COMPARISON OF LEARNING OUTCOMES IN WRITING OBSERVATION REPORTS USING THE GROUP INVESTIGATION METHOD VERSUS THE STUDENT TEAMS ACHIEVEMENT DIVISION METHOD FOR GRADE X STUDENTS AT SMK BRAHMA HARDIKA INDONESIA

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Abstract: This study aims to determine whether there is a comparison between the use of the Group Investigation method and the Student Teams Achievement Division method in writing observation reports for grade X students at SMK Brahma Hardika Indonesia. This research was conducted at SMK Brahma Hardika Indonesia in the second semester of the 2014-2015 academic year. The sample consisted of 60 students from grade X Computer Network Engineering and X Light Vehicle Engineering, all of whom were studied. The instrument was an essay test. The normality test of pretest and posttest results using the Liliefors test in the control class yielded $L_{count} = 0.1141$ and $L_{table} = 0.161$ at $\alpha = 0.05$. In the experimental class, $L_{count} = 0.1352$ and $L_{table} = 0.161$ at $\alpha = 0.05$ (Pretest). In the control class, $L_{count} = 0.0649$ and $L_{table} = 0.161$ at $\alpha = 0.05$. In the experimental class, $L_{count} = 0.1012$ and $L_{table} = 0.161$ at $\alpha = 0.05$ (Posttest). For both samples, $L_{count} < L_{table}$, so it can be concluded that both samples are normally distributed. The homogeneity test using the Fisher test yielded $F_{count} = 1.352$ at $\alpha = 0.05$ with $F_{table} = 1.858$ (Pretest) and $F_{count} = 1.109$ at $\alpha = 0.05$ with $F_{table} = 1.858$ (Posttest). Since $F_{count} < F_{table}$, it can be concluded that the samples have homogeneous conditions. The hypothesis test using the t-test yielded $t_{count} = 2.371$ and $t_{table} = 2.021$ at $\alpha = 0.05$ (Pretest) and $t_{count} = 3.409$ and $t_{table} = 2.021$ at $\alpha = 0.05$ (Posttest). Since $t_{count} > t_{table}$, H0 is rejected and H1 is accepted, meaning it is significant. From the data obtained, it can be concluded that there is a comparison between the use of the Group Investigation method and the Student Teams Achievement Division method in writing observation reports for grade X students at SMK Brahma Hardika Indonesia.

Keywords: Method, Group Investigation, Student Teams Achievement Division, Writing Observation Reports

INTRODUCTION

Language is a means for humans to communicate both orally and in writing because without language, we cannot communicate well. Therefore, the Indonesian language subject is held so that students can communicate using good and correct language. According to Dyer, language is a symbolic system used to represent one's thoughts. Language is an important means to enhance students' knowledge through their activities and creativity. Writing requires ideas and creativity that are thought out before writing. Thus, to be proficient in the Indonesian language, it is necessary to develop skills in its use.

The recognized skills in Indonesian language teaching are: listening skills, speaking skills, writing skills, and reading skills. These four skills cannot be separated and are interrelated. According to Tarigan, the relationship between writing skills and speaking skills is that both have the same characteristics, namely productive and expressive. In the Indonesian dictionary, productive means generating, and expressive means being able to express ideas. So students are expected to have the skills to convey ideas, thoughts, descriptions, feelings, and intentions in their minds, which are then expressed orally and in writing. Among the four language skills that need research in Indonesian language teaching at schools is writing skills.

Writing is a language skill that involves expressing ideas, thoughts, feelings, and desires in written form as a means of indirect communication. Through writing, students can pour out what they are thinking and wanting without communicating directly. Writing skills allow students to imagine and develop ideas that are poured into written works, and they can create inspiring works that motivate readers as a communication medium.

The development of writing skills needs attention because writing skills are not formed automatically. Someone who wants to be skilled in writing requires continuous practice to produce good and useful written works for readers. Writing is a skill that demands students to express ideas, descriptions, messages, and thoughts using good and correct Indonesian. If using the group investigation method, students are expected to write good observation reports. However, in reality, students' language mastery in the 2013 curriculum is still lacking with this method. This can be seen from the results of writing observation reports that are below the Minimum Mastery Criteria (KKM) of the Merdeka Curriculum, which is 75. Students are not able to compose sentence structures, letter

writing, and spelling accurately, so writing observation reports on environmental observations is not well conveyed to the readers. Additionally, students have difficulty collaborating with peers and expressing the creative ideas they want to put into their writing. As a result, students lack creativity and do not pay attention to lessons because they consider writing observation reports on environmental observations to be easy. Therefore, researchers need methods as tools to implement good writing.

