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Application of The Group Investigation Model, Using Whatsapp to Increase Learning Outcomes for Class VI Students of SD Negeri Trayu Samigaluh for The 2020/2021 Academic Year

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ABSTRACT: The purpose of this study was to improve learning outcomes for grade VI students at SD Negeri Trayu Samigaluh Kulon Progo for the 2020/2021 school year and the ability of teachers to manage learning through the application of the Group Investigation model with WhatsApp Group Classes. This research is a classroom action research (CAR). This research was carried out in two cycles, in which each cycle had two meetings covering planning, action, observation, and reflection. The research subjects were students of Class VI SD Negeri Trayu Samigaluh, Kulon Progo Regency. Data and data sources come from students, and the learning process. Data collection techniques through observation and tests. Data analysis with qualitative descriptive technique. The results showed that the application of the Group Investigation model using the WhatsApp Group class could improve the learning outcomes of grade VI students at SD Negeri Trayu Samigaluh for the 2020/2021 school year. It can be seen the increase in cognitive test scores from 35.29% (cycle I) to 58.82% (cycle II). Furthermore, in the management of learning by teachers, the average result was 3.49 (cycle I), with the category "Very Satisfactory", while in Cycle II the average value was obtained at 3.74 with the category "Very Satisfactory".

Keywords*:* model group investigation, WhatsApp Group, learning outcomes

INTRODUCTION

The COVID-19 pandemic has had a major impact on all sectors, including the education sector. Education in schools cannot be carried out properly. Schools are not allowed to carry out face-to-face learning to prevent the spread of Covid-19. The safety of students, teachers, and employees is the most important thing, however, the learning process must not stop.

To continue to provide educational services for students, the government has set a policy of learning from home since the beginning of the Covid-19 pandemic spreading in Indonesia, namely in March 2020. The government's policy regarding learning from home is stated in Circular Letter Number 4 of 2020 issued on March 24, 2020. This learning from home policy is still ongoing even though it has changed the school year because the pandemic has not yet ended.

Based on the Circular of the Secretary General Number 15 of 2020 concerning guidelines for implementing learning from home during the emergency period of the spread of Corona Virus Disease (Covid-19), the implementation of learning from home is carried out by distance learning divided into two approaches, namely distance learning in the network and learning from home. remotely outside the network. Schools can choose this approach according to school conditions. SD Negeri Trayu chose the learning process to be carried out through a combination system, namely online and off-network learning.

Based on the results of observations made at SD Negeri Trayu in October 2020, students experienced boredom in participating in online learning. Some of the factors that cause students to have low learning mastery when online learning include (1) the implementation of online learning which is only given assignments through a WhatsApp group then students have to do assignments and collect them for the teacher; (2) teachers have not applied various models and methods when carrying out online learning; (3)

lack of interaction between students and teachers in the implementation of online learning.

The results of observations related to the mastery of student learning outcomes, the percentage of completeness of student learning outcomes is still less than 50%, to be precise 47.05%. This shows that the mastery of student learning outcomes is still low. To overcome these problems, teachers must work themselves so that the mastery of student learning outcomes in learning increases.

Based on these problems, researchers want to determine actions to improve the quality of learning on the theme of exploring space, the sub-theme of amazing regularity, on the content of science to encourage student involvement in learning and improve learning outcomes, researchers use one of the group investigation learning models. so that students are active in learning activities and are able to find out for themselves about the learning they are experiencing.

From the description above, the purpose of this research is to improve learning outcomes in class VI students of SD Negeri Trayu Samigaluh Kulon Progo for the 2020/2021 academic year and the ability of teachers to manage learning through the application of the Group Investigation model with WhatsApp Group Classes. Group investigation is a small group that encourages students to engage in learning. This model requires students to have good communication skills and group process skills. Group investigation is a cooperative learning strategy that places students in groups to investigate a topic [1].

RESEARCH METHODOLOGY

This research method is a classroom action research. This research was carried out through collaborative work between grade VI teachers at SD Negeri Trayu Samigaluh and researchers. The subjects of this study were students of class VI SD Negeri Trayu, Samigaluh, totaling 17 students, consisting of 8 girls, 9 boys. The research object is "Application of the Group Investigation (GI) Model, Using Whatsapp to improve student learning outcomes in the Amazing Order of the Theme of Natural Science (IPA) content. Research Place: SD Negeri Trayu, Samigaluh, Kulon Progo Regency. Research time: January 18 to April 3, 2021.

