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THE GROUP INVESTIGATION TYPE COOPERATIVE LEARNING MODEL WITH THE ASSISTANCE OF IMAGE MEDIA TO IMPROVE THE LEARNING OUTCOMES OF CLASS VIII STUDENTS AT SMPN SATAP KARANGGI ROWA

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Abstract
The purpose of this study was to determine the application of students' cognitive learning outcomes using the Collaborative Group Inquiry (GI) learning model on the material of the human respiratory system in class VIII of SMP Negeri Satap Karanggi Rowani, Umbu Ratu Nggay Barati Tengah District. Sumba. Area The population of this study were all students of class VIII, SMP Negeri Satap Karanggi Rowa, totaling 30 students, and the research sample was class VIII students, totaling 30 students. Multiple choice questions on the pretest and posttest were used to collect data for this study. The results of the vitality survey showed that 17 students scored more than 65 or 57%, while 13 students scored less than 65, namely. 3% of 30 students in the first cycle, and 29 students scored more than 65 points in the second cycle. . or 97%, while 1 student or 3% of 30 students scored below 65. Based on the results of the study it can be concluded that the application of the Cooperative Group Investigation (GI) learning model to the human respiratory system material for SMP Class VIII students Negeri Satap Karanggi Rowa can improve student performance and assessment. problems and can improve student learning outcomes with group inquiry type cooperative learning models.

Keywords: Group Learning Model, media images, learning outcomes

Abstrak
Tujuan penelitian ini adalah untuk mengetahui hasil belajar kognitif peserta didik dengan penerapan model pembelajaran Cooperative Learning Group Inquiry (GI) pada materi sistem pernapasan manusia di kelas VIII SMP Negeri Satap Karanggi Rowan Kecamatan Umbu Ratu Nggay Barati Kabupaten Sumba Tengah. Populasi penelitian ini adalah seluruh siswa kelas VIII SMP Negeri Satap Karanggi Baris yang berjumlah 30 pesrta didik dan sampel penelitian terdiri dari 30 peserta didik kelas VIII. Dalam penelitian ini digunakan soal pretest dan posttest berupa soal pilihan ganda untuk mengumpulkan data. Hasil survei vitalitas adalah 17 peserta didik yang mendapat nilai lebih dari 65 poin atau 57%, sedangkan 13 dari 30 peserta didik pada siklus I atau 3% dari 30 peserta didik pada siklus kedua, berada di bawah 65. 29 peserta didik mendapat nilai lebih dari 65 poin, atau 97%, bahkan 1 peserta didik mendapat nilai kurang dari 65, atau 3% dari 30 peserta didik. Berdasarkan hasil penelitian dapat disimpulkan bahwa penerapan model pembelajaran Kooperatif Group Study (GI) pada materi Sistem Pernapasan Manusia di Kelas VIII SMP Negeri Satap Karanggi Rowa dapat meningkatkan prestasi dan kemampuan peserta didik. Pemecahan masalah dan dapat meningkatkan hasil belajar peserta didik melalui model pembelajaran Cooperative group research.

Kata Kunci: Model Tipe Pembelajaran Kelompok, media gambar, hasil belajar.

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INTRODUCTION

The development of the world of national education has undergone a transformation from time to time to produce the best human resources (Makaborang, 2019: 130). In Law no. 20 of 2003 concerning the National Education System education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have spiritual strength, religion, personality, intelligence, noble character, self-control and the skills needed by them, society, nation and state.

Learning is a system that aims to help the learning process of students, which is designed in such a way as to support the learning process of students in developing their potential. The thing that is very important in education is the method of delivering messages or material that is in accordance with educational goals, namely by creating models to achieve the expected learning objectives, so planning learning activities should not depend solely on the teacher, but must optimize their potential. students (Rambe, 2018). Therefore learning must be designed in such a way and learning must optimize the potential of students to achieve effective and efficient learning objectives. This can be applied in the science learning process.

Natural Sciences (IPA) is a natural science or knowledge that studies events that occur in nature. Science learning emphasizes students finding out and doing so that it can help students gain a deeper understanding of themselves and their surroundings. So science learning must emphasize giving direct experience to provide competence so that students are able to understand and solve problems with the natural surroundings, especially problems with the human respiratory system.

