of students' mathematics learning models from two schools SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II in the Batanghari area. The first hypothesis test was obtained that there were differences in the jigsaw learning model at SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II Batanghari Regency in Mathematics. Furthermore, it was found that there were differences in the Student Team Achievement Divisions (STAD) learning model at SD Negeri 04/I Sungai Ruan Ilir and SD Negeri 52/I Kilangan II, Batanghari Regency in Mathematics subjects so that there were differences in comparisons between the 2 SD in process skills in the learning model in math subjects. Process skills in the learning model for students have no small effect on success, increase in learning outcomes, and influence student performance.

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