This class action research consists of three stages in one cycle, if in this class action deficiencies are found and the predetermined target is not created, then this is found and the predetermined target is not achieved, then improvements are made to the planning and implementation of the next cycle.

The classroom action research procedure uses a spiral model from Kemmis & Mc Taggart consisting of three cycles, each cycle consisting of several actions [2]. Considering that research during the COVID-19 pandemic was carried out in 2 cycles, each cycle of 2 meetings where each meeting took 2 x 35 minutes or 2 hours of lessons. CAR is carried out through a cycle assessment process consisting of 4 stages, planning (Planning), implementing action (Action), observation (Observation), and reflection (Reflection). The design of the research can be seen in FIGURE 1.
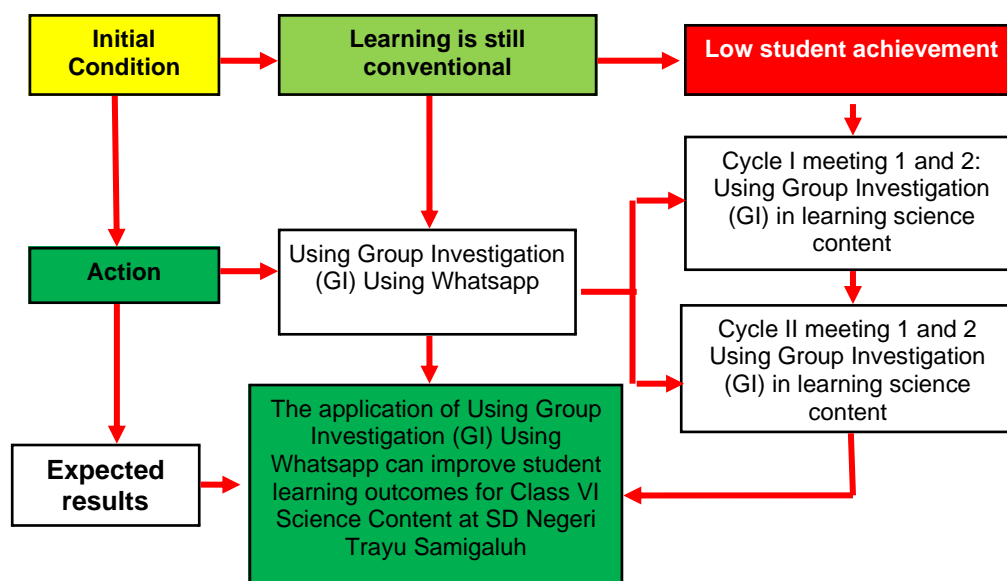

FIGURE 1. The design of the research

The technique of collecting data through observation was carried out by researchers with colleagues to collect data obtained during the study. Observations were carried out using an instrument for assessing the ability of teachers to teach consisting of 7 aspects consisting of 29 indicators. The test is used to determine the level of success of students in learning using practice questions which consist of 20 questions consisting of 10 multiple choice questions and 10 short questions and are given according to the material. Document data is used to strengthen the data obtained from the results of students' work scores, the results of observations in the form of photos of the learning process, photos of images used.

The research data analysis technique is a qualitative descriptive technique with the aim of knowing the increase in learning outcomes of the Space Exploration Theme, Sub-Theme of Amazing Order in the Natural Science (IPA) content of students by applying the Group Investigation (GI) model. The data analysis technique is made in the form of tables and graphs of student scores obtained both before the repair, the value of cycle 1, and the value of cycle 2 so that it can be seen the trend of increasing the results of the implementation of the Group Investigation Model.

Researchers analyzed each score obtained by students with scoring guidelines that had been made based on the weight of the scores obtained by students, multiple choice each student answered 1 score of 1, while the description of giving was based on keywords, while the maximum keyword was 3. Further information can be seen in TABLE 1.

TABLE 1. Assessment Guidelines for Student Learning Outcomes

No	Question Form	Number of Questions	Score	Total score
1.	Multiple choice	10	1	10
2.	Short Fill	10	2	20
	Maximum Score			30

Teaching and learning activities carried out by teachers using an observational model based on quantitative data using an assessment procedure obtained on each indicator are given a minimum score of 1 and a maximum of 4 which can be calculated based on the total average score, percentage, value conversion, and category can be seen in **TABLE 2**.