Based on the results of the initial interview on April 11 2022. Researchers found problems that often occur in science learning activities at class VIII SMPN Satap Karanggi Rowa. The learning model is still conventional where the learning model is directly teacher-centered so that students are less active in the learning process. Students are busy disturbing their seatmates and students rarely express their opinions. In addition, students do not understand the material that the teacher conveys. The KKM score for science subjects, especially the UAS score for the 2020/2021 school year, is 65. Only 33% of students who complete, while 66% do not complete. The KKM score is low because during class learning there are still students who work individually and have not interacted with fellow friends. Another problem is that the teacher has not used learning media in class, only provides textbooks and is told by students to record or specialize in material and needs solutions so that students are active in learning.

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One model of cooperative learning, such as group study, is considered a sophisticated learning model because it involves students during the learning process. This is in accordance with Hamdan (2011: 90) that the group learning method is often considered the most complex and difficult method in cooperative learning. This method involves students in determining topics and planning ways to learn through their research. In general, the class organizational structure with the group research (GI) cooperative learning model is dispersed, students are divided heterogeneously into several groups consisting of 2-6 people, after which each group discusses a different topic under their responsibility and presents it to the group. . . reports to share and exchange information.

of the Group Investigation (GI) Cooperative Learning Model on student learning outcomes in class X high school plantae material, it can be concluded that the application of the learning model GI has a significant effect on student learning outcomes in Plantae material for class X SMA Srijaya Negara Palembang. This can be seen from the comparison of the average learning outcomes of students in the experimental class using the GI learning model which is higher than the control class using the lecture and question and answer method. Opinion according to Marhadi (2014) says that the results of research by applying the GI type cooperative learning model can be concluded: 1) the *Group Investigation type* cooperative learning model can improve social studies learning outcomes for fourth grade students at SD Negeri 56 Pekanbaru, 2) the application of GI type cooperative learning can improve quality of learning.

Based on the description above, the researcher wants to conduct research with the title Application of the *Group Investigation Type Cooperative Learning Model* with the Assistance of Picture Media to improve the learning outcomes of class VIII students at SMPN Satap Karanggi Rowa.

Learning is a word that is familiar to everyone, especially students, learning activities are an integral part of all their activities in studying at formal educational institutions (Fauhan & Brillian, 2021: 323). According to Slameto (2010: 54) suggests the factors that influence learning are as follows: internal and external factors.

One important aspect in the learning process is the learning model. The use of learning models is one of the innovation efforts made by the teacher so that learning is more varied, interesting, and meaningful. According to Wisudawati and Sulistyowati (2014: 48) stated that the learning model is a conceptual framework that describes procedures systematically in organizing learning experiences to achieve learning objectives.

METHODS

This type of research is classroom action research (CAR) modeled by Kemmis and Mc.Taggart. Classroom action research (PTK) is a scientific activity that has an orientation towards solving learning

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problems through deliberate action with the aim of improving and enhancing learning processes and outcomes (Ningrum, 2014: 22). The approach in this study uses a descriptive quantitative approach .

The location of this research is at Satap Karanggi Rowa Public Middle School, Umbu Kawolu Village, Umbu Ratu Nggay Barat District, Central Sumba Regency for the 2022/2023 academic year. The subjects of this study were students in class VIII of SMP Negeri Satap Karanggi Rowa in the 2022/2023 academic year.

The variables contained in this study are:

a) Independent variable *Group Investigation Learning Model* with the help of media images
b) The dependent variable is student learning outcomes

To provide the same elaboration in this study, the following operational definitions of the research variables are given, namely:

1. The *group investigation type* cooperative learning model is the division of students into several groups consisting of 4-5 people. (Rusman, 2011:220).
2. Learning outcomes are abilities possessed by students after obtaining learning experiences in the form of cognitive abilities.

The data and data sources used in this study are

1. Data from interviews with science teachers in connection with the learning process
2. Data on test results which are student learning outcomes by learning using the *Group Investigation type cooperative learning model* with the help of media images
3. Field notes from a series of learning activities during research
4. The data source in this classroom action research was class VIII students at SMPN Satap Karanggi Rowa, Umbu Ratu District, West Nggay, Central Sumba Regency, consisting of 30 students.

