

IMPROVING STUDENTS LEARNING OUTCOMES USING GROUP INVESTIGATION METHOD

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ABSTRACT

This research is Classroom Action Research which aims to improve student learning outcomes using the Group Investigation method. This research was carried out in 1 cycle consisting of four stages, namely planning, implementing actions, observing and reflecting. Because the expected results have been achieved, only 1 cycle is carried out without a second cycle. The results of the research show a significant increase in student learning outcomes in oceanography courses for semester 2 students in Geography study program at PGRI University of Pontianak. In pre-action it was found that there were still 89% of students who could not achieve the minimum score with an average score 44.2. After implementing the group investigation method in the class, it was found that the student's score increased to 77 with the student completion rate reaching 82%. This shows that the group investigation method is very effective in improving student learning outcomes because this model guide students to get involve in internalizing and reshaping information actively. Beside that, students build understanding from within, not from external sources which encourages a better understanding of the topics.

Keywords: *CAR, Learning Outcomes, Group Investigation*

INTRODUCTION

Education is one of the manifestations of dynamic human culture. Therefore, educational development should occur in line with changes in the culture of life. In Indonesia, education has experienced developments over time in all aspects of learning, starting from facilities, learning media, educational technology, and teachers. The community environment will always be related to education,

especially in this modern era. The global era has placed education in higher education in a vital and strategic area. Through educational efforts that are constantly moving, it is a series in a unified whole and culminates in the ideals of national education. Good management in the scope of education will consistently produce quality output and vice versa. The idea of management is undergoing a



series of education is the process for us to gain valuable experience. Therefore, the series of the learning process should be fulfilled first.

The teacher's ability to explain the material to make the students understand is the main role in implementing formal elementary and tertiary education. Besides that, communication skills are also important in the process of teaching. When these two things have been fulfilled, the target in teaching can be achieved.

According to Nana Sudjana (2005), Learning outcomes refer to the skills and knowledge students acquire after completing the learning process. Successful students demonstrate mastery of the expected competencies. Learning outcomes encompass changes in knowledge, understanding, attitudes, and behaviour due to the learning experience. These changes can be observed by developing students' behaviour (Muhamad et al., 2023).

Based on the observations of semester 2 students of the Geography Study Program at PGRI University, some problems happened in the classroom. The students are likelier to get bored during the learning process because the lectures still used conventional methods and one-

direction communication. It makes the students passive in the classroom and during the teaching process. These conditions also influenced the final score of the students who did not achieve the minimum score target.

Improving students' learning outcomes is closely related to their increasing interest in learning. The more interested students are in learning, the better their academic performance will be (Buchs & Butera, 2015).

One solution to the problem is to use more innovative learning models, which can increase the student's learning motivation and influence the students' learning outcomes. One of the practical learning models is the cooperative learning method. Cooperative learning means working together in a group to hone the ability to socialize with classmates. The goal of cooperative learning is to develop adequate social skills. Group formation can be classified based on students' needs and learning styles so that they can continue to be in the group. Each group member must interact with other students and exchange their knowledge and skills. In addition, each group member has responsibility for part of the subject to be discussed and fully contributes to the work on the joint



project (Jacobs, 1991). When students fulfil their responsibilities for their roles in a group, it will hone their skills to work in a team and increase students' motivation to learn because it can raise self-esteem.

In cooperative learning activities, students carry out responsibilities such as supervising, summarizing, providing sources, investigating, supporting, recording, observing and leading. (Johnson & Johnson, 1999). In addition, a teacher acts as a facilitator and controls the learning atmosphere in the classroom. Not only acting as a source of knowledge but also as a trainer and mentor. These mentors must teach basic skills to students, provide sequential exercises and then observe the development of learning experienced by students. (Koç et al., 2013)

Group Investigation Method is when students work in small groups to analyze and understand a learning topic (Siddiqui, 2013). It was developed by Shlomo Sharan and Yael Sharan in 1992. In this method, students conduct investigations according to the roles that have been divided to achieve the learning objectives. In other words, the group investigation method combines cooperation with the investigation

process (Sharan et al., 2013). This strategy focused on students' participation and activity. This method focuses on student activeness in the learning process in the classroom. Students must help determine the topic to be studied and then work together to investigate the topic. In other words, this method will allow students to be actively involved and control the learning process and encourage students to work well with their teams (Slavin, 2015).