Method is one of the essential components of the teaching and learning process. It can be understood as a tool to facilitate an activity. Certain methods can increase students' enthusiasm and activeness in learning. By using appropriate methods, students will be more enthusiastic about receiving the ongoing lesson material, showing that learning is enjoyable. Thus, delivering lesson materials depends on the methods used. Among various teaching methods used by teachers in delivering material, researchers choose two methods that are considered to make students more active and creative in Indonesian language learning in writing observation reports at school: the Group Investigation method and the Student Teams Achievement Division method.

Using the Group Investigation learning method, students can use their creativity. In the group investigation method, students are given full choice in planning what they want to learn. Students form small groups of 2-6 people, each given a different task. Each member discusses the information they will choose to collect, research, and present in front of the class. All members must participate in deciding the topic to be taken and share the tasks they want to do during the research process. Each group member researches what they will study to become presentation material for their respective groups, thus guiding students to increase activity and creativity through observation report results in environmental observations.

The Student Teams Achievement Division learning method encourages students to support and help their group members in learning to do their best and show that learning is important, valuable, and fun. Using the Student Teams Achievement Division method, students are grouped based on ability, race, ethnicity, gender, and without discrimination. Then, students study the given material together with their group members. Each student will be individually tested through quizzes. The quiz scores of each member will determine the score of each group. If students want their group to get high scores and win prizes, they must achieve maximum scores in answering quizzes.

The above learning methods can motivate students in writing observation reports, leading to good results. Therefore, research on these two methods is necessary to see whether they provide different learning outcomes.

This research focuses on writing observation reports. An observation report is a text style used specifically to report observation results systematically, containing general descriptions or reporting an observation result. Based on the background, the researcher is interested in conducting research titled "Comparison of the Use of Group Investigation Method with Student Teams Achievement Division Method in Writing Observation Reports for Grade X Students at SMK Brahma Hardika Indonesia."

Based on the above description, several problems can be identified. First, how are the results of writing observation reports using the Group Investigation method? Second, how are the results of writing observation reports using the Student Teams Achievement Division method? Third, are the learning outcomes of writing observation reports using the Group Investigation method good? Fourth, are the learning outcomes of writing observation reports using the Student Teams Achievement Division method good? Fifth, is there a difference in the learning outcomes of writing reports using the Group Investigation method and the Student Teams Achievement Division method? Sixth, is the difference significant? Based on the problem identification, this research is limited to the comparison of using the Group Investigation method and the Student Teams Achievement Division method with the learning outcomes of writing observation reports in the school environment of grade X students at SMK Brahma Hardika Indonesia. Based on the problem identification, the research question is: What is the difference in learning outcomes in writing observation reports using the Group Investigation method and the Student Teams Achievement Division method for grade X students at SMK Brahma Hardika Indonesia?

The objectives of this research are as follows. First, to obtain information on the use of the Group Investigation method. Second, to obtain information on the use of the Student Teams Achievement Division method. Third, to determine the advantages and disadvantages of the Group Investigation method. Fourth, to determine the advantages and disadvantages of the Student Teams Achievement Division method. Fifth, to compare

the Group Investigation and Student Teams Achievement Division methods in writing observation reports for grade X students at SMK Brahma Hardika Indonesia.

To see the novelty of the research, a literature review was conducted on studies in the field of education and teaching related to this research. Kemal, Riniati, Haetami, Wahab, and Pratiwi (2023) analyzed the relationship between learning motivation and students' procrastination attitudes in elementary schools. Sasabone, Rachmad, Kemal, Fatmawati, and Safar (2023) examined the implementation of literacy activities in shaping students' character. Utami, Uswah, Kemal, and Nugraha (2022) applied storytelling methods to heal trauma experienced by children who were victims of the Cianjur earthquake disaster. Utami, Wulandari, Kemal, and Supriyanta (2023) analyzed the improvement of teachers' character and competence in implementing independent play. Nurlaely, Kemal, & Prihartini (2023) discovered the phenomenon of acquiring coarse language in elementary school children. Utami, Wulandari, Kemal, and Gumilar (2023) implemented socialization regarding the father's role in parenting.