Research procedure

The model used in this class of action research is the Kemmis and Mc Taggart Models. In each cycle of this research model several iterative stages are carried out which include planning (planning) implementation or (acting), observing (observing), and reflecting (refleting). Explaining that one CAR cycle consists of four stages, namely (1) Planning, (2) Implementation, (3) Observation, (4) Reflection, after a cycle has been completed, re-planning is carried out again which will be carried out in the form of a separate cycle and so on or with several cycles, opinion according to (Iskandar, Dadang, & Narsim, 2015)

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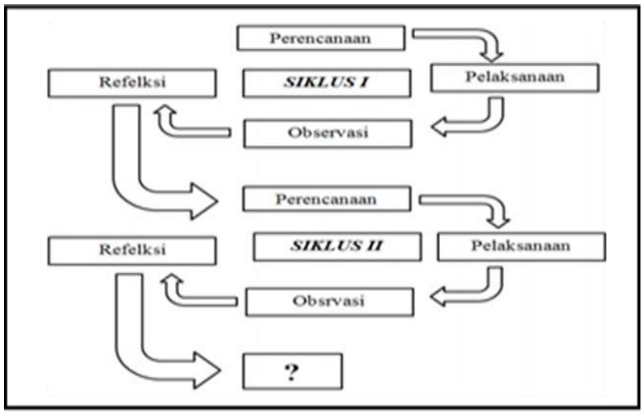

Data Collection Techniques and Instruments

According to Sudaryono et al. (2013:40) Data collection is carried out to obtain correct and reliable information in a study. The data collection instrument used in this study was in the form of a test result sheet at the end of the teaching and learning activities with the application of the *Group Investigation Type Cooperative learning model* with the help of media images the researcher conducted a test to find out and measure the ability of class VIII students of SMPN Satap Karanggi Rowa in understanding the material what has been studied, the test will be carried out at the end of each cycle using question sheets on the material of the human respiratory system. The research technique used in this study is in the form of

1. The test as a data collection instrument is a series of questions or exercises used to measure knowledge, intelligence, abilities or talents possessed by individuals. In this study, the test was carried out twice, namely the initial test or test before treatment (*pretest*) and the posttest or test after the discovery of *the Group Investigation* (*posttest)* .
2. Observation collecting data in observation, researchers directly dive in location to study and analyze field data systematically in accordance with the problems in research. The observation sheet is used to determine the activities of students during learning using the *Group Investigation cooperative learning model* equipped with LKPD.
3. Documentation is all recorded material during the research. Documentation is the process of collecting data in the form of photographs.

Data analysis technique

The data obtained in this study were analyzed using quantitative descriptive analysis techniques to determine the increase in student learning outcomes through the learning process using the *group*

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investigation cooperative learning model . Data obtained from learning outcomes in the analysis with using the formula for calculating the average value of student completeness (Sudjana, 2011: 67).

Preliminary data

The initial data is the percentage of learning completeness obtained from the subject teacher in the form of students' midterm assessment scores.

Student Activity Data

Judging from group work, activeness in finding out about things that are not understood, good responses to students who are presenting, asking questions, or responding, students can understand the application of actions and are able to argue, then conclude learning.

Learning Outcome Data

Data on learning outcomes obtained from tests carried out in pre-cycle learning, cycle I and cycle II were used to determine the development of student scores before and after implementing the *GI type cooperative learning model* .

Table 3. Assessment Criteria

Level of success	Category
81–100	Very good
66–80	Good
56–65	Pretty good
0-55	Not good

RESULTS AND DISCUSSION

Research result

The implementation of the research begins with an introductory cycle and continues with cycles I and II. Each cycle I was made in 1 meeting with 3 lessons (JP), consisting of 1 JP 5 minutes, and the results obtained during the research are explained below.

Pre Cycle Data

Pre-cycle learning of science subjects for class VIII Semester II at SMPN Satap Karanggi Rowa, Umbu Kawolu Village, Umbu Ratu Nggay Barat District, Central Sumba Regency, 2022/2023 academic year with the subject matter of the Human Respiratory System. It was carried out on Monday 30 January 2023, the results were not satisfactory, where the researchers had not implemented the *GI type cooperative learning model* .

