The Effect Of Application Of Cooperative Learning Model Type Pair Check On Learning Outcomes Student In The Mathematics Lesson Class IV SDN 351 Kawasan Amma Toa Kecamatan Kajang Bulukumba District

[1]Yustika, Universitas Negeri Makassar
E-mail: yustika076@gmail.com
[2] Widya Karmila Sari Achmad, Universitas Negeri Makassar
E-mail: wkarmila73@unm.ac.id
[3]Erma Suryani Sahabuddin, Universitas Negeri Makassar
E-mail: ermasuryani@unm.ac.id

ARTICLE INFO
Original Article
Received: 19, 03.2021.
Revised: 22, 04.2021.
Accepted: 23, 04.2021.
doi:10.5937/IJESTxxx
UDK
xxx

Keywords:
cooperative model type pair check, learning outcomes, mathematics

ABSTRACT
This research is a research that uses a quantitative approach with the type of pre-experimental research and uses the form of One Group Pretest Posttest Design. The population in this study were all fourth grade students, totaling 16 students. The sample selection used is saturated sample technique. Data collection techniques in this study were observation sheets and tests. The data analysis technique used is descriptive statistical analysis and inferential statistical analysis using Paired sample T-Test. The results showed that: (1) The learning process by applying the Pair Check type cooperative learning model can be said to be good, (2) student learning outcomes show an increase after applying the Pair Check type cooperative learning model in learning, (3) Pair Check type cooperative learning model has an effect on mathematics learning outcomes. Based on these results, it can be concluded that the Pair Check type of cooperative learning model has an effect on students' mathematics learning outcomes.

INTRODUCTION

Mathematics is one of the most important branches of science, because mathematics is a subject that allows developing thinking skills and is a means to improve one's quality. The teacher's view of the mathematics learning process greatly influences how they perform their role in the classroom, so learning theories related to learning mathematics must be a top priority for mathematics teachers.

Learning mathematics is essentially learning concepts, conceptual structures, and looking for relationships between concepts and their structures. Mathematics is one of the subjects that has an influence on mastery of science and technology, so it requires strong mastery of mathematics from an early age. According to Sholeh (Chaelani, Febrianta, & Muslim, 2019, p. 156) "Mathematics subjects given in primary and secondary education are intended to equip students with the ability to think logically, analytically, systematically, critically and creatively, as well as abilities. cooperate".

Susanto (Zainal et al., 2019, p. 135) explains "Mathematics learning is a teaching and learning process that is built by the teacher to develop students 'creative thinking which can improve students' thinking skills, and can increase the ability to construct new knowledge as an effort to increase good mastery of mathematics material."

Teaching process, especially mathematics, dominant learning activities ddone by the teacher, so that there is only interaction between the teacher and students. Students tend to quickly feel bored and pay less attention to the material taught by the teacher, lack of cooperation between students, students do not understand mathematical concepts taught in an abstract manner and students have difficulty understanding the material.

One way that is done so that students can understand the concept of learning mathematics well is to form groups. Forming small groups that can actively involve students and work together is expected to improve student learning outcomes. The demands of the learning process must now involve students actively, therefore with the application of the Pair Check type of cooperative learning model it is hoped that more interactions will occur between students and students, so that students who are active in the learning process are not only smart students.

The Pair Check type cooperative learning model in Indonesian means that the pair checks. According to Irham & Armiati (2019, p. 104) "Pair Check type cooperative learning is one type of cooperative learning that can include all students in the learning process". Meanwhile, according to Yani, SP, & Sari, DS (2019) Pair Check is a cooperative model designed to influence student interaction patterns and provide opportunities for students to share knowledge.

As in previous research by Kurniawan (2017) meShow that the Pair Check type cooperative model can be applied to attract students' attention in learning, make students active during learning, students will easily accept material when interacting with friends and easily understand the material, it can increase student motivation in learning. Based on this description, Researchers are interested in conducting research with the title "The Effect of the Application of the Pair

Check Type Cooperative Learning Model on Student Learning Outcomes in Mathematics Subjects for Class IV SDN 351 Amma Toa Area, Kajang District, Bulukumba Regency".