RESEARCH METHOD

This research was conducted at SMK Brahma Hardika Indonesia, located on M.T Haryono Street, Kp. Ciledug, Burangkeng Village, Setu District, Bekasi. The researcher chose SMK BRAHRI as the research site because of its strategic location, and the Indonesian language teacher is an alumnus of Muhammadiyah University Prof. DR. Hamka, which facilitates the researcher in understanding the character of the class to be studied. The subjects in this study comprised two classes consisting of grade X students from SMK BRAHRI, namely X Automotive Engineering with 30 students and X Computer Network Engineering with 30 students.

Sugiyono stated that the research method is used to answer problem statements and test the proposed research hypotheses. In other words, the research method is an activity execution that aligns with the problem statement and tests the research hypotheses. The research method used in this study is the experimental design method. The experimental design is presented in a constellation form to provide a depiction of testing treatment effectiveness. The experimental method is a quantitative method used primarily when researchers want to conduct experiments. This method is used to determine whether there is a comparison of methods used during the learning process.

In this study, the research subjects were grouped into two groups: the control class and the experimental class. The control class students were given the Group Investigation method, while the experimental group students were given the Student Team Achievement Division method. The research design used is the Random Control Group Posttest Only design, as students will be given a posttest after being taught using the respective methods, both for the experimental group and the control class.

The research instrument used was a test aimed at measuring the ability to write observation reports. The test provided was in written form. The aspects evaluated included content, text structure, vocabulary, sentences, and mechanics.

Data analysis is an activity carried out after data from all other data sources have been collected. Broadly speaking, the data analysis method in this research is divided into two: first, using the normality test with the Liliefors test, and second, the homogeneity test using the Fisher test. To compare the ability to write observation reports of grade X students at SMK Brahma Hardika Indonesia who were taught using the Group Investigation method and the Student Teams Achievement Division method, a hypothesis is needed.

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RESULT

The calculations in the control class using the Group Investigation method and the experimental class using the Students Teams Achievement Division method indicate Lcount < Ltable at a significance level ($\alpha = 0.05$) with a sample size of 30. Thus, it can be concluded that the classes are normally distributed.

Testing Criteria: If Fcount < Ftable, then reject H0, meaning it is significant. After consulting the F table at a significance level of $\alpha = 0.05$ and comparing Fcount with Ftable, it turns out that Fcount < Ftable, or $1.109 < 1.858$ in the pretest and $1.352 < 1.858$ in the posttest, meaning H0 is rejected and it is significant.

After performing data analysis calculations and obtaining a value of tcount > ttable, H0 is rejected. Therefore, it can be concluded that there is a significant difference between the class treated with the Group Investigation method and the class treated with the Students Teams Achievement Division method.

The conclusion is that H0 is rejected and H1 is accepted, indicating a significant difference between the class treated with the Group Investigation method and the class treated with the Students Teams Achievement Division method.

Based on the previously analyzed data, it can be seen that there is a significant difference between the posttest results of writing observation reports by students using the Group Investigation method and the class treated using the Students Teams Achievement Division method. From this hypothesis testing, it can also be seen that the posttest results for writing observation reports are higher using the Students Teams Achievement Division method compared to the posttest results using the Group Investigation method.

Based on the research in the Control class, the data for writing observation reports using the Group Investigation method (pretest) for grade X Automotive Engineering students at SMK BRAHRI Setu Bekasi shows the highest score = 75, the lowest score = 42, the average score = 57.5, mode = 59.5, median = 58.7, standard deviation = 8.45, and score variance = 71.51. In the posttest using the Group Investigation method for grade X Computer Network Engineering students at SMK BRAHRI Setu Bekasi, the highest score = 85, the lowest score = 58, the average score = 70.06, mode = 71.1, median = 71.1, standard deviation = 6.8, and score variance = 46.8 (Calculation Data Attached).

Based on the research in the Experimental class, the data for writing observation reports before using the Students Teams Achievement Division method (pretest) for grade X Computer Network Engineering students at SMK BRAHRI Setu Bekasi shows the highest score = 75, the lowest score = 42, the average score = 59.9, mode = 60.2, median = 60.2, standard deviation = 8.2, and score variance = 67.39. In the posttest after using the Students Teams Achievement Division method for grade X Computer Network Engineering students at SMK BRAHRI Setu Bekasi, the highest score = 90, the lowest score = 62, the average score = 73.6, mode = 72.9, median = 72.3, standard deviation = 7.9, and score variance = 63.3 (Calculation Data Attached).

The calculations in the experimental class using the Students Teams Achievement Division method and the control class using the Group Investigation method show Lcount < Ltable at a significance level ($\alpha = 0.05$) with a sample size of 30. Thus, it can be concluded that the classes are normally distributed (Calculation Data Attached).