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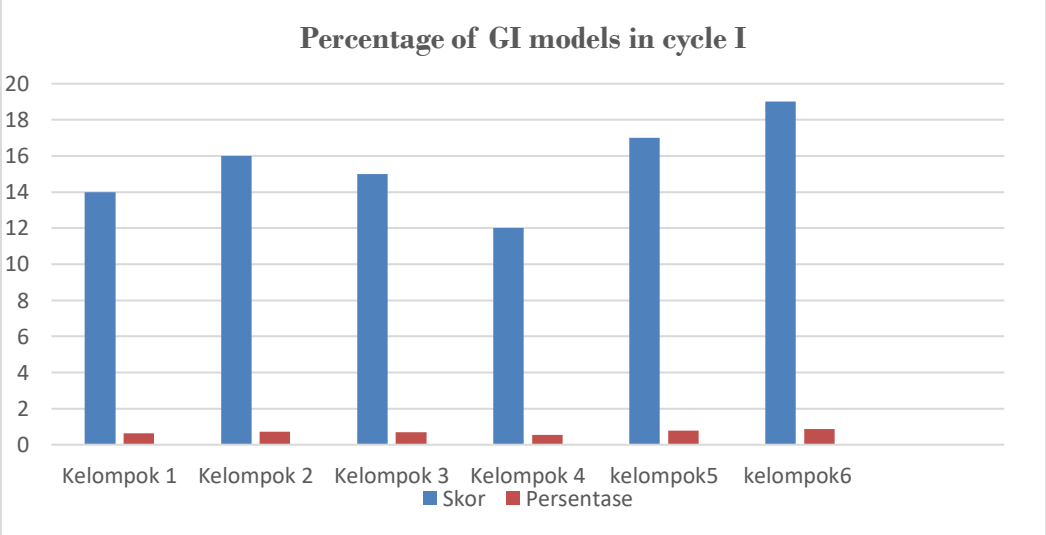
Table 4. 1Pre Cycle Test Results

No	Learning outcomes	Pre Cycle
1	The highest score	75
2	Lowest Value	30
3	Average value	5,43
4	complete	10
5	Not Completed	20
6	Percentage of learning completeness	33.67%

Figure 4. Graph of Evaluation Results Before Learning Improvements



Based on the results of observations obtained in cycle I, the implementation of the GI model in each group was different where there were still groups that received a score below 65% with an adequate category with a percentage of 64% and a less category with a score of 54% with a less category. The problems found in Cycle I were because the teacher was not used to applying the GI model in the learning process and was not yet optimal, so the researchers continued in cycle II.

At the end of the study the researcher conducted an evaluation of learning outcomes to determine the level of success. The results of cycle I learning improvements are presented in the following table.

Table 4. Results of the Evaluation of Cycle I Learning Improvements

NO	NAME	MARK
1	Agung Purnama U. Eldest	95
2	Alvinaratika Nolan	55
3	Anastasia RY Danga	70

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4	Angelyn R. Jatti	100
5	Anthony Woha Again	50
6	Arel Saputra Ana Gadung	95
7	Chery marsel ur samapati	65
8	Evansius pali oha	70
9	Faris gawi tangi	80
10	Giovani Gauka saba kodi	50
11	Immanuel safrianus gawi	90
12	Juandri umbu jowa	60
13	Jumita R toji	90
14	Kristian u poti	35
15	Mance H Lalu meha	40
16	Mince lawu nedi	85
17	Marlince ladu bana	75
18	Nadia rambu hadda	60
19	Priski Umbu Ringu	55
20	Printo mala palalabu	65
21	Rivaldo Katanga H Ora	80
22	Roy Delu Jipi	95
23	Sanly R Daiju	75
24	Sarianti R.Liga	40
25	Sastria Pradika RDS	95
26	Siti Prawida R. Tagu	45
27	Lowu umbu triconation	65
28	Winda Mbaja Oru	35
29	Winanda ladu bana	50
30	God umbu tara dapamudang	30
Amount		**1995**

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From the table we can see that 17 students or 57% scored above 65, while 13 students or 43% of the 30 students scored less than 65. To find out the presentation of the range of values, an analysis is carried out which is presented in the table below.

Figure 4. Graph of Evaluation Results of Cycle I Learning Improvements

Table 4. Analysis of Cycle I Formative Test Results

No	range	Frequency
1	29-30	1
2	31-40	4
3	41 -50	4
4	51–60	4
5	61–70	5
6	71–80	4
7	81 -90	3
8	91 -100	5
	Amount	30

Based on the table above, of the 30 people who mastered the material before learning improvement, 1 student, student 31-0, student 1-50, student 51-60, class 61-70 is. 5, the value is 71-80 students, grades 81-90 as many as 3 students and students in grades 91-100 as many as 5 students. If the results of the evaluation of learning improvement cycle I for Science Subjects with indicators of the Human Respiratory System class VIII semester II at Satap Karanggi Rowa Middle School, Umbu Kawolu Village, Umbu Ratu West Nggay District, Central Sumba Regency, for the 2022/2023 academic year, if presented in graphical form, it can be seen in the figure following.