METHOD

The research method used in this research is experimental. The form of research used in this research is Pre Experiment Design. The type of design used is One Group Pretest Posttest Design. This design does not use a control group, described as follows.

Pretest Value	Treatment	Posttest Value
O1	X	O2

Source: Sugiyono, Educational Research Methods

The population and sample of this study were fourth grade students of SDN 351 Kawasan Amma Toa which consisted of class IV students consisting of 16 people. The sampling technique used in this study was saturated sampling technique, in which all populations were sampled. This sample is used when the population is relatively small, less than 30 people.

The research data was obtained through the use of instruments in the form of pretest and posttest to measure differences in student learning outcomes using the Pair Check type cooperative learning model in mathematics lessons. The instrument is a test of student learning outcomes that has been validated by validators / experts in their fields. The research implementation process was carried out in approximately two weeks with four meetings in the experimental class. At the first meeting, students were given a pretest to measure students' initial abilities. Then, at the second and third meetings, treatment was carried out in the learning process using the Pair Check type cooperative learning model. Finally, the class is given a posttest to measure the extent to which student learning outcomes have improved.

RESULTS AND DISCUSSION

Description of the Application of the Check Pair Type Cooperative Learning Model

The learning process by applying the Pair Check type of cooperative learning model on student learning outcomes in mathematics is effective and can be said to be good, as evidenced by teacher and student observations made by the observer. In the teacher's observations, both the second and third meetings were in the good category with a percentage of 71% and 86%. Meanwhile, student activity at the second and third meetings using the Pair Check type cooperative learning model has increased from sufficient to good category with a percentage of 67% to 81%. The percentage category of the implementation of the learning process has not reached 100% due to several unsupportive conditions. However,

Overview of Student Learning Outcomes

Students' mathematics learning outcomes by applying the Pair Check type cooperative learning model in grade IV students have increased, as evidenced by the results of descriptive statistics, namely the pretest and posttest scores. The pretest value obtained by the average value of the students' pretest learning outcomes was 59.38. Data in the frequency table obtained 4 students with pretest scores in the high category and 12 students with pretest scores in the medium category.

The results of the descriptive analysis for the posttest obtained an average value of the posttest students' learning outcomes of 73.75. Data in the frequency table obtained 4 students with posttest scores in the very high category, 10 students with posttest scores in the high category and 2 students with posttest scores in the medium category. So it can be concluded that by applying the cooperative learning model type Check Pair student learning outcomes increased, from the average value of learning outcomes of 59.38 increased to 73.75 which at first the category of student learning outcomes only in the moderate category increased to high category.

According to the above, it can be interpreted that the Pair Check type of cooperative learning model is successfully used in class IV mathematics learning. The acquisition of high learning outcomes in students who are taught with the Pair Check type cooperative learning model is strengthened by Sanjaya's opinion.(Teibang & Husna, 2019)which mentions some of the advantages of the Pair Check type of cooperative learning model, among others, it can increase student independence, increase student participation to contribute thoughts because they feel free to express their opinions, form groups more easily and quickly, and train students' thinking speed. This is also in line with the opinion of Edy Setiyo Utomo(Jannah et al., 2019) revealed that the effect of the Pair Check type cooperative learning model on mathematics learning is very effective in improving student learning outcomes.