TABLE 2. Category and Value Conversion Based on Criteria

Criteria	Value Conversion	Category
85 % < X ≤ 100 %	4	Very satisfy
65 % < X ≤ 84 %	3	Satisfying
45 % < X ≤ 64 %	2	Good enough
0 % < X ≤ 44 %	1	Less satisfactory

a. The formula for calculating the percentage is as follows:

$$P = \frac{\Sigma \text{ Score}}{\Sigma \text{ Maximum Score}} \times 100$$

b. The formula for calculating the average value is as follows:

$$x = \frac{\Sigma X}{\Sigma N}$$

Description:
x   = Average value
∑X   = Sum of all participant scores
∑N   = Number of participants

RESULT AND DISCUSSION

The discussion of classroom action research is based on the results of the research starting from the Pre-cycle, cycle I to cycle II. The discussion on the results of the study explains that the application of the Group Investigation (GI) learning model using WhatsApp Group can be explained as follows:

1. Pre Cycle

The results of the pre-study show that most of the students' learning achievements have not met the Minimum Completeness Criteria because teachers are still teaching conventionally, considering that learning in the learning pandemic era requires creativity and innovation in carrying out learning activities. The impact of student achievement on learning completeness Minimum Completeness Criteria 75, has not been fulfilled. The result is that there are 5 students who reach the Minimum Completeness Criteria: 29.41%, and those who have not reached the Minimum Completeness Criteria are 12 students (70.59%). The frequency of students achieving completeness is still very low. Method is a systematic way of working to facilitate the implementation of an activity in order to achieve the specified goals [3]. In the era of the covid-19 pandemic, teachers are taking steps to improve distance learning through the Group Investigation (GI) learning model using WhatsApp Groups**.**

2. Cycles I and II in Research.

This research was conducted in two cycles. Each cycle has two meetings. with the Theme Exploring Space, Sub-Theme of Amazing Order in the content of natural science (IPA). and focus of research on the content of Natural Sciences (IPA). class VI even semester at SD Negeri Trayu Samigaluh. research activities using the distance learning process (online) are divided into 3 main activities, namely initial, core, and final activities.

The core activity, the researcher explained the online model material using the WhatsApp Group delivering material through voice notes, pictures, assignments, experiments, discussions, and questions and answers, students were divided into three groups, each group was given a subject in which the material was randomized by the participants. students look for partners and appear in WhatsApp Groups, reading out the results according to the material on the subject under the guidance of online teachers. Then a test is conducted to determine the level of mastery of students on online material using WhatsApp Group. at the end of cycle I and II.

Improving student learning activities in the COVID-19 pandemic era, cognitively and physically, through a fun learning model that is very suitable to be used to solve problems and can increase student learning motivation effectively as a means of training students' courage to make presentations using the WhatsApp application. Group, and can train students' discipline in respecting time to learn.

a. Improved learning outcomes for the Theme of Exploring Space, Sub-Theme of Amazing Order in the content of Natural Sciences (IPA).

During the implementation of learning applying the Group Investigation (GI) learning model using WhatsApp Group, there was an increase in learning outcomes. Learning outcomes can be seen from the test scores starting from the initial test to the final test. Cycle I and Cycle II. in TABLE 2.

TABLE 2. Results of Pre-cycle, Cycle I and II students at SD Negeri Trayu, Samigaluh Kulon Progo. 2020/2021 school year

Value interval	Pre Cycle (%)	Cycle I Test Results (%)		Cycle II Test Results (%)	
	Test Results	Meet 1	Meet 2	Meet 1	Meet 2
85-100	0	5.88	11.76	11.76	29.41
75-84	29.41	35.29	47.06	58.82	64.71
65-74	41.18	47.06	35.29	23.53	5.88
55-64	23.53	11.76	5.88	5.88	0
> 54	5.88	0	0	0	0
Amount	**100**	**100**	**100**	**100**	**100**

TABLE 2 Shows student learning outcomes that have increased starting from the initial test, cycle I, to cycle II. It is known that the initial test percentage is 29.41% of students who complete the Minimum Completeness Criteria, in the first cycle of meeting 1: reaching 35.29%, and meeting 2: reaching 58.82%, there is an increase, 23.53%. Students who have not met the Minimum Completeness CriteriaCycle I meeting 1: 58.82% then meeting 2: reaching 41.17%, there is a decrease of 17.65%. Cycle II obtained the average test results that met the Minimum Completeness Criteriabased on the percentage of meeting 1: reaching 70.58%, meeting 2: reaching 94.12%j, there was an increase of 23.54%, students who had not completed meeting 1 achieved an average based on a percentage of 29.41%, at the second meeting it reached 5.88%, so there was a decrease of 23.53%.