Based on observations from cycle II, the implementation of the GI model in each group achieved an increasing success rate from cycle I to cycle II. In round II, all groups got percentages above 65% in good and very good categories. This shows that the application of the GI type cooperative learning model

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can improve the science learning outcomes of Grade VIII students of SMPN Satap Karanggi Rowas to be optimal and successful as expected. Teachers are used to applying the GI model in the learning process, and students are starting to be active in learning.

The learning scenario went well, the researcher carried out according to plan. At the end of the study the researcher conducted an evaluation of learning outcomes to determine the level of success. The results of cycle II learning improvements are presented in the following table

Table 4. Results of Cycle II Learning Improvement Evaluation

NO	NAME	MARK
1	Agung Purnama U. Sulung	95
2	Alvinaratika Nolan	90
3	Anastasia RY Danga	70
4	Angelyn R. Jatti	100
5	Anthony Woha Again	80
6	Arel Saputra Ana Gadung	95
7	Chery Marshall UR Samapati	65
8	Evansius Pali Oha	70
9	Faris Gawi Tangi	80
10	Giovani Gauka Saba Kodi	50
11	Immanuel Safrianus Gawi	90
12	Juandri Umbu Jowa	70
13	Jumita R Toji	90
14	Kristian U. Poti	90
15	Mance H Lalu Meha	75
16	Mince Lawu Nedi	85
17	Marlince Ladu Bana	75
18	Nadia Rambu Hadda	65
19	Priski Umbu Ringu	70
20	Printo Mala Palabu	65
21	Rivaldo Katanga H Ora	80
22	Roy Delu Jipi	95
23	Sanly R Daiju	75
24	Sarianti R.Liga	80
25	Sastria Pradika RDS	95
26	Siti Prawida R. Tagu	75
27	Trikonsasi Umbu Lowu	65
28	Winda Mbaja Oru	95
29	Winanda Ladu Bana	90
30	God Umbu Tara Dapamudang	75

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Amount	**2390**

From the table we can see that 29 students or 97% scored above 65, while 1 student or 3% of the 30 students scored less than 65. To find out the presentation of the range of values, an analysis is carried out which is presented in the table below.

DISCUSSION

In pre-cycle learning, it was seen that some students were not so ready to participate in learning. When the researcher explained the material in front of the class, many students did not focus on listening to the researcher's explanation. Furthermore, when the researcher gave the posttest, many students were noisy and asked each other questions related to the post test that they did not understand. After the test, the researcher gave the opportunity to the students to ask questions, out of 30 students, 2 people dared to ask, then the researcher guided the students to conclude the material after that the researcher delivered the sub-material that would be studied at the next meeting and ended the learning activity. The learning outcomes of students in the pre-cycle were only 10 students who completed with a percentage of 33% and those who did not complete were 20 students with a percentage of 67%. Initial study results show that the average score is still very low, but the percentage of learning completeness is also very low, many of which get less than KKM or 65.

Identification of student learning outcomes from the posttest activity cycle 1 there were 17 students who completed with a percentage of 57% and 13 students who did not complete with a percentage of 43% with the highest score of 100 and the lowest score of 30 then the overall average score in cycle 1 is 56.67%. Student learning outcomes experienced a significant increase in cycle 1 from pre-cycle activities. For cycle 1 learning outcomes are said to be still low because it shows a higher percentage of incomplete. This is because learning cycle 1 is given action by using the GI learning model equipped with worksheets in the form of filled-in questions to make students more active because the stages in the learning process become students find the concepts in the material being studied. In line with the opinion of Kholifah., et al., (2018: 95) which states that the group investigation type cooperative learning model if accompanied by the use of media images will make students more active and understand the subject matter (Latif et al., 2020; Raka Siwa et al., 2018; Romaito et al., 2021; Thovawira et al., 2020)

The implementation of cycle II has gone well, because students already understand how the GI type cooperative learning model is so that students are able to carry out learning properly and correctly. Students have participated actively in learning both in doing group assignments. Posttest learning outcomes in cycle II for the cognitive aspect, namely there were 29 students who completed with a percentage of 97% of students who did not complete 1 person with a percentage of 3%, the achievement

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of learning outcomes in cycle II was very satisfying because many students scored above the KKM, namely 65.

CLOSING

Based on Class Action Research (PTK) and the discussion found in each cycle I and II with the material on the human respiratory system in class VIII semester II of the 2022/2023 academic year at Satap Karanggi Rowa Middle School, Umbu Ratu Nggay Barat District, Central Sumba Regency, the authors can concluded that the application of the group investigation type cooperative learning model with the help of media images has been able to improve the learning outcomes of class VIII students at SMPN Satap Karanggi Rowa.

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