The homogeneity test criteria (F-test) are that if Fcount < Ftable, then reject H0, meaning it is significant. After consulting the F table at a significance level of $\alpha = 0.05$ and

comparing Fcount with Ftable, it turns out that Fcount < Ftable, meaning H0 is rejected and it is significant (Calculation Data Attached). The conclusion is that H0 is rejected and H1 is accepted, indicating a significant difference between the class given the final test using the Group Investigation method and the class given the final test using the Students Teams Achievement Division method.

After performing data analysis calculations using the hypothesis testing (t-test) and obtaining a value of tcount > ttable, H0 is rejected. Therefore, it can be concluded that there is a significant difference between the class treated with the Group Investigation method and the class treated with the Students Teams Achievement Division method.

CONCLUSION

Based on the research conducted on grade X students at SMK Brahma Hardika Indonesia, it is known that in learning to write observation reports using the Student Teams Achievement Division method compared to using the Group Investigation method, there is a very significant difference. Learning with the Student Teams Achievement Division method achieved higher scores compared to the Group Investigation method. This is evident from the pretest and posttest data results in writing observation reports and hypothesis test calculations.

The conclusion is that H0 is rejected and H1 is accepted, indicating a significant difference between the class given the posttest using the Group Investigation method and the class given the posttest using the Student Teams Achievement Division method. After conducting hypothesis test calculations, the data analysis showed that the values were 2.371 > 2.021 (Pretest) and 3.409 > 2.021 (Posttest), hence H0 is rejected. Therefore, it can be concluded that there is an improvement in the ability after the Student Teams Achievement Division method is applied to the learning outcomes in writing observation reports in the grade X Computer Network Engineering class.

Based on the observations, it shows that the condition of the experimental class is better compared to the control class. The observations regarding the teaching-learning situation after using the Student Teams Achievement Division method in learning to write observation reports show that students are more motivated in learning, able to think

critically, and make writing activities more enjoyable and less boring. Additionally, it motivates students to be more creative in organizing and facilitates their understanding of writing observation reports.

Thus, it can be concluded that there is a very significant difference between writing observation reports taught using the Group Investigation method and the Student Teams Achievement Division method in grade X students at SMK Brahma Hardika Indonesia. The use of the Student Teams Achievement Division method is more effective compared to the Group Investigation method. Implications of this research are:

1. This research aims to make improvements in both the process and the results. This is necessary because teachers often face problems or difficulties in the teaching-learning process that need to be addressed properly to make classroom learning better and to improve students' ability to write observation reports.

2. Good cooperation between teachers and students is essential in this research. Constructive feedback from students is needed to achieve the objectives of the Group Investigation and Student Teams Achievement Division learning methods.

3. Students' ability to write observation reports needs special attention from Indonesian language teachers because writing is one of the most difficult language skills to learn. Besides being able to articulate their ideas, students must also use language components such as word choice and grammar properly and be able to express their ideas in writing.

Based on the research and discussion, the following suggestions are provided. Students should always be active in participating in Indonesian language lessons, especially in learning to write observation reports, and should enhance cooperation with their group mates to help each other in learning. Students are also encouraged to frequently practice writing observation reports and are expected to implement the knowledge they gain to become independent and skilled in writing observation reports.

Teachers should pay attention to the use of teaching methods that match students' ability levels to help them better understand the material being taught. Teachers should be more creative in teaching Indonesian, especially in the material on writing observation reports. Additionally, after delivering the material, teachers should conduct quizzes to assess students' learning outcomes, particularly in writing observation reports.

Technically, the results of this research are expected to provide an alternative for Indonesian language teachers in teaching writing observation reports using different teaching methods, one of which is the Student Team Achievement Division method.

Regarding facilities, the existing infrastructure is adequate. However, it should be emphasized that these learning facilities need to be improved in their functionality to fully support the learning process of the Indonesian language, especially in writing observation reports, thus enhancing students' learning outcomes.

In conclusion, it is evident that there is a very significant difference between writing observation reports taught using the Group Investigation method and the Student Teams Achievement Division method. This research aims to bring about improvements in both process and results. Good cooperation between teachers and students is essential to achieving the objectives of Indonesian language learning, especially in writing observation reports. Regarding the available facilities, it would be better if the school improved the functionality of these facilities as tools to support the enhancement of students' learning outcomes, making them more creative and independent.

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