The Group Investigation method comprises three main concepts: inquiry or research, knowledge, and group dynamics or learning group dynamics (Ainiyah et al., 2022). Research is a process where students analyze and try to solve a problem. Knowledge is the experience that students gain during the learning process. At the same time, group dynamics describes group interactions, including exchanging ideas and experiences.

According to Malisa and Barutu (2019) In applying the Group Investigation Method, students are given full control to choose what they want to study and investigate. In other words, this method emphasized students' participation and activity in finding their own lecture material to be studied from books or the



internet with reliable references (Tsoi et al., 2004).

The advantage of the Group Investigation model is that it encourages students to identify a problem and clarify the problem. After that, students will explore the problem from several perspectives. This helps students develop their knowledge and, at the same time, their social skills (Rosba et al., 2021). Teachers guide students in managing the information they receive and ensure active and dynamic learning activities. This method provides students the broadest opportunity to become independent learners and develop critical thinking skills. (Susanti et al., 2019).

All the explanations above are the basis for the researchers to prove that the Group Investigation method can improve students' learning outcomes for the semester 2 students in PGRI University Pontianak.

MATERIALS AND METHODS

This research used the Classroom Action Research (CAR) method. According to Arikunt (2012), Classroom Action research helps someone practically solve problems in emergencies and help achieve the goals of social sciences and educational science by working together

within a mutually agreed ethical framework. Research-based learning is a teaching and learning process that motivates students to learn by exploring and uncovering facts independently. It involves using research methods or findings as the foundation for learning activities (Ratnawati & Idris, 2020).

The subjects of this research were the semester 2 geography education students, consisting of 35 students. The sampling technique uses a sample population. The subject of this research is a source for obtaining the information needed.

Classroom Action Research (CAR) used the CAR principle to collect the data. The research consisted of a cycle treatment consisting of planning, action implementation, observation and reflection.

All stages are carried out collaboratively between lecturers and students to collect the data, which is divided into qualitative and quantitative data. The data collection technique used observation and measurement techniques and tool observation guides, tests, and other supporting documents such as lesson plans.

In data analysis, this research used a descriptive qualitative method for the qualitative data and used. According to



Sugiyon (2015), Descriptive research is carried out to understand the value of an independent variable, whether it involves one or more variables, without making comparisons or establishing connections between them. In this case, the researcher must gather data and describe what occurs in the field. This method highlights the circumstances, conditions, situations, events, and other activities documented in the research report.

For the quantitative data, the researcher used a formula to calculate the mean score and the percentage of students passing the minimum score. The formula is below :

$$\bar{X} = \frac{\sum X_i}{n}$$

Note :

\bar{X} = Mean Score

$\sum X_i$ = total sum

n = number of students

RESULTS AND DISCUSSIONS

Since the research was only carried out in one cycle, the qualitative and quantitative research findings could be seen during reflection in cycle 1. The results found in the observation sheet showed that there were improvements in students' interest in class when they used the group investigation method.

The use of the group investigation method consists of 6 steps, namely i) identifying the topic to be discussed and dividing students into groups; ii) planning the tasks to be studied; iii) carrying out group investigations; iv) making a final report of the investigation results; v) presenting the final report; vi) evaluation. In group investigations, the teacher begins learning by presenting fundamental theories as an introduction so that students get an idea when asked to explore the topic of their investigation assignment. After that, students will position themselves in roles and investigate to get the final results they want. The teacher also supports students to look for references from various sources.

This method combines the inquiry learning process in small cooperative groups with the principles of problem-solving, so it is hoped that the students can think critically and democratically (Tsoi et al., 2004).

The quantitative data showed an improvement of students' understanding about the material been taught. It is showed by the increasing of students' learning outcomes. The improvement can be seen in the **Figure 1**.