The application of the Group Investigation (GI) learning model using WhatsApp can improve student learning outcomes. Group Investigation learning is very actively used to improve learning because it can provide more learning control than other learning models [4].

b.   Ability of Model Teacher in teaching and learning activities at SD Negeri Trayu Samigalus Academic Year 2020/2021

The teaching and learning process is carried out by the teacher applying the Group Investigation (GI) learning model using WhatsApp Group, showing significant developments as shown in TABLE 3.

TABLE 3. Results of Model Teacher Ability in managing teaching and learning activities cycles I and II at SD Negeri Trayu Samigaluh for the 2020/2021 academic year.

No.	Aspects /Indicators	Total Score Average Cycle I		Total Average Score of Cycle II	
		Pert 1	Pert 2	Pert 1	Pert 2
	Total score average	3,36	3,61	3,70	3,78
	Convert value	3	4	4	4
	Category	Satisfying	Very Satisfactory	Very Satisfactory	Very Satisfactory

TABLE 3 above shows the development of the model teacher's ability to manage teaching and learning activities the results starting from cycle I and cycle II show significant progress, the result is that the average score of cycle I reach 3.49; 87.13% conversion value 4, the category "Very Satisfactory", Cycle II total average score; 3.74; the percentage is 93.50%, the conversion value is 4, the category "Very Satisfactory" when viewed from the development of the model teacher's ability there is an increase in cycle I to cycle II: reaching 6.38%. demonstrate the ability of the learning process in applying the Group Investigation (GI) learning model using WhatsApp by the model teacher, which has an impact on the achievement and ability of the model teacher in managing learning,

The Group Investigation cooperative learning model is ideally applied in science learning. The ability or competence is important for teachers to be able to carry out their duties as educators/teachers effectively and efficiently. Competence is the ability or ability to do something [5]. Group Investigation (GI) learning model using WhatsApp as a solution.

CONCLUSION

The results of the acquisition based on the test at the end of the study in the first cycle of meeting 1 reached 35.29%, and meeting 2, there were 58.82%, there was an increase, 23.53%. While students who have not met the Minimum Completeness Criteria Cycle I in the first meeting reached 58.82% and then the second meeting, got 41.17%, there was a decrease of 17.65%. Thus the second cycle obtained the average test results that met the Minimum Completeness Criteria based on the percentage of meeting 1 reaching 70.58%, meeting 2 obtaining 94.12%, then there was an increase of 23.54%, while students who had not completed meeting 1 reached an average of the average percentage was 29.41%, and at the second meeting it was 5.88%, so there was a decrease of 23.53%. Meanwhile, on the teacher's ability to manage learning models through the Group Investigation (GI) learning model using WhatsApp Group, the results of observations made by colleagues (collaborators) showed significant developments where

students were able to interact and innovate well. the average of the first cycle reached 3.49, with a percentage of 87.13% conversion value of 4, the category "Very Satisfactory", while the second cycle the average score of 3.74, percentage of 93.50%, value conversion of 4, the category "Very Satisfactory" when viewed from the development of the model teacher's ability, there was an increase in cycle I to cycle II achieved; 6.38%.

REFERENCES

1. Maimunah, "Pembelajaran Volume Bola dengan Belajar Kooperatif Model GI pada Siswa Kelas X SMA Laboratorium UM", thesis, Universitas Negeri Malang, 2005, pp. 21.
2. Basrowi, Penelitian Tindakan Kelas. (Departemen Pendidikan Nasional Direktoran Jenderal Pendidikan Tinggi, Jakarta, 2008)
3. A. Abu and U. Nur, Ilmu Pendidikan Islam I, (Pustaka Setia, Bandung, 1997).
4. Sharan, Y., & Sharan, S. (1990). Group investigation expands cooperative learning. Educational Leadership, 47(4), pp. 17–21.
5. Muhibbin Syah, Psikologi Pendidikan Suatu Pendekatan Baru (Bandung: Remaja Rosdakarya, cet. 14, 1995), pp. 1