The Effect of the Check Pair Type Cooperative Learning Model on Student learning outcomes

Inferential statistical analysis, an assumption test is carried out, namely the normality test first. The normality test used the Kolmogorof-Smirnov test with the results that all data were normally distributed. The results of hypothesis testing with inferential statistics show that there is a significant effect on students' mathematics learning outcomes after using the Pair Check type cooperative learning model in the learning process. The results of the hypothesis testing were carried out by the Paired Sample t-Test with the help of the SPSS Statistic Version 22 program, which obtained a probability value of 0.000 <0.05. So that H0 is rejected and Ha is accepted. Thus it can be said that there is an average difference between the pretest and posttest learning outcomes, which means that there is an effect of the application of learning using the Pair Check type cooperative model in improving student learning outcomes. So it can be concluded that there is an effect of the application of the Pair Check type cooperative learning model on student mathematics learning outcomes in class IV SDN 351 Amma Toa Area, Kajang District, Bulukumba Regency.

CONCLUSION

Based on the discussion of the research results, it can be concluded that:

1. The learning process by applying the Pair Check type cooperative learning model to student learning outcomes in mathematics class IV SDN 351 Amma Toa Area, Kajang District, Bulukumba Regency can be said to be good. This can be seen from the activeness and enthusiasm of students when the teacher is learning with the Pair Check type cooperative learning model.
2. Student learning outcomes in Mathematics after being givenThe treatment by applying the Pair Check type cooperative learning model in the learning process showed an increase, in this case at the category level the average score of student learning outcomes, namely from the category of medium, high, and very high.
3. The Pair Check type cooperative learning model has an effect on the Mathematics learning outcomes of grade IV students. This is shown based on the probability value of 0.000 smaller than 0.05, which means that there is a difference in this case the value of student learning outcomes after learning using the Pair Check type cooperative learning model.

The suggestions given by researchers to several parties are as follows:

1. Teachers are expected to be able develop and develop creativity by using various models in learning. One of them is the Pair Check type cooperative learning model which can be used in mathematics subjects. This needs to be considered, because Pair Check is a learning model that can support the improvement of student mathematics learning outcomes and train students to learn collaboratively.
2. Students are expected to be able to follow the learning process well and be actively involved in the teaching process of the teacher who uses it Pair Check type cooperative learning model so that thinking skills and student learning outcomes can improve.
3. School can provide policies for teachers to be more innovative, creative, and professional in carrying out a more creative learning process in the classroom. One of the examples is by applying the learning model in teaching and learning activities.

REFERENCES

Armiati, M. I. (2019). Pengaruh Model Pembelajaran Kooperatif Tipe Pair Check terhadap Kemampuan Pemahaman Konsep Matematika Peserta Didik Kelas VIII. *Edukasi Dan Penelitian Matematika*, *8*(3), 102–109.

Chaelani, I., Febrianta, Y., & Muslim, A. (2019). Analisis Kebutuhan Pengembangan Model Permainan Tradisional Jawa Tengah untuk Pembelajaran Matematika di SD. *Pendidikan Jasmani, II*(1), 155-163.

Jannah, R., Studi, P., & Matematika, P. (2019). *Jurnal online mahasiswa (jompema) peningkatan hasil belajar matematika melalui model pembelajaran kooperatif tipe pair check 1*. *1*(1).

Sari, S. P. Y. D. S. (2019). Pengaruh Model Pembelajaran Kooperatif Tipe Pair Check Terhadap Hasil Belajar Siswa Kelas VIII. *Pendidikan Matematika*, *1*(2), 28–35.

Teibang, S. I., & Husna, A. (2019). Efektivitas Model Pembelajaran Kooperatif Tipe Pair Check Terhadap Hasil Belajar Matematika Siswa Kelas IX SMP Negeri 17 Batam TP. 2018/2019. *PYTHAGORAS: Jurnal Program Studi Pendidikan Matematika*, *8*(1), 32–40. https://doi.org/10.33373/pythagoras.v8i1.1788

Zainal, Z., Jasriani, A., & Hasnah, H. (2019). Pengaruh Penggunaan Media Film Kartun Matematika Terhadap Hasil Belajar Matematika Siswa SD Negeri 187 Pinrang. *Saintifik*, *5*(2), 135–139. https://doi.org/10.31605/saintifik.v5i2.232.