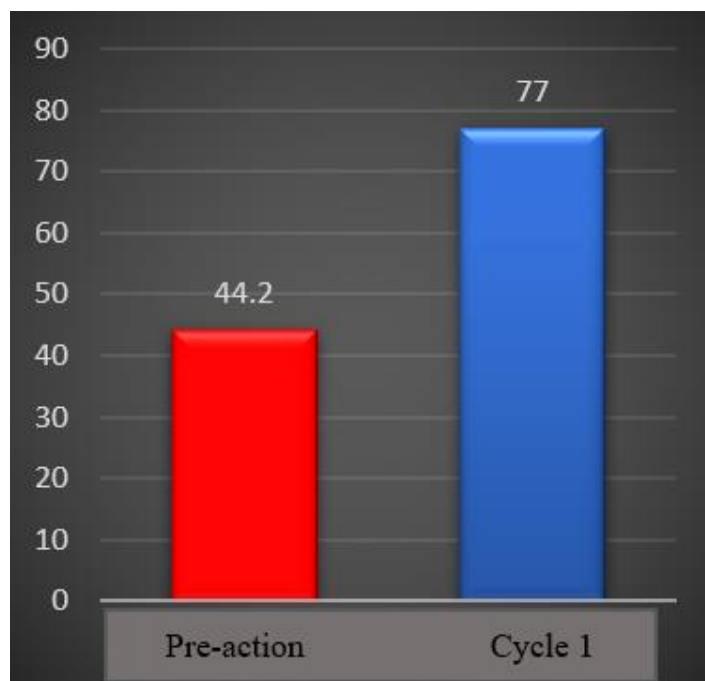


Figure 1. The presentation of improvement between pre-action and post-action in cycle 1

The application of the Group Investigation Method has the advantage of improving students' learning outcomes because it is easy to apply and makes the students more creative in the discussion to generate their ideas quickly (Susanti et al., 2019).

The learning process in the group investigation model offers students the chance to engage and communicate actively and frequently (Komala et al., 2020). Task segmentation in problem-solving requires students to engage in group discussions, analyze issues, and develop solutions. This process naturally fosters continuous interaction and communication among students.

As one of the main components of the group investigation model, task segmentation is a tool to bring out problems and complexities in discussions to encourage students to play an active role in group investigations (Asyari et al., (2016). The higher the student participation in a group, the better it is for creating a fun but competitive learning atmosphere.

Based on the observations in the field. It showed that students' enthusiasm for participating in learning has increased because they feel that they have been given the opportunity by the teacher who serves as a facilitator to express their ideas.

The group investigation model in this study is expected to encourage the creation of democratic learning with the following objectives: i) developing a democratic social system; ii) directing scientific research on natural life and social processes; iii) using research strategies to solve social problems; iv) providing learning experiences based on reflection and learning conditions. The task segmentation applied in this study is solving social problems to encourage democratic learning (Suhartono et al., 2019).

Based on a similar research finding entitled "Group investigation model to improve interpersonal skills", written by Nur Ainiyah and posted in the *International Journal of Evaluation and Research in Education (IJERE)* in 2022, the social problem-solving approach applied in the group investigation model is intended to create complexity in learning in order to enrich the topic being discussed. This is expected to increase group activity and encourage meaningfulness in learning. In addition, applying learning principles that combine investigation and cooperative processes in the group investigation model is an effective way to improve students' interpersonal skills, which will affect a

person's performance and productivity in the long term.

The presentation of the problem is packaged in a story describing a conflict in social life. The student's task is to analyze it and provide solutions through a group investigation. This process is expected to train students to think critically when solving problems, train individual and group responsibility, and increase meaningfulness in learning (Siddiqui, 2013).

Democratic learning also highlights that students actively construct their own knowledge during the learning process by being actively engaged, particularly in the group investigation process (Goss, 2022). The teacher's job is not to deliver lessons traditionally to several students but to build a learning situation that encourages students to be actively involved in learning. In this regard, the group investigation model places the teacher's function as an academic mentor or trainer, creating a learning atmosphere that can increase positive interdependence between group members. In addition, it facilitates active student interaction in learning so that it remains within the corridor of the topic being discussed and encourages individual responsibility. After the report



presentation phase, the teacher's job is to encourage each group to reflect on the learning process. The reflection focuses on task management and the interaction process among members during the learning process. As a result, the effectiveness of the teacher's involvement in this model plays a key role in enhancing students' interpersonal skills.

CONCLUSION

Based on the research findings, we can conclude that the implementation of *Group Investigation* method can improve the students' learning outcome. It is because this learning method encourages students to be actively involved in learning because it requires all students to contribute to group discussion. This will increase students' motivation to express their ideas in front of